Detailed Task List

Team Name: Plate Settler Capture Velocity
Team Members: Xiaocan Sun (xs82), Ruonan Zhang (rz233), Yizhao Du (yd99)
Team Advisor: Michael Adelman

Task 1.
Finish all the readings including background on plate settler calculations, and get familiar with apparatus of Plate Settler Capture Velocity.

Task 2.
Meet team advisor and command how to handle the Process Controller. Also, try to operate the whole experimental process for the first time. Record how long it takes for the whole process.

Task 3.
Observe the flocculator to see whether the current lab-scale simulation of flocculation works properly. If so, prepare for the following experiment. If not, we will figure out how to improve it. Carry out a consistency study by running the apparatus under constant conditions and ensuring that consistent performance can be maintained.

Task 4.
Create an efficient system to organize and analyze the experimental data. This will include folders on the AguaClara drive for the Process Controller datalogs, as well as a MathCAD file to download and process the data. Begin the first set of the experiments with coagulant of alum. We fix the raw water turbidity and coagulant dose, and then change capture velocity within the given parameter range. Do a cycle.

Task 5.
Continue with the first set of the experiments with coagulant of alum. We fix the raw water turbidity and capture velocity, and then change coagulant dose within the given parameter range. Do a cycle.

Task 6.
Continue with the first set of the experiments with coagulant of alum. We fix coagulant dose and capture velocity, and then change the raw water turbidity within the given parameter range. Do a cycle.

Task 7.
Begin the second set of the experiments with coagulant of PACl. We fix the raw water turbidity and coagulant dose, and then change capture velocity within the given parameter range. Do a cycle.

Task 8.
Continue with the second set of the experiments with coagulant of alum. We fix the raw water

turbidity and capture velocity, and then change coagulant dose within the given parameter range. Do a cycle.

Task 9.
Continue with the second set of the experiments with coagulant of alum. We fix coagulant dose and capture velocity, and then change the raw water turbidity within the given parameter range. Do a cycle.

Task 10.
Data analysis and report composition.