Math 263
Quiz 5 **Name**_____

Please show your work.

Farmed salmon may contain contaminants, such as insecticides that have entered the water as pollutants. A study reported on 14 contaminants, one of them the insecticide mirex, which is known to be carcinogenic and toxic to the liver, kidneys, and the endocrine system.[1] The 150 fish in the study came from 51 farms in 6 countries. The mean mirex concentration was 0.0913 parts per million (ppm). The safely level recommended by Environmental Protection Agency (EPA) is 0.08 ppm and the standard deviation 0.0495 ppm. Does the study suggest that farmed salmon is safe at the 5% significance level? Use the following steps to decide.

(a) State the null hypothesis.

(b) State the alternate hypothesis.

(c) Find the z-value.

(d) What is the p-value?

(e) What is your conclusion about salmon?

[1] "Global Assessment of Organic Contaminants in Farmed Salmon" R. A. Hites, et al. *Science,* January 2004. Reported in *Stats: Data and Models*, 3rd ed R. De Veaux, et al, Addison Wesley 2012.