

Test Report

Prepared For:
Interface Protection Group

Test Performed:
House Blanket Retardant Test

Report No: GVLT-092018-1

Material Receive Date: August 28, 2018

Test Dates: August 28, 2018

Report Date: September 20, 2018

Test Summary

Testing Overview

Test was performed per the customer supplied test profile. A total of 18 Thermocouples were connected inside and around the structure to monitor temperatures during a controlled burn. Data was collected with a Data Acquisition System and stored for evaluation. JA King was only responsible for data collection and the burn was performed by Alabama Forestry Division.

Test Number: GVLT-092018-1

Test Specimen(s): Thermal Protection Blanket

Personnel in Charge of the Test:

Personnel	Client
Shaun Falconer Calibration Technician Office: 615-352-4400	Brian Vaughn Interface Protection Group

General Test Results

Part Number	Intact After Burn	Notes
Building 1	Yes	Building had Minimal Burn Damage
Control Building	No	Full Involvement and Destruction

Client

Interface Protection Group
Contact Name: Brian Vaughn

Test Facility

J.A. King
7103 Juniper Road
Fairview, TN 37062
Phone: 615-352-4400
Contact Person: Shaun Falconer

The following persons verified and guarantee the accuracy and validity of the information presented in this report in accordance the specifications required by the client:



Shaun Falconer
Calibration Technician
J.A. King

Report Revision History

Revision	Description	Date
0	Original Release	09/20/2018



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Table of Contents

Test Summary	2
1 Preliminary.....	5
1.1 Test Methods.....	5
1.2 Procedure/Setup	5
1.3 Equipment Information	5
1.4 Parts Tested	6
1.5 Photographs – Thermocouple Location and Set Up.....	6
2 Mid Test.....	8
2.1 Photographs – Mid Test	8
3 Post Test Evaluation	10
3.1 Photographs – Post Test.....	10
3.2 Evaluation – Visual/Sensory	10
3.3 Thermocouple Data	11

1 Preliminary

1.1 Test Methods

Per customer guidelines, the building was wired with 18 K type thermocouples that were connected to two Graftech GL-240 temperature loggers/data acquisition units. These units were then buried underground in a cooler for their protection and a thermocouple was positioned in the cooler to monitor the temperature of the data acquisition units. During burn a Flir Thermal Imaging Camera was used to verify temperatures and give a heat map of the burn area. Images were taken pre/post and mid test.

1.2 Procedure/Setup

7 Thermocouples were placed in the corners and center of the building and 4 thermocouples were placed on the outside. One thermocouple was placed in the cooler to monitor the data acquisition units. The building was then wrapped with the thermal protection blanket, 6 thermocouples were placed between the building and the blanket. A control (non-wrapped) building was set in front of the test building. The recorders were started and the surrounding woods were set on fire. Images were taken at this point. Test time was taken from the time the control building was set on fire, annotations were made for timing of destruction for the control building. Imaging was made by the FLIR at full involvement and when the fire receded. The next morning after the fire was completely extinguished, the building was re-entered, inspected and the data recorders and thermocouples were removed.

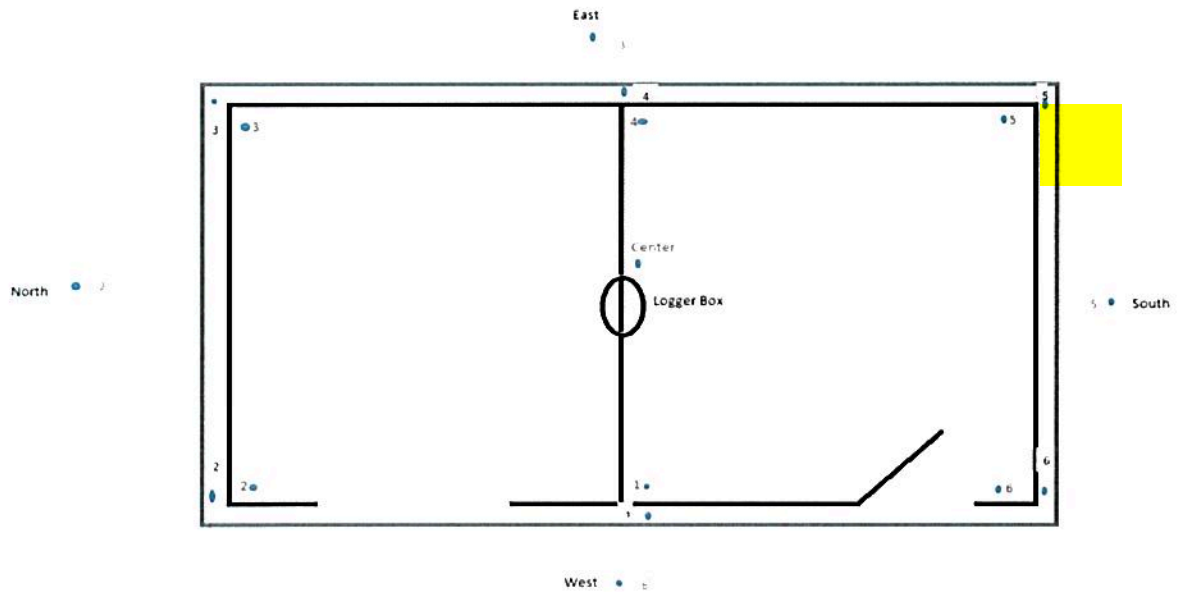
1.3 Equipment Information

- **10 Channel Data Logger:** C80537815 CAL DATE: 08/24/18
- **10 Channel Data Logger:** C80437371 CAL DATE: 08/24/18
- **K Thermocouple Wire:** 1234500577 CAL DATE: 08/19/17 – In Use
08/28/18
- **FLIR Thermal Imaging Camera:** For Reference Only

1.4 Parts Tested

Company	Description	For Use
Interface Protection Group	Fire Protection Blanket	Home Protection Against Burn During Surrounding Fire Such As Forest Fire

1.5 Photographs – Thermocouple Location and Set Up



Initial Thermocouple Set up

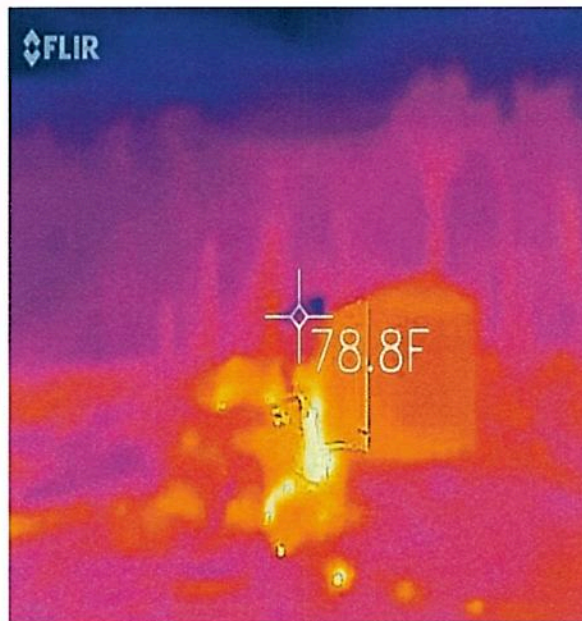


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Pre Test - Standard Image



Pre Test - Flir Image



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2 Mid Test

2.1 Photographs – Mid Test



Initial Catch of Control – Standard Image

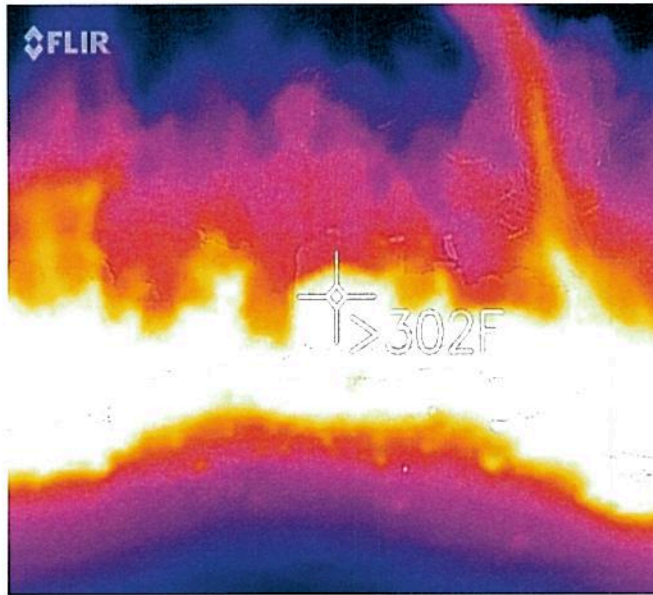


Fully Involved Control – Standard Image



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Fully Involved – Flir Image



Controlled Destruction – Standard Image

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J.A. King and Company

3 Post Test Evaluation

3.1 Photographs – Post Test

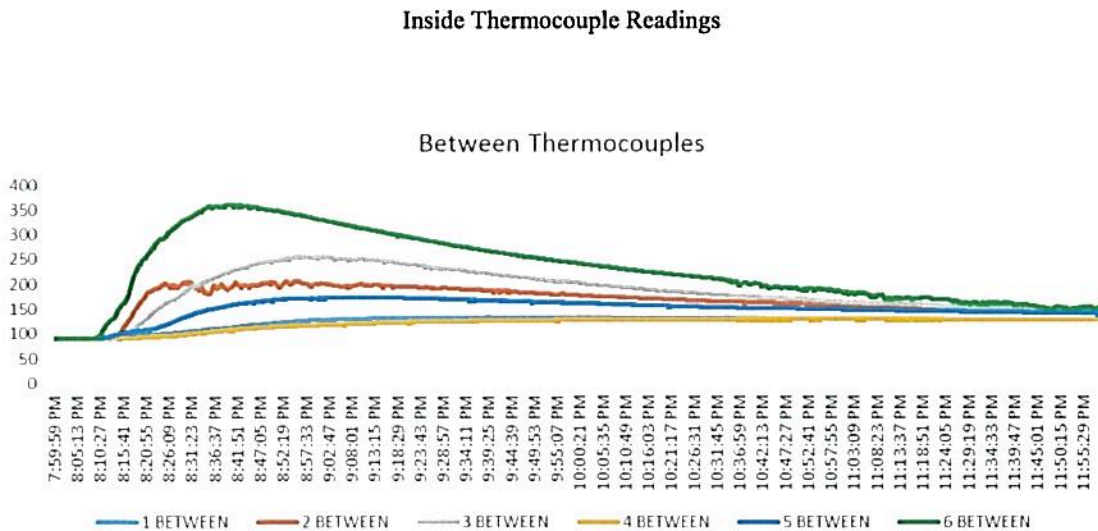
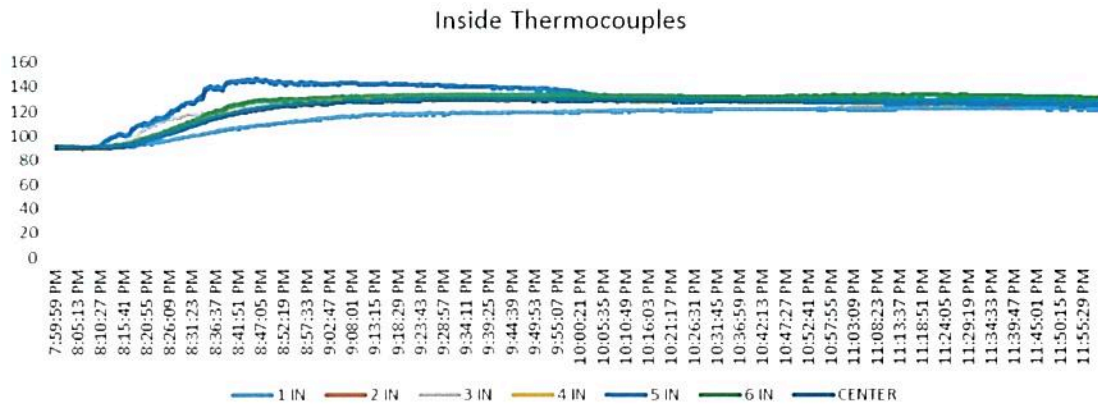


Post Test – Fire Receded – Standard Image

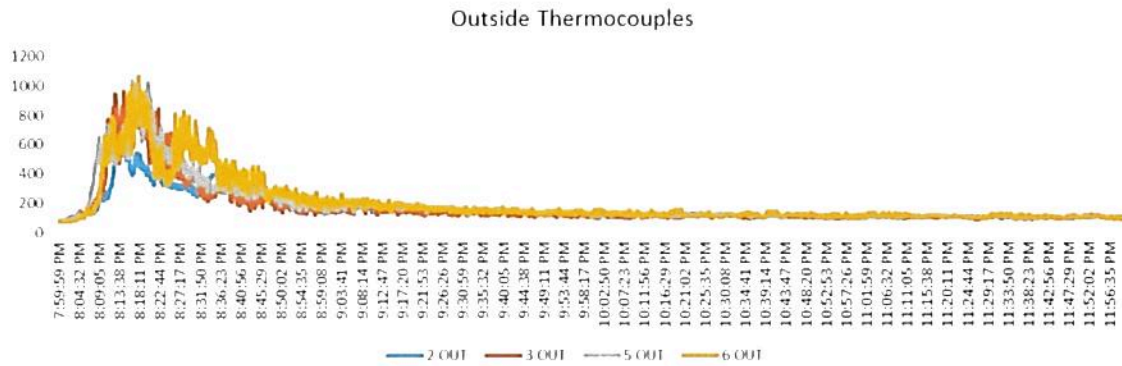
3.2 Evaluation – Visual/Sensory

The burn started at 8:00 pm. Control Building had first Ignition around 8:09pm and was completely destroyed at approximately 8:20pm. The burn temps started decreasing around 8:27pm and was settling around 10:00 pm with the test structure still intact and no burn on the thermal wrap. At re-entry the building appeared unharmed and there was no lingering smoke smell. The thermocouples were unharmed and the data acquisition systems were in working order.

3.3 Thermocouple Data



Between Thermocouple Readings



Outside Thermocouple Readings

***** See Separate File Raw Data for Report GVLT 092018-1 *****