Project Status Report: CEEn-2018CPST-010

Report Date: 03/04/2019

Team Members: Los Hermanos

Project Title: Asian Clams Report # 15

1) Summary of technical/non-technical challenges encountered

Technical:

- Measuring the exact volume of chemical needed to get desired concentration. Really small values in the order of .1 mL make it difficult to measure.
- Find a laboratory that is able measure the residual copper in the solution after testing.

Non-technical:

- Determine whether Clams are dead or alive
- Coordinate with Lehi Water personnel and find time to travel to Lehi at least twice weekly (Monday - Thursday) during work hours to gather sample and reset experiment

2) Team approaches & resolutions to overcome challenges

Solutions:

- Bought Fish Tank to observe Clams to see if they open or close.
- Bring Cameras to observe whether Clams stay open/closed
- Figure out how to do time lapse.
- Constant Communication with Matt Dalton to get fresh clams
- Contact City of American Fork and see if they are willing and able to test sample for residual copper

3) Status of challenge resolutions & potential project impact

- 100% Silicon has been a better sealant for the experiment. Filled all the cracks between the wood and the tub. The model tanks are holding well.
- First experiment successful. High mortality rate for 70 clams at ⅛ teaspoon Earthtec per 90 gal. 70 Clams in the Control Tank were still alive
- If American Fork City cannot help determine the residual copper, the team may need to reach out to a private lab.

4) Project status & summary

- System models are holding well. 3rd Experiment successful. 4th Experiment in progress
- Procedure are created to follow steps in experiment
- Will try different methods and observe how clams react when they die
- Testing to continue with different concentration of EarthTech. The goal is to find the optimal concentration