DLA Report 12

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1 Description of what was done

For these two weeks, I primarily worked on my SIAM FRAMSC presentation and on the water table. SIAM FRAMSC went well, I had a great time with Mark, Wenqian, and Christina. It was a good experience and enjoyable first conference! As for the water table, I cut the aluminum honeycomb in half. This allows the honeycomb to stretch further across the table. Mark said that we could place a heavy object on the honeycomb to keep it from moving when the water table is on. I also assembled the PVC for the water table. Then, I cut the existing hose and bought the hose adapters, but have not yet attached the adapters to the hose. I also cut holes in the stock tank and attached the bulkhead tank adapters. Lastly, I caulked the water table's edges and added a duct-tape lip to the open end of the table to prevent leaks as much as possible.

I also learned about the types of connections for pipes. Turns out, there are two primary types of connections:

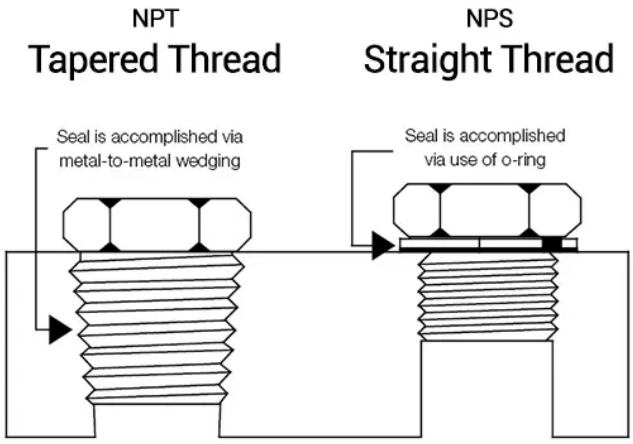

Figure 1: Types of connection threads

The hose's original adapters use NPS whereas the rest of the PVC adapters we have use NPT. The problem is that technically these two threads are incompatible, causing leaks when used with one another. We are using NPT with NPS on any connection with the hose using the original adapters. This includes the connection between the hose and the pump, since the pump is NPT. Thus, the NPS hose and the NPT pump theoretically should cause leaking. I think

it's best to not buy another pair of NPT adapters until we see leaking from the original NPS adapters.

2 Description of Next Steps

- Attach the hose adapters to the ends of the hose that were cut
- Find what to place on top of the aluminum honeycombs to keep them from moving when the table is running
- Run the water table and identify any other problems that need to be resolved

3 Questions

- How tight should PVC fittings be?
- Should we buy another set of pipe adapters for the original hose ends?