Four-step_Population Mean

A multinational corporation is testing a new **AI-enhanced routing system** designed to increase the total continuous handling time that experienced senior agents can manage without burnout. To evaluate the performance of this new system, a **Simple Random Sample (SRS)** of **30 new routing cycles** was monitored. The data collected from these trials showed that agents using the new AI system managed an average of **33.9 hours** of continuous handling, with a sample **standard deviation of 9.8 hours.** Construct and interpret a 99% confidence interval for the true mean continuous handling time (μ) of all senior agents using this new AI-enhanced routing system. Based on this interval, does it appear that the new system results in a mean handling time different from the traditional average of 30 hours?