**The College of New Jersey**

**Civil Engineering Department**

**Thailand Water System Senior Project**

Meeting 1

Date: Wednesday, August 31, 2011, 10:30 AM

Attendance: Dr. Horst, Advisor

Ian Burton, Project Manager

Jayme Lynch

Amanda Feeley

Summary:

The group discussed the general goals of Senior Project I and Senior Project II along with the specific project. The objective of the project, “Thailand Water System,” is to pipe water from a local stream to a set of tanks that would provide extra water to the village of Nong Pit in Thailand.

The goal of Senior Project I is to analyze the data in preparation of the design. From the summer trip, elevations points, distances and water usage data was obtained. The elevations need to be charted to determine the actual and needed head change between the water source and the storage tank location. The water usage needs to be analyzed to determine the amount of water needed for daily storage. The stream cross section needs to be analyzed to determine if there is enough water capable of filling the tanks.

The goal of Senior Project II is to design parts of or different versions of the project. One option for design would consist of each member being responsible for the design of a specific component of the system. These components would consist of structural analysis for the water tanks, a foundation design to support the tanks, and fluid mechanics to transport the water. The other option would be for each member to design an alternative solution. The first of the present three options is a simple design of pipes starting at the stream and ending at the tanks located on the ground which is on a hill above the town. The second option is a series of pipes that run to a water tower in the town and then distribute the water through the village. The final design would consist of a turbine located at the bottom of the waterfall (source) that would power a pump that could move the water to any location whether it be the tanks on the ground or water tower in the town.

The next meeting will be on Wednesday September 7, 2011 at 10:00 am in Dr. Horst’s office. The agenda will consist of the determination of the grade distribution and the finalization of the proposal.