Q. **RE: p. B-68 Replace UHF Radio – Upper Salmon ($556,000)**

47.1 What other options are available with regard to replacing the obsolete UHF radio links? Which of these have been investigated? What cost comparisons resulted from these investigations?

A. 47.1 When considering the transport options for the replacement of the UHF radio systems at the Upper Salmon generating station, only two (2) technologies stand out as practical, fibre optic cable and low capacity radio. Therefore, the options available with regard to the replacement of the UHF radio systems are:

i) fibre optic cable
ii) low capacity spread spectrum digital radio; and
iii) combination of (i) and (ii)

The replacement of the UHF radio systems at Upper Salmon is very similar to the replacement of the UHF radio system completed at Hinds Lake in 1998. At that time the three (3) options noted above were investigated.

The analysis done as part of the Hinds Lake UHF radio replacement indicated that from a capital cost comparison, fibre cable, All Dielectric Self Supporting Fibre (ADSS) was $50,000 more expensive than the low capacity radio alternative. However, it was decided to select the fibre alternative because:

i) the fibre alternative would have a longer life cycle than radio, 20 years compared to 10 years;

ii) the fibre alternative would require less maintenance because of less electronic equipment and its design provides for a self healing fibre ring thereby increasing the reliability of the overall communication system;

iii) the fibre alternative provides for higher bandwidth capabilities between sites.