Q. **Project C-3: Replace Site Facilities - Bay d'Espoir**

With reference to section 3.3, "Development of Alternatives"**,** page 25 of the Report at Tab 1, Volume II, states:

> "As part of the development of the cost benefit analysis, the following items were added to the analysis, in addition to the construction cost estimate:
>
> - Construction cost of a new 8625 sqft building as outlined above;
> - Demolition costs of the existing three buildings; and
> - Residual benefit of the new buildings at the end of the 25 year study period."

Please provide full details of the referenced construction costs, demolitions costs and of the residual benefits analysed.

A. The section referenced in the question above relates to the option of replacing the maintenance garage, carpentry shop and warehouse with new separate buildings.

During the development of the cost benefit analysis (CBA), costs were added to the analysis so that all the costs for development of each option are captured in the CBA.

- Demolition costs were added to the CBA for both option 1 (Replace Existing Buildings with a New Consolidated Building) and option 2 (Replace Each Building) since for these two options, the existing buildings would be demolished prior to construction of any new buildings. Option 3 (Refurbish Buildings) would not require demolition since Hydro would retrofit and re-use the existing buildings. A cost estimate of $250,000 was obtained from a demolition contractor to demolish and remove all three buildings. This

amount was added to the CBA for option 1 and 2 as an additional cost to the construction cost estimate.

- Residual value was included as a benefit in the CBA to capture the life remaining in each building for each option after the study period. The refurbishments (option 3) were estimated to last another 25 years beyond their existing 50 years. To recognize the value associated with having a newer building(s) in the Replace Options (options 1 and 2), the analysis includes a benefit equal to the residual value based on the undepreciated capital cost at the end of the 25 year analysis period, assuming a 75 year useful life. For both options, the residual value was calculated as 50 years of life remaining out of a 75 year life expectancy. For option 2, the residual value would be (50/75) x $13,636,500 = $9,091,000 in 25 years. For option 3, the residual value would be (50/75) x $11,981,300 = $7,987,533 in 25 years.

- The needs assessment, attached in Vol II, Tab 1, Appendix B, determined that the warehouse and maintenance garage did not meet the functional needs of the maintenance operation for the Bay d'Espoir plant. A conceptual design was developed to house the functions of the three buildings and consolidate services into one location. This resulted in an increase in building area from 20,300 sqft to 28,925 sqft as noted in Table 6, page 23. As noted in sections 3.3.1 and 3.3.2, a new building with an area equal to the difference between the conceptual building area and the functional areas of the existing buildings was added to the cost benefit analysis. The difference in area is 8625 sqft. To recognize the value

associated with this increase in floor area in option 1 and to compare size equivalent options, the cost to construct an 8625 sqft building was included in the CBA for option 2. See section 3.3.2, page 25. The cost estimate for the 8625 sqft building was developed using RS Means and was determined to be $2,531,529.