

The “one pass” oxygen filter used to fill both “Luke” and “Bo” has a volume of 1.72 liters. The oxygen filter material manufacturer recommends 900 volume changes at 250 °C for filter regeneration. The maximum flow rate of the current regeneration gas delivery system at PAB is 5 ft³/hr of the 5% H₂ - 95% Argon gas.

$$\frac{1 \text{ regeneration}}{900 \text{ volume changes}} \times \frac{1 \text{ volume change}}{1.72 \text{ liters}} \times \frac{28.32 \text{ liters}}{1 \text{ ft}^3} \times \frac{5 \text{ ft}^3}{\text{hr}} = \frac{0.091 \text{ regeneration}}{\text{hr}}$$

or 10.93 hours to complete one oxygen filter regeneration.