tsc28

Tanya's Individual Contribution Page

Fall 2010

This semester I was the team leader of the Plate Settler Spacing Team. My contributions include:

Helped run the clay velocity gradient experiments.
Helped formulate future goals for Plate Settler Spacing, updated models, and worked on velocity gradient clay experiment paper.
Helped draft reflection reports and maintained the PSS wiki page.
Helped with reformulating the parameters for tube re-runs required for next semester (due to the model error).
Helped with Dynamics Model, mostly just checking up, overseeing, and contributing information. Actual Matlab coding and modeling was done by Cosme.

Summer 2010 Semester Contribution

This semester, I was subteam leader of the Plate Settler Spacing team. I helped with developing the process controller method, experimental design, and the bench scale apparatus. We began running experiments to test the floc roll-up theory.

Spring 2010 Semester Contributions

This semester, I was part of the Plate Settler Spacing team. My responsibilities included aiding in planning, setting up, running experiments and analyzing data. I also drafted and updated pages for the AguaClara wiki. In terms of planning experiments, I helped perform calculations for the first set of experiments (Coupled effects of capture velocity and velocity gradients) and analyzed the data shown on the wiki page for that experiment. I have also done programmed most of the Process Controller methods used in the experiment and for the upcoming experiments. In terms of setting up experiments, I helped prepare the tubing and proposed the addition of a reservoir system. The wiki pages I have drafted for the PSS team are listed below. Additionally, I have helped in updating most of the wiki pages drafted for the Spring 2010 semester.

Summer 2009 Semester Contributions

This semester, I was the leader of the Floating Floc research subteam. My responsibilities included training new members of the Floating Floc team, assembling and debugging the experimental setup to be used this summer with my teammates, running experiments, performing literature searches, creating parts of presentations, updating the wiki, and generally organizing/coordinating the summer plans of the floating floc team with team members in a way that was hopefully reasonable and beneficial to all.

Spring 2009 Semester Contributions

For the past semester, I have been working on the Dissolved Air Floation of Flocs team. Originally, I was involved with the Aeration subteam; however, with the dissolution of that group (due to the conclusion that the method was ineffective) I joined the Sand Filter team. The bulk of my work involved aiding in the assembling process and expansion of both setups. Post construction, my focus was mostly helping the team run experiments concerning gas removal from supersaturated water with both the aeration and the sand filter setup. When it was necessary to obtain a range of sand grain sizes for the sand filter, Haley and I spoke to Professor Stewart in the Geotechnical Department and I subsequently aided in sieving out a range of sizes. After data collection from both setups, I aided other team members with data analysis.

My wiki work this semester include drafting up an AutoCAD diagram of the aeration experimental setup that can be found in the Floating Floc Team's Detailed Task List. I've also made flow diagrams and other diagrams for the aeration method and helped to reformat the Floating Floc main page and most of the Aeration Method pages.

While the experimental setup was being constructed, I also performed literature searches in order to find relevant information regarding factors facilitating bubble formation in supersaturated water. The articles I have found are:

Effects of Dissolved Gas Supersaturation and Bubble Formation on Water Treatment Plant Performance by Paolo Scardina

The Fundamentals of Bubble Formation in Water Treatment by Paolo Scardina and Marc Edwards

Pages Created

Content created by Anonymous
There are no pages at the moment.