

Fluoride Task List

Team Roles:

Team Coordinator: Pooja

This semester Pooja will be responsible for coordinating Fluoride and CSFBR trip to the EPA P3 expo (including organization and research) as well as overseeing the project report that will primarily be written by Lishan. She will be a liason between both teams and Monroe, and keep track of the team's progress. She will communicate and discuss challenges and accomplishments with the team advisor (Lishan) and Monroe.

Materials Coordinator: Auggie

With an expertise in building reactor systems, Auggie will be responsible for not only ordering necessary materials but leading and educating other team members on the progress of the reactor set-up, and solution creation. He will be responsible (primarily) for learning about the floc blanket systems and flocculation through CSFBR and will be synthesizing and sharing the information he has learned.

Data Coordinator: Katie

Katie is an expert in creating method files, and will be spearheading data collection and analysis with ProCoDa. She will be responsible for speaking with the CSFBR team to better understand their calculations and their MathCAD file, and be synthesizing and relaying this information back to the rest of the team. She will be in charge of beginning the ProCoDa method file. Lastly, she will be responsible for turning to ProCoDa and the data to analyze the differences the between removal rates obtained from the reactor vs obtained removal rates from the sand filter.

*Note: With such a small team, all team members will assist with each task. Names in parenthesis are members who will "spearhead" the task.

February 8, 2015

- Speak with CSFBR to determine reactor set-up and measurements (Team)
- Start building reactor (Auggie)

February 12, 2015

- Complete physical reactor set-up (Auggie)

February 15, 2015

- Enter exhibit information on EPA by deadline (Pooja)

February 19, 2015

- Complete literature review (Katie)
 - Research floc blankets, fluoride, tube settlers
- Determine concentration of desired fluoride solution (Auggie, Pooja)

February 22, 2015

- Create flocculator (Auggie)
 - Research MathCAD file detailing relationship between tube diameter and 'turns'
- Create clay/PACl solution (Pooja)

February 26, 2015

- Complete method file on ProCoDA (Katie)
- Complete flow rate calculations with the help of CSFBR's MathCAD file (Katie)

February 29, 2015

- Begin experimentation with 10 mg/L of fluoride to compare reactor results with sand filter results. (Auggie, Team)

March 31, 2015

- P3 Project Report due at 11:59 (Pooja, Team)
 - 1. Go to <http://www.grants.gov/web/grants/applicants/apply-for-grants.html>
 - 2. Click "Get Application Package" (a red button on the right side of the page).
 - 3. Enter "EPA-G2015-P3-PHASE2" in the Funding Opportunity Number box and click Submit.

April 15-17, 2015

- P3 Competition (Team)

May 1, 2015

- Continue experimentation with varying levels of fluoride. With the bulk of our experiments before P3 involving 10 mg/L of fluoride, it will be important to branch out to both higher and lower raw water concentrations. (Team)
- Continue analyzing the differences between the fluoride removal results obtained through the reactor system and the sand filtration system.
 - Highlight these differences in the final report.

May 11, 2015

- Submit final report

May 20, 2015

- Final Presentation