

1 **Q. (Reference Application, Schedule B, pages 2 and 3)**

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3 **It is stated "Oil samples were taken from both power transformers in 2022 in**  
4 **accordance with standard maintenance practices."**

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6 **a) Please provide details of the "standard maintenance practices".**  
7 **b) Specifically, in what months were the oil samples taken in 2022?**

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9 A. a) With respect to power transformer oil sampling, as referenced in this question, the  
10 main tank and tap changer oil is tested annually. For units above 50 years of age,  
11 the main tank oil is tested twice per year.

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13 Oil sampling includes standard oil tests and dissolved gas in oil analysis. Standard  
14 oil tests check for contaminants and moisture, which at unacceptable levels can  
15 lower the dielectric strength of oil and cause a fault. Dissolved gas analysis is used  
16 to monitor and diagnose internal transformer electrical problems, such as the  
17 presence of arcing or poor electrical connections. Certain gases naturally increase as  
18 a transformer ages, but can be a sign of excessive temperatures and overloading in  
19 newer transformers. Oil sampling and analysis is completed annually to gauge the  
20 internal health of transformers.<sup>1</sup>

21  
22 With respect to Newfoundland Power's other standard maintenance practices for  
23 power transformers, see the response to Request for Information PUB-NP-002.

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25 b) The specific oil samples referenced in this question were completed in February 2022  
26 for MUN-T2 and April 2022 for MUN-T1. For the dates of additional oil sampling and  
27 other maintenance activities, see the response to Request for Information  
28 CA-NP-006.

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<sup>1</sup> See the *Application, Schedule B*, page 2, footnote 3.