

me345

Miree Eun's Individual Contribution Page

Spring 2012 Contributions

I joined the Stacked Sand Rapid Filter (SRSF) sub-team of the [Demo Plant team](#) to design and fabricate the filter so that it could be presented at the EPA P3 competition in April of 2012.

As a SRSF team member, I worked with [Meena Selvanathan](#) and [Diana Kelterborn](#). First we completed initial design calculations on MathCAD and ordered parts to begin fabrication. A big challenge we faced was replicating the slotted pipes of the full-scale SRSF on such a small scale. I have drawn the AutoCAD image of the filter and the slotted pipe in detail so that it could clearly present what we are looking for exactly. After contacting many different labs on campus and companies, using a Wire EDM and abrasive wires were available, but too expensive for our budget. As a result, we decided that the slotted pipes can be the most accurately replicated by pipes with compressed springs in them. Lab technician Paul in Holister Hall has helped us a lot to come up with this solution. After fabricating the "slotted pipes", we as a SRSF team successfully fabricated the filter and it could be attached with other parts of the DP. After the EPA P3 competition, I measured the overall plant dimensions and calculated the headlosses using MathCAD. As a team, we also wrote the user manual for the DP and research report.