H.P. WHITE LABORATORY, INC.

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6 April 2009 (HPWLI 11172-01A)

ISBI-Level X-CPS 5301 SW 184 Way Miami, Florida 33029

Attention: John Murphy

Gentlemen:

In accordance with your instructions, H.P. White Laboratory, Inc. conducted ballistic resistance testing of one transparent armor sample received 9 October 2008 via United Parcel Service.

Testing was conducted in accordance with your instructions, and the abbreviated provisions of EN1063, Level BR6, using caliber 7.62x51mm, 149 grain, M80, Ball ammunition. The test sample was rigidly fixtured on an indoor range 32.8 feet from the muzzle of a test barrel to produce zero degree obliquity impacts. Photoelectric lumiline screens were positioned at 23.5 and 26.5 feet which, in conjunction with elapsed time counters (chronographs), were used to compute projectile velocities 25.0 feet forward of the muzzle. Penetrations were determined by visual examination of a 0.002 inch thickness aluminum foil witness panel positioned 20.0 inches behind, and parallel to, the test sample. Table I presents a summary of the attached data record.

TABLE I. SUMMARY OF RESULTS

7	Test Sample		Ballistic Threat					Results
Number	Thickness	Weight	Obliquity	Caliber	Shots	Velocity (fps)		Penetrations
	(in) (a)	(lb)	(degrees)		(b)	Maximum	Minimum	Telletrations
SAMPLE 1 (0292)	1.772	45.07	0	7.62, M80	5(c)	2742	2715	0

- (a) Average of four corner thicknesses.
- (b) Three impacts on vertices of a 120mm equilateral triangle.
- (c) Data for fair impacts only.

This report is based on data obtained from having tested only the sample submitted, and should NOT be interpreted as an endorsement by H.P. White Laboratory, Inc. of the continuing quality, or performance, of any other items of the same, or similar, design.

The test sample is being returned via United Parcel Service. Should you have any questions regarding this matter, or if we may be of any further service, please do not hesitate to contact us.

Very truly yours,

H.P. White Laboratory, Inc.

Craig B. Dunn

CBD/tc Enclosure



H.P. White Laboratory, Inc.

BALLISTIC RESISTANCE TEST

Client: ISBI-LEVEL X-CPS

Job No.: 11172-01

Test Date : 3/30/09

TEST PANEL

Manufacturer: ISBI-LEVEL X-CPS Size: 19.75 X 19.75 in.

Thicknesses: 1.780, 1.776, 1.769, 1.762 in.

Avg. Thick.: 1,772 in.

Description: LAMINATED TRANSPARENCY

Sample No.: SAMPLE 1 (0292)

Weight: 45.07 lbs.

Hardness: NA Plies/Laminates : NA Via: UPS

Date Rec'd.: 10/9/08

Returned: UPS

SET-UP

Shot Spacing: 3 SHOTS ON A 120MM TRIANGLE

Witness Panel: 0.002" ALUMINUM FOIL

Obliquity: 0 deg. Backing Material : NA

Conditioning: AMBIENT

Primary Vel. Screens: 23.5 ft., 26.5 ft.

Primary Vel. Location: 25.0 ft. From Muzzle

Residual Vel. Screens : NA

Residual Vel. Location : NA Range to Target: 32.8 ft.

Target to Wit.: 20.0 in.

Range No.: 3

Temp.: 51 F

BP: 29.56 in. Hg

RH: 47%

Barrel No./Gun: R3.308

Gunner: CONTRERAS J.

Recorder: BONSALL

AMMUNITION

(1): 7.62mm Ball, M80, 149 gr.

(2):

(3): (4):

Lot No.: Lot No. :

Lot No.:

Lot No.:

APPLICABLE STANDARDS OR PROCEDURES

(1): EN1063 BR6 (ABBREVIATED)

(2): REQUIRED VELOCITY: 2690-2756 fps.

(3):

Shot No.	Ammo.	Time 1 (usec)	Velocity 1 (ft/s)	Time 2 (usec)	Velocity 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes	
1 2 3 4 5	1 1 1 1 1 1 1	1119 1117 1104 1106 1092	2681 2686 2717 2712 2747	1118 1117 1100 1104 1096	2683 2686 2727 2717 2737	2682 2686 2722 2715 2742	None None None None None	(a) (a) (b) (c)	
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REMARKS:

FOOTNOTES:

(a)INSUFFICIENT VELOCITY (b)SHOT #4 TO REPLACE SHOT #1 (c)SHOT #5 TO REPLACE SHOT #2