

Senior Capstone Design

Project: **Solar Rocks**

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Date: **2/26/2019**

Design Validation Plan & Results (DVP&R)

Requirement	Test	Test Subject	Target Date	Result	Recommendation
Heat transfer into storage system shall be between 150 and 250 degrees fahrenheit	temperature measurements shall be taken before, after and within storage system.	Initial Prototype	4/7/19		
Chamber shall be able to contain two meters cubed of gravel.	Fill the table in line with construction schedule. Mathmatically determine amount of rock in chamber from order minus leftovers.	Initial Prototype	4/1/19		
Chamber shall be structurally sound and able to withstand applicable forces.	Carefull attention will be made during the gravel filling stage. Any sign of weakness will be evaluated.	Initial Prototype	4/1/19		
In-line heating element shall be able to heat air to a variety of desired temperatures.	Measurements after the in-line heating element shall read temperature data.	Initial Prototype	4/7/19		
Blower shall be able to supply a continuous air flow through the chamber	Run the prototype and check for exhaust velocity	Initial Prototype	4/7/19		
pipng system hshall be able to supply air to the chamber, from the blower and through the heater with minimal loss and no leaks.	soap-water test on all fittings, and pipe temperatrue inspection will determine compliance.	Initial Prototype	4/7/19		
System shall be able to run independent of operator interaction.	Running the prototype for a complete 3 hour cycle.	Initial Prototype	4/7/19		
Data collection shall be available both instantaneously and for a specific run time.	Collect data for a 3 hour cycle.	Initial Prototype	4/7/19		