Q. **Project D-29, Overhaul Turbine/Generator Units – Bay d'Espoir and Hinds Lake**

On page D-29, Hydro states that these turbine/generator units are inspected on a six year frequency based on recommendations outlined in Hydro's Asset Maintenance Strategy (AMS) Management Program. On page D-30, Hydro states that the six year frequency is based on the experience and manufacturer recommendations as described in the Industry Experience section, while the Industry Experience section simply states that work performed during major inspections and overhauls is based on operational experience and manufacturer recommendations. Describe what factors and sources of information were considered in determining that a six year frequency is appropriate.

A. Factors that were considered in determining that a six-year frequency is appropriate include:

Equipment manufacturer recommended frequency of five years for electrical tests that is supported by IEEE and other industry standards (for example, if a hydraulic generator stator winding passes a DC over-potential (high voltage) test, the probability of an on-line winding failure in the next five years is low).

Hydro's operating experience has shown that typically the buildup of brake dust, oil and brush gear dust on the generator stator windings occurs at a rate that requires dismantling the unit on a six-year frequency to clean cooling air pathways in the winding to prevent overheating.

Hydro's operating experience has shown that a six-year frequency is appropriate to inspect for turbine runner cavitation damage. This gradual deterioration of the

runner steel has, in worst cases (including Hinds Lake), required welding repairs on a five or six-year frequency.

Based on the required frequency of these activities that require dismantling the unit, the six-year frequency is appropriate for unit overhauls.