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DYESS-PETERSON TESTING LABORATORY, INC

Arrwillo, Texas 79120
 P.O. Box 30699
(806) 372-4911 • Fax (806) 572-552

PROFESSIONAL TESTING

tubbock, Texas 79424
 5853 49th Street
 (806) 785-8378 • Fax (806) 785-1959

June 8, 2009

Larry Touchon 2219 S.E. 23<sup>rd</sup> Avenue

Amarillo, Texas 79103

Re: Mason Greenstar Blox Building Product

Mr. Touchon,

As requested by you, I was at the intersection of 6<sup>th</sup> Avenue and Johnson Street in Amarillo, Texas on May 19, 2009 at 1.00pm. The purpose of the site visit was to witness the loading and exposure to fire of a wall constructed of Greenstar Blox. It is my belief that the testing of this building product was to provide verification information to gain approval from the City of Amarillo Code Enforcement department in order to be utilized in construction of low-income houses. This Greenstar Blox building product is a building block comprised of recycled short-fiber cellulose, Portland cement, water and an organic curing agent admixture. These blocks are 10" wide. 14" long and 4" thick.

Mr. Touchon provided me a copy of American Standards for Testing Materials (ASTM) Designation E 119-05a to use as testing basis for this project. This specification states that for load bearing walls the sample area should be not less than 100 square feet ( $ft^2$ ) with neither dimension less than 9 feet. It also states that a superimposed load be applied throughout the fire endurance test to simulate a maximum load condition. It is also required that thermocouples or thermometers be installed in the building material wall to measure temperatures. Mr. Touchon stated that he didn't have the capabilities to install thermocouples or thermometers, build a 100 ft<sup>2</sup> wall section or provide a controlled loading apparatus, therefore could only utilize the tools he had available. A L-sloped wall section was constructed outdoors at 6<sup>th</sup> Avenue and Johnson Street. The wall section was 4'-8 Yf in length for one (1) leg and 4'-3<sup>1</sup>/i" in length for the other leg (outside dimensions). The height of the wall was 3'-8" tall, with the thickness of the wall being 10 inches including the bonding and coating cement. This wall was constructed using two (2) blocks cemented together side by side. Due to the limited resources Mr. Touchon has available a temperature gun, propane tank with torch and plastic drum barrel filled with water were utilized for testing procedures.

A 2' wide section of the wall was utilized for testing. On top of this 2' wide section a 30 gallon plastic drum barrel was placed then filled with water (weight = 250 pounds). The torch (approximately 12 inches away from the wall) was directed at a spot approximately 18 inches from the top of the wall and lit. The initial area of heat exposure to the wall was approximately 5.5 inches in diameter. Using the

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