Technical Assistance Request – Team D&D and LIT

It is the intent of D&D Manufacturing LLC (D&D) and Partners Low Impact Technologies USA Inc. (LIT) to design, develop, and manufacture a Concentrated Solar Multi-Effect Distillation Unit (CSMED) and, subject to successful progression in the Solar Desalination Prize, install this for initial testing at the Brackish Ground Water National Desalination Research Facility (BGNDRF) in

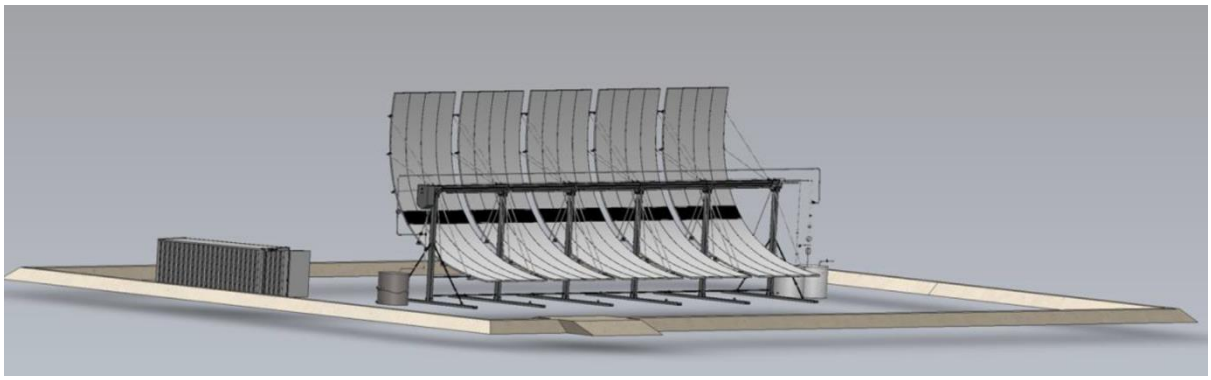

Figure 1 - The Current Unit Design

Alamogordo in New Mexico. BGNDRF is a purpose-built testing ground that brings together researchers from other Federal government agencies, universities, the private sector, research organizations, and state and local agencies to work collaboratively and in partnership. The Research Facility integrates into Reclamation's existing desalination research and development program. It provides the perfect location to field test new innovative systems that will process High salt content brines or otherwise unusable wastewater streams.

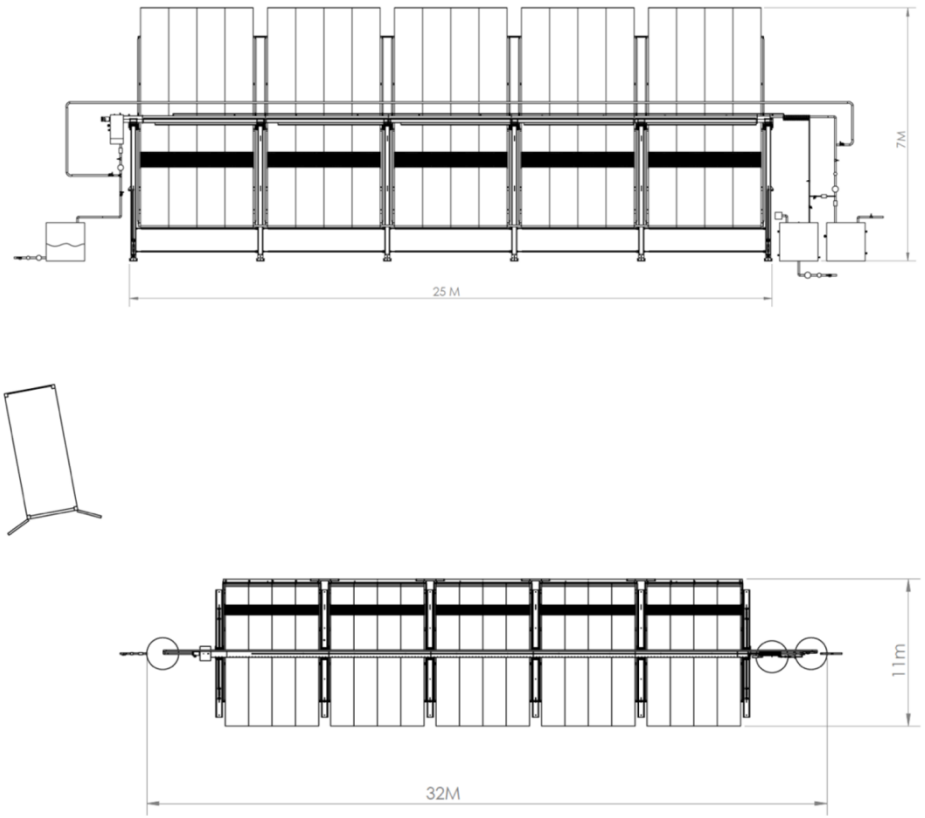

Figure 2 - Footprint and height of constructed unit

The Unit will sit on approximately 3,000 ft2 on the site and process the full quota of the 4,000 gallons of oil-produced water per day in around 3-4 hours that can currently be stored and handled on-site. It is the intention to run testing over a period of 2 weeks in between 1 week each of commissioning and de-commissioning the units.

The total unit excluding the electrical components and pumps will be manufactured in-house at the D&D / LIT manufacturing facility in Fletcher, North Carolina. No additional modifications to our manufacturing plant will need to be made to enable the construction of such a unit. Once complete, the unit will be delivered to the site in one semi-trailer load, and testing will commence.

Technical Assistance

1. Laboratory Work:

a. Temperature versus solubility (max concentration of minerals or other contaminants) before precipitation of minerals/other contaminants for chosen contaminated water mixtures.
b. Vacuum pressure versus solubility (max concentration of minerals or other contaminants) before precipitation of minerals/other contaminants for chosen contaminated water mixtures.
c. The energy required to distill water from chosen contaminated water mixture at desired Vacuum Pressures
d. Ensure that there are no possible Azeotropes formation with any organic compounds

2. Engineering Assistance:

a. Wind loading versus Structure Stresses for the Parabolic Trough
b. Evaluate and Chose Selective Surfaces for the Solar Absorber Unit
c. Evaluate and Chose Needed Insulation Materials for Metal Parts that are not Solar Impinged
d. Evaluate and Chose Needed Clear Insulation Materials for Parts that are Solar Impinged
e. Control System Design and Validation
f. Evaluate Needed Process Reporting System
g. Evaluate and Chose Proper Sensors for Processing