

FFSDEP Field Test Summary

Item	Portadam	Hesco Bastion	Sandbags	RDFW
ROW Used (Feet)	10	25	25	22
Footprint Width (feet)	15	4	12	6
Structure Length (feet)				
Riverward Face	103	98	101	101
East Tieback	41	49	32	41
West Tieback	41	49	30	45
Ease of Construction				
Time (hours)	5.1	8.9	30.5	7.5
Effort (man-hours)	26.2	57.5	453.1	48.4
Manpower (number of laborers)	5	7	Up to 20 (fill bags) Up to 27 (place bags)	7
Equipment	Ratchet and Socket Shovels Trenching Machine	Shovels 2 Bobcat Loaders	Hogan Automatic Speed Sandbagger (Model ASB-3) Shovels Bulldozer Trailer	Shovels 2 Bobcat Loaders
Fill (cubic yards)	450 sandbags	91	132	85
Durability	All products stayed in the field for 2 months and subjected to hot, wet weather.			
	No Deterioration	No Deterioration	Significant deterioration of bags (bags not to specifications)	Plastic material more brittle, not as flexible as when constructed
Varying Terrain	The field test site was relatively flat with a mild slope from the protected side of each structure to the riverward side.			

FFSDEP Field Test Summary (Continued)

Item	Portadam	Hesco Bastion	Sandbags	RDFW
Ease of Removal				
Time (hours)	2.9	8.7	2.6	17.3
Effort (man-hours)	12.6	36.3	3.5	113.4
Manpower	5	7	2	Up to 11
Vendor Representatives	1	2	N/A	2
Laborers	4	4	0	8
Operators	0	1	2	1
Equipment	Ratchet and Socket Banding Tool Front End Loader Forklift	Shovels Pin Removal Bar Front End Loader Forklift	Front End Loader Bulldozer	Hand Held Vacuums Air Compressor Shovels Pumps with fire hose Vacuum Truck Track Hoe Front End Loader Forklift
Seepage (gallons / hour)				
For 100 sq ft Wetted Area	200	300	0	50
For 200 sq ft Wetted Area	300	2300	0	200
For 300 sq ft Wetted Area	500	3900	50	700
For 400 sq ft Wetted Area	550	6000	300	900
For 500 sq ft Wetted Area	600	---	800	1500
For 600 sq ft Wetted Area	600	---	3200	---
Repairs	All Minor – Structural Integrity Not Threatened			
	Raised 2 Sags In Top Of Liner	Attempted To Seal Joints Between Units With Plastic Sheeting and Bentonite	Attempted to Reduce Through Seepage By Covering With 2 Sheets of Plastic	Added Sand Fill After Initial Sand Fill Settled

FFSDEP Field Test Summary (Continued)

Item	Portadam	Hesco Bastion	Sandbags	RDFW
Damage	None	Some Coils and Panels Damaged Due to Use of Heavy Machinery for Removal	Significant Deterioration of Bags Due to Exposure to Elements	Some Units Damaged Primarily Due to Use of Heavy Machinery for Removal
Reusability (percent)	100	> 95	0 – All Disposed	95