2.110) \( \mu = 94.0 \)
\( \sigma = 6.8 \)

a) \( x = 97.6 \) has a z-score of \( z = \frac{97.6 - 94.0}{6.8} = 2 \).

Thus 2.5% of the time it will take the cleanup crew longer than 97.6 hours.

b) According to the empirical rule 95% of the data will fall within 2 standard deviations of the mean. This corresponds to \( \pm 2 = 2 \).

\[ z = -2 = \frac{x - 94.0}{6.8} \]
\[-13.6 = x - 94.0 \]
\[ 84.0 - 13.6 = x = 70.4 \text{ hrs.} \]

Thus 95% of the time the cleanup crew will finish in 70.4 to 97.6 hrs.