

1     Q.     What are the levels that are prescribed by these standards?

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4     A.     NLH uses the standards prescribed in the *Air Pollution Control Regulations,*  
5           *2004, Consolidated Newfoundland Regulations 39/04* (made under the  
6           Environmental Protection Act, S.N.L. 2002, c. E-14.2) in judging the  
7           acceptability of levels of sulphur dioxide in the environment. Section 3 of the  
8           *Air Pollution Control Regulations, 2004*, prescribes the standards for ambient  
9           air quality in the province. Section 3.(2) specifies that the concentration of air  
10          contaminants due to all sources shall not exceed the standards prescribed in  
11          Schedule A. Schedule A identifies four maximum air concentrations for  
12          sulphur dioxide related to four time periods: 900 micrograms per cubic meter  
13          (ug/m<sup>3</sup>) in one hour; 600 ug/m<sup>3</sup> in 3 hours; 300 ug/m<sup>3</sup> in 24 hours; and 60  
14          ug/m<sup>3</sup> annually.

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16          The Department of Environment and Conservation's Guidance Document  
17          GD-PPD-009.2 *Determination of Compliance with the Ambient Air Quality*  
18          *Standards* defines the procedures that the Department follows in determining  
19          whether a facility is in compliance with Section 3 of the *Air Pollution Control*  
20          *Regulations*. GD-PPD-009.2 requires existing facilities with annual residual  
21          fuel oil consumption in excess of 2 million litres annually to complete a stack  
22          emission test and dispersion model every 2 years where the modeling  
23          indicates the facility not to be compliant, and every 4 years where the  
24          modeling indicates that the facility is compliant. For each pollutant modeled,  
25          where the maximum predicted ground-level concentration under all operating  
26          scenarios is below the associated ambient air quality standard for the given  
27          timeframe, the facility will be deemed to be compliant for that particular  
28          pollutant. The facility will be deemed compliant when modeling for all

1 pollutants of concern indicates each pollutant is below the associated  
2 ambient air quality standard. Compliance will be valid until registration of the  
3 next scheduled dispersion model.

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5 In the case of the HTGS, stack emission testing has been conducted every  
6 two years since 1993 and air dispersion modeling has been performed  
7 annually since 1995 using emission characteristics prorated from the stack  
8 test results to the production information from the year of modeling. Each  
9 modeling scenario has indicated ground level sulphur dioxide concentrations  
10 in excess of the standard specified in the *Air Pollution Control Regulations*.  
11 The latest modeling completed was for emissions resulting from 2004  
12 production and indicated that sulphur dioxide concentrations would exceed  
13 the maximum one hour standard within an area of 2.2 km<sup>2</sup> for 0.06% of  
14 available hours. As well, the modeling indicated that sulphur dioxide  
15 concentrations would exceed the maximum three-hour standard within an  
16 area of 1.7 km<sup>2</sup> over 0.8% of the available three-hour periods.