

1 **Q. GENERATION - HYDRO**

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3 **Rattling Brook Hydro Plant Refurbishment (Clustered) - \$18,242,000**

4
5 **PUB 2.0 NP**

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7 **Is there an objective test or measure of the condition of the woodstave penstock that**
8 **can be done?**

9
10 A. No objective test exists to measure the condition of a woodstave penstock. No codes or
11 stress analysis formulas are available to follow.¹

12
13 Conditional assessments of woodstave penstocks are primarily based on visual
14 inspections by knowledgeable professional engineers of the interior and exterior of the
15 penstock. The acceptance criteria is based upon safety concerns and tolerance of leakage.

16
17 Penknife penetration and core sampling along the length of the penstock will provide an
18 assessment of the wood fibres in those samples. Due to the extent of deterioration and
19 crushing of wood staves in the penstock at Rattling Brook, it was determined that core
20 sampling was not necessary.

¹ This is an accepted fact of engineering practice. See, for example, *Guidelines for Evaluating Aging Penstocks*, Task Committee on Guidelines for Aging Penstocks, American Society of Civil Engineers, 1995, p. 5-28.