Verification and Validation Plan for Solar Water Heating Systems Incorporating Phase Change Material

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1 General Informationl

The following section provides an overview of the Verification and Validation (V&V) Plan for a This section explains the purpose of this document, the scope of the system, common definitions, acronyms and abbreviations that are used in the document, and an overview of the following sections

1.1 Purpose

The main purpose of this document is to describe the verification and validation process that will be used to test a simulation for This document is indented to be used as a reference for all future testing and will be used to increase confidence in the software implementation.

This document will be used as a starting point for the verification and validation report. The test cases presented within this document will be executed and the output will be analyzed to determine if the software is implemented correctly.

1.2 Scope

1.3 Definitions, Acronyms, and Abbreviations

symbol	description
QA	Quality assurance
SRS	Software requirements specification
V&V	Verification and validation
V&VP	Verification and validation plan
V&VR	Verification and validation report

1.4 Overview of Document

The following sections provide more detail about the V&V of a . Information about the testing process is provided, and the software specifications that were discussed in the SRS document are stated. The evaluation process that will be followed during testing is outlined, and test cases for both the system testing and unit testing are provided.

2 Plan

This section provides a description of the software that is being tested, the team that will perform the testing, the milestones for the testing phase, and the budget allocated to the testing.

2.1 Software Description

2.2 Test Team

The team that will execute the test cases, write and review the V&VR consist of:

2.3 Milestones

2.3.1 Location

The location where the testing will be performed is Hamilton Ontario. The institution that will be performing the testing is McMaster University.

2.3.2 Dates and Deadlines

2.4 Budget

The budget for the testing of this system is being funded by McMaster University and NSERC

3 Software Specification

This section provides the functional requirements, the business tasks that the software is expected to complete, and the nonfunctional requirements, the qualities that the software is expected to exhibit.

3.1 Functional Requirements

3.2 Nonfunctional Requirements

4 Evaluation

This section first presents the methods and constraints that are to be used during the evaluation process. This is followed by how the data obtained by the testing will be evaluated, which includes: how the data will be recorded, how to move from one test to the next, and how to determine if the test was successful.

4.1 Methods and Constraints

4.1.1 Methodology

4.1.2 Extent of Testing

4.1.3 Test Tools

4.1.4 Testing Constraints

4.2 Data Evaluation

4.2.1 Data Recording

After each test is run the results of the test should be recorded in the following format:
Test ID:
Input:
Expected Output:
Actual Output:
Result: