

1 Q. Further to PUB-Nalcor-123, the final three recommendations on p. 31 of Exhibit 68
2 involve follow-up work to be completed by Nalcor. Please describe the specific
3 activities undertaken by Nalcor for each of these recommendations and the
4 individual results realized.

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7 A. The specific activities undertaken by Nalcor for each of these recommendations and
8 the individual results realized are as follows:

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10 **(1) Review the available improvements in burners and combustion system**
11 **technologies to optimize the fuel combustion within the existing furnaces.**

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13 Due to the limited number of options available for optimised emissions related to
14 burner technology, it was decided to focus on power consumption or boiler
15 efficiency. NLH has reviewed replacing some existing motors with variable-speed
16 drive motors, refitting the current soot blowers and integrating the blower control
17 with an intelligent soot blowing system and upgrading the forced draft (FD) fans
18 and ductwork on all units.

19

20 From 2008 through 2010 Holyrood has completed an annual Energy Management
21 System target to reduce emissions through exceeding the five-year rolling average
22 guide curve. This has involved assessing and implementing a prioritized list of
23 projects for guide curve improvements. Five-year rolling average guide curve
24 improvements were documented in each of these years.

1 **(2) Undertake follow up testing after the change of fuel is implemented to**
2 **quantify the reduction in particulate emissions and opacity.**

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4 Please see PUB-Nalcor-123 for details of follow up testing and results.

5
6 **(3) Conduct further investigation on the use of fuel additives for a trial program in**
7 **the event that additional treatment for particulate reduction becomes necessary.**

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9 A test of the fuel additive COMATE was conducted in unit 1 in 2005, during the
10 stack testing program. Comate is an abrasive additive intended to reduce ash
11 buildup in the boiler and increase efficiency. However, this resulted in increased
12 particulate emission rates. This potential was identified on page 4-4 of the SGE
13 Acres report, page 21 of Exhibit 68 and seen as a general limitation for use of fuel
14 additives to meet required objectives.