**Memorandum**

To: Deborah Sills, Ph.D.

From: Brian Ward

Date: September 24, 2013

Re: Results of Granulated Activated Carbon Sorption of Chlordane

**OBJECTIVE**

To determine the best sorption isotherm fit for laboratory data of adsorbed chlordane and granulated activated carbon vs. dissolved chlordane.

**METHODS**

I took the following steps to complete this objective:

1. Obtained laboratory data from excel file
2. Inputted the data into KaleidaGraph
3. Fit the data to a linear isotherm model
4. Fit the data to a Freundlich isotherm model
5. Compared the two models to determine which was a better fit
6. Create one high-quality plot that illustrates the best model fit to the data set

**RESULTS AND DISCUSSION**

The Freundlich isotherm model was the best fit for the data set. Figure 1 shows the model fit to the data set. The calculated Freundlich isotherm solid partition coefficient value is 2.5 ((mg/g)(L/mg)).



**Figure 1:** Adsorbed Chlordane concentration vs. Dissolved Cholordane Concentration. The circles represent data and the lines represent a Freundlich fitted model.