

March 2, 2020

Mr. Chris Berry  
Heaven's Trail

Subject: **Report of Product Testing**  
**Product Designation: Heaven's Trail "Belt"**  
**SGS TEC Project # 18-1471**  
**SGS TEC Lab No. 20-T023**

Dear Mr. Berry:

SGS Testing, Engineering and Consulting Services, Inc. (SGS TEC Services) is an independent testing laboratory with a quality system accredited by AASHTO R18, ANS/ISO/IEC 17025:2005, and the Army Corp of Engineers. SGS TEC Services is pleased to present this report of our test results for the subject submitted product. The testing was performed at our Lawrenceville, Georgia facility in February of 2020. The product was first received on February 19, 2020. Our services were performed in accordance with the terms and conditions of our Service Agreement (SGS TEC PRO 18-1471). The test results presented only pertain to the product tested.

The purpose of our testing was to determine the mechanical properties of the submitted product in accordance with Section 8.1 of ASTM F2337-19 *Standard Test Method for Treestand Fall Arrest System (FAS)*. One Occupational Protective Belt was submitted along with subsequent attachment hardware and user instructions (Photo 1). Details pertaining to the submitted product are reported in Table 1. The instructions were reviewed for proper donning and use of the subject submitted product.

The following tests were conducted per ASTM F2337-19 on the Occupational Protective Belt:

1. Section 8.1 – 350 lbs. Drop Test – Climbing Belt

#### **Section 8.1 – 350 lbs Drop Test – Climbing Belt**

The occupational belt was fitted to a drop test torso weighing  $350 \pm 3$  lbs. per the manufacturer's instructions (Photo 2). The assembly was then attached to a permanent stop composed of a 3-inch wooden dowel securely installed to a wooden pole with a diameter of  $10 \pm 1$  inch. The belt was then adjusted to a length which provided a horizontal distance of 24 inches to the face of the pole. The effective length of the climbing belt between the attachment points per section 8.1.3 was 68 inches. Prior to the drop test being performed the entire assembly was lowered allowing the full weight of the setup to be supported by the lanyard/ belt. This step was introduced to aid in seating the prusik knot to the lanyard rope. The torso was then vertically raised until achieving a horizontal gap distance of  $3 \pm 1$  inches from the torso to the closest perimeter of the pole (Photo 3). From this point the torso was dropped in a vertical free fall in a feet first position. The torso was then allowed to hang suspended by the lanyard/belt for a period of 2 minutes (Photo 4 & 5). At the conclusion of the 2-minute period the torso was lowered to the ground and inspected for damage.

**Table 1 - Summary Test Results**

<b>ASTM F2337 Section 8.1</b>	
Torso Weight or Load (lbs.)	350
Total Length of positioning lanyard (in.)	144
Horizontal Gap Distance (in.)	24
Effective Length (in.)	68
(Post-Test) Prusik Knot Slippage Length (in.)	8.5
Loss of Components	No
Did Torso Contact Ground	No
Post Test 2-minute Hang Time Criteria	Pass
Overall Performance	Pass

**Summary**

- At no time during testing did the test torso come in contact with the ground, result in a loss of component, nor detach from the full body harness or anchorage point
- No damage was observed in connecting hardware such as cracks or permanent deformation
- The torso was able to be suspended for a duration of 2 minutes following the test

We appreciate the opportunity to provide our services to you on this project. Please do not hesitate to contact us at your convenience if you have any questions about this report or if we may be of further assistance.

Sincerely,

**SGS TESTING, ENGINEERING & CONSULTING SERVICES, INC.**



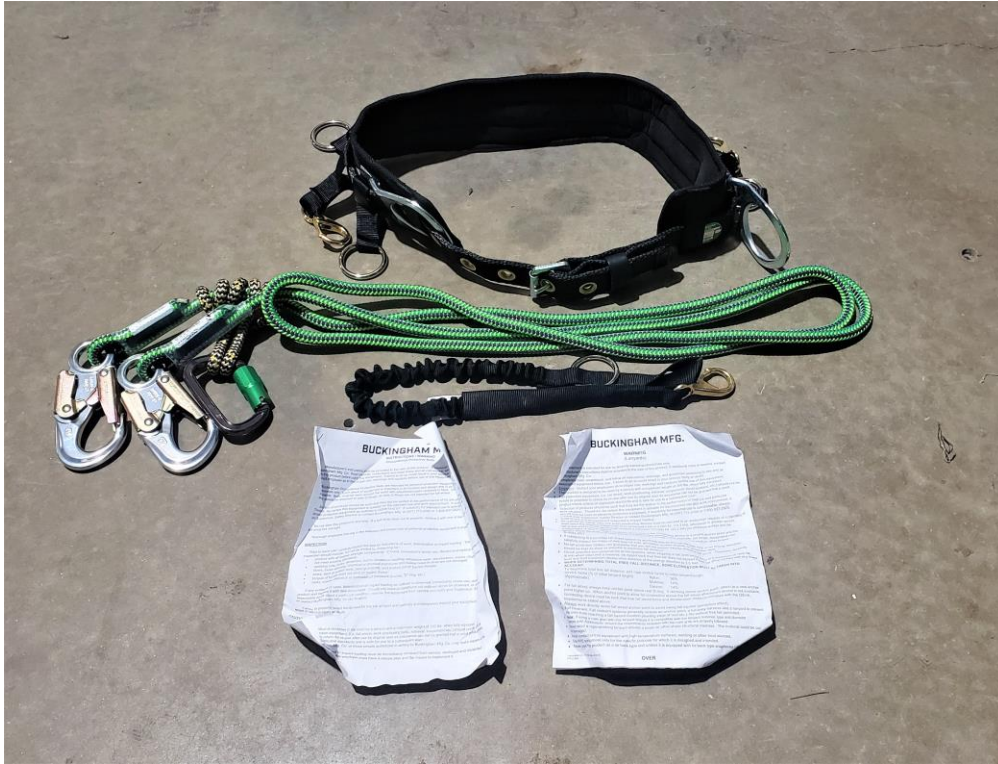
James G. McCants III  
Laboratory Manager, Chemist



Zack Mooney  
Project Manager

Attachments: Photos 1-5

**Photo 1 – Product as Received**



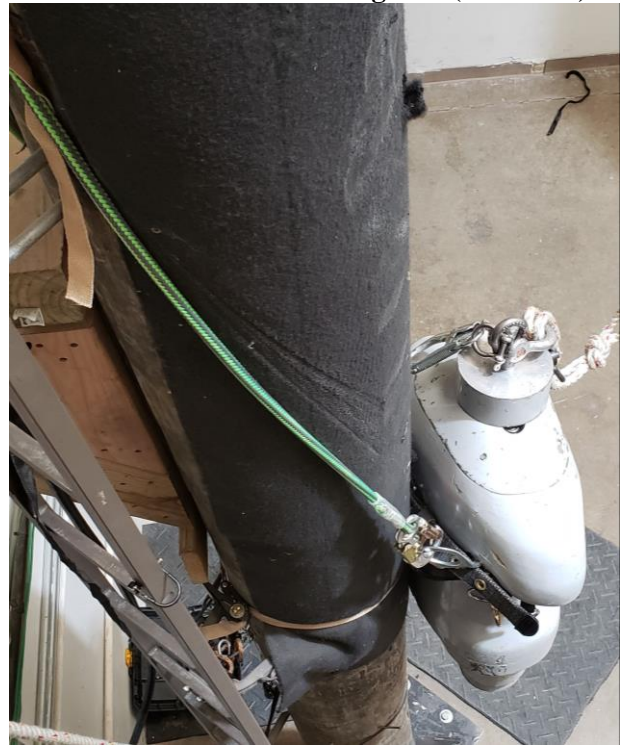
**Photo 2 – Pre-Test (Front View)**



**Photo 3 – 350 lbs. Climbing Belt (Pre-Test)**



**Photo 4 – 350 lbs. Climbing Belt (Post-Test)**



**Photo 5 - 350 lbs. Climbing Belt (Post-Test)**

