64. When $\beta = 0.9860$, we have $\gamma = 5.9972$, and when $\beta = 0.9850$, we have $\gamma = 5.7953$. Thus, $\Delta\gamma = 0.202$ and the change in kinetic energy (equal to the work) becomes (using Eq. 38-49)

$$W = \Delta K = mc^2\Delta\gamma = 189 \text{ MeV}$$

where $mc^2 = 938$ MeV has been used (see Table 38-3).