

1 **Q. *Pierre's Brook Hydro Plant, Tab 1.2, Appendix B, page B-1***

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3 **Is it possible to delay this project until after commissioning of Muskrat Falls and**

4 **associated transmission? What would be the repercussions of such a delay?**

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6 A. Delaying the project is not advisable as AMEC has recommended replacement of the

7 penstock primarily due to the condition of the woodstaves. Delaying the project until

8 after the commissioning of Muskrat Falls and associated transmission will increase the

9 likelihood of blowout caused by woodstaves failing which would result in an extended

10 period of plant unavailability while repairs are being completed.

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12 Due to the condition of the staves and cradles there is high potential that a blowout would

13 require a complete replacement of a section of penstock rather than just the blown out

14 woodstave itself. An extended period of dewatering would be required, as pipe of this

15 type is not readily available and an access route would have to be established to the site

16 of the blowout to facilitate installation.¹

17

18 Dewatering is a concern for penstocks in this condition. Woodstaves that have been

19 allowed to dry will leak significantly on the initial re-watering of the penstock.² For this

20 reason it may be impossible to return the penstock to service during the winter months as

21 a result of the ice buildup associated with the leakage. It is also likely that an extended

22 period of dewatering will result in loose bands which will have to be tightened over the

23 entire 2.47 km long woodstave section. Accelerated deterioration of the remaining

24 woodstaves is also likely as a result of an extended period of dewatering.

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26 Newfoundland Power is replacing the Pierre's Brook Penstock in a planned and

27 controlled manner such that it can consider penstock materials and configurations to

28 provide the least cost replacement alternative. This will allow the Pierre's Brook Plant to

29 remain in service through the critical winter generation period. In addition, replacing the

30 penstock in an unplanned manner following a catastrophic failure will result in greater

31 cost.

¹ A section of steel penstock or replacement woodstaves of similar dimension would be the only available alternatives for this type of repair.

² The amount of leakage following dewatering could be significant enough to cause damage to adjacent property, including potentially washing out roadways.