20 A positive charge of 2.6×10^{-8} C is in a uniform electric field of field strength 3.0×10^{5} N C^{-1}.

How much work must be done on the charge in order to slowly move it a distance of 4.0 mm in the opposite direction to the direction of the field?

A -3.1×10^{-2} J

B -3.1×10^{-5} J

C 3.1×10^{-5} J

D 3.1×10^{-2} J