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7 August 2003
(HPWLI 9145-01A)

Off the Wall Products LLC
P.O. Box 1461
Salt Lake City, Utah 84110-1461

Attention: Mr. Mark Christensen

Gentlemen:

In accordance with your instructions, H.P. White Laboratory, Inc. conducted ballistic resistance testing of three water-filled polyethylene barriers (see model numbers below) received 21 April 2003 and 14 July 2003 via Federal Express and Central Transport, respectively.

Testing was conducted in accordance with your instructions using caliber .50 Browning, 662 grain, M33, Ball ammunition; caliber .50 Browning, 708 grain, M2, AP ammunition, and caliber 20mm, 830 grain, fragment simulator projectiles conforming to the provisions of MIL-P-46593A. The test samples were positioned on an outdoor range 25.0 feet from the muzzle of a test barrel to produce zero degree obliquity impacts. Electro-optical screens were positioned at 10.0 and 20.0 feet which, in conjunction with elapsed time counters (chronographs), were used to compute projectile velocities 15.0 feet forward of the muzzle. Penetrations of the barrier samples were determined by visual examination of a 0.020-inch thick alloy 2024T3 aluminum witness panel positioned on the rear surface of the barrier samples. Table I below presents a summary of the test data.

TABLE I. SUMMARY OF RESULTS

Test Sample		Ballistic Threat			Penetration	Remarks
Model Number	Dimensions (in)	Caliber	Shots (a)	Velocity (fps)		
MB-42x72	42 x 72 x 24	.50, M33, Ball	1	2891	0	(b)
		.50, M2, AP	1	2909	1	(c)
		20mm FSP	1	2547	1	(d)
MB-42x96 JSS	42 x 96 x 24	.50, M33, Ball	1	2889	1	(e)
MB-31x120	31 x 120 x 24	.50, M33, Ball	1	2901	1	(f)
		.50, M2, AP	1	2894	1	(g)
		20mm FSP	1	2519	1	(h)

(a) Impacts on vertical centerline of barrier samples.
(b) 8 inch tear on top front seam; 5 inch tear on top back seam.
(c) 10 inch tear on top front seam; 27 inch tear on top back seam; 2 inch tear on rear side opposite projectile impact.
(d) 19 inch tear on top front seam; 9 inch tear on front side; 29 inch tear on top back seam
(e) 41 inch tear on back side; 5x7 inch hole on back side; testing terminated.
(f) Two 3 inch tears on top front seam; one 5 inch tear on top front seam; two 2 inch tears on top back seam.
(g) One 2 inch tear on top front seam; one 5 inch tear on top front seam; one 6 inch tear on top front seam; one 2 inch tear on top back seam; one 9.5 inch tear on top back seam.
(h) One 2 inch tear on top back seam; one 10 inch tear on top back seam; one 33 inch tear on front side; one 21 inch tear on front side.

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Based on the data presented in Table I, the caliber .50 Browning, M33, Ball projectile did not penetrate the alloy 2024T3 witness panel positioned on the rear surface of the Model MB-42x72 barrier sample. All other impacts on this sample, and all other samples, penetrated the respective witness panels. This conclusion is based on data obtained from having tested only the samples 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.

Please find post-test photographs of the barrier samples enclosed herein.

In accordance with your instructions, the test samples are being discarded. Should you have any questions regarding this matter, or if we may be of any further assistance, please do not hesitate to contact us.

Very truly yours,

H.P. WHITE LABORATORY, INC.

A handwritten signature in black ink, appearing to read 'Craig B. Dunn', with a stylized flourish extending to the right.

Craig B. Dunn

CBD/mw
Enclosures