

1 **Q. Why is there excessive vegetation on the downstream face of Rattling Lake Dam? Is**
2 **control of such growth part of Newfoundland Power Inc.'s normal maintenance**
3 **practices (Figure 4, Attachment A, Appendix D, Volume II)?**
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5 A. The dams within the Rattling Lake system are located in an area of the province that is
6 susceptible to rapid vegetation growth. As a result, frequent and excessive re-growth is
7 common.
8

9 As part of its vegetation management program, Newfoundland Power selects a number of
10 dams on a priority basis for vegetation clearing each year. With the current level of root
11 material in the Rattling Lake Dam slope, vegetation clearing is required approximately
12 every 5 years.
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14 The photograph in Figure 4 as referenced was taken in September 2005, just prior to the
15 execution of the Company's 2005 vegetation management program. The vegetation
16 along the downstream slope of Rattling Lake Dam was cleared in October 2005.
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18 It is important to control vegetation growth on engineered earth filled dams, such as
19 Rattling Lake Dam. Dam safety can be compromised if vegetation such as trees or other
20 deep rooted plants become established.
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22 Trees and woody vegetation can make a dam susceptible to internal erosion. Decaying
23 roots of dying vegetation can create a seepage path in the dam, leading to internal
24 erosion, which is commonly known as "piping". Roots can also penetrate existing cracks
25 and joints in the foundation rock and embankment, potentially leading to internal erosion
26 and seepage. Furthermore, excessive vegetation growth makes it difficult to properly
27 conduct dam safety inspections and monitoring.
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29 As part of the capital improvements planned for Rattling Lake Dam in 2008, the
30 downstream slope will be re-graded. The work will involve scarifying the downstream
31 face by mechanical means to remove the root system, followed by placement of rock fill
32 material. This will significantly reduce the extent of re-vegetation, reducing costs
33 associated with future vegetation clearing efforts and ensuring that the integrity of the
34 dam is maintained.