

## APPENDIX F

# Assessment and Computation Tables

## PRINCIPLES

The tables that follow were developed by the Command and General Staff College for assessing such exercise effects as personnel losses and equipment damage and for computing emplacement or deployment times. When battle simulations support an exercise, the tables from the simulations should be used. Other field manuals and training circulars, such as FM 101-10-1, contain data and tables that should be used, as appropriate, in the assessment procedures. Locally produced tables and procedures should be used judiciously. Within any exercise, all participating elements must use the same tables.

To determine armored vehicle kill

probability (AVKP), umpires follow the procedure below.

### STEP 1

First, opposing umpires determine task organization based only on the part of the unit that is in contact. For instance, one armored platoon, two mechanized infantry platoons, and two TOW sections may be opposing each other. Each of these elements has a kill potential in the following ranges: 1,000 meters, 1,000-2,000 meters, and 2,000 meters and beyond. At 500 meters or less, each can also inflict casualties. Umpires total the kill potential of all elements for each range, using Table 27.

	RANGE IN METERS			
	1,000	1,000-2,000	2,000	500 (Casualties)
<b>US</b>				
1 Tank platoon (105-mm)	4	2	1	12
1 Mechanized platoon	3	0	0	20
1 TOW section	1	2	1	3
<b>Totals</b>	<b>8</b>	<b>4</b>	<b>2</b>	<b>35</b>
<b>OPFOR</b>				
1 Tank platoon (105-mm)	4	2	1	12
2 Mechanized platoons	6	0	0	40
2 TOW sections	2	4	2	6
<b>Totals</b>	<b>12</b>	<b>6</b>	<b>3</b>	<b>58</b>

### STEP 2

Opposing umpires then exchange their accompanied unit AVKP. The totals above, for instance, would be exchanged as follows:

US to OPFOR            **8/4/2/35**  
 OPFOR to US            **12/6/3/68**

### STEP 3

The umpires then adjust the AVKP they received for posture, visibility conditions, and the amount of indirect fire being used to suppress the opposing forces. They adjust the AVKP for these factors by referring to the direct fire adjustment table (27).

### Example 1

US forces are in defensive/prepared positions (2 to 8 hours). Heavy rain reduces visibility. The US is firing light suppression on OPFORs located 1,500 meters from US positions. The AVKP US received from OPFOR is 12/6/3/58. By entering the adjustment table at 6 (1,500 meters) and reading across, the umpire determines that the posture adjustment is 3. The umpire then enters the visibility table at 3 and adjusts for rain. The AVKP is reduced to 2. Finally, the umpire enters the suppression table at 2 and, reading across to light suppression, determines an AVKP of 2. Thus, at a range of 1,500 meters, the OPFOR has the potential to kill 2 US armored vehicles in each five minutes of contact.

### Example 2

The OPFOR is attacking 900 meters from US defensive positions. There is no night illumination, and heavy suppression is being fired on US positions. The AVKP that OPFOR received from US is 8/4/2/35. Entering the table at 8 and reading across, the umpire would determine that there is no target posture adjustment. The OPFOR is moving or in open positions; the night illumination adjustment is 4; the heavy suppression adjustment is 2. Thus, at a range of 900 meters, the US has the potential to kill 2 OPFOR armored vehicles in each five minutes of contact.

### Example 3

The US is attacking and has breached a minefield 900 meters from the OPFOR. The US umpire takes the AVKP previously received from the OPFOR controller—8/4/2/35—and makes a special AVKP adjustment. Using the AVKP for 900 meters, which is 8, the umpire enters the direct fire adjustment table (27) in the Moving or Open

column and reads directly across to the Canalized Crossing Obstacle column where the AVKP increases to 10. This number reflects the increased vulnerability for crossing an obstacle through a narrow breach. Other adjustments are made for visibility and suppression. The adjusted AVKP is assessed for each 55-minute period the US is moving through the breached obstacle.

### STEP 4

From the above calculations, the umpires determine that the OPFOR now has the capability to inflict 2 armored vehicle losses per 5 minutes of engagement on the US forces and that the US can inflict 2 armored vehicle losses per 5 minutes of engagement on the OPFOR.

When more than one unit opposes a single unit, umpires use the cumulative AVKP in assessing losses. For example, an umpire may receive AVKPs from two opposing controllers:

	10/7/3/20
	6/5/1/30
Total	16/12/4/50

The umpire then adjusts the cumulative AVKP for target posture, illumination, and suppression. When a company is attacked by two opposing companies, the AVKP is divided and forwarded to each opposing controller. For example, a company in such a posture has an AVKP of 10/6/4/18. The umpire forwards an AVKP of 5/3/2/9 to each opposing controller.

### DIRECT FIRE TABLES

To determine the effects of direct fires, umpires use the tables below, as appropriate.

## Appendix F/Assessment and Computation Tables

TABLE 27. DIRECT FIRE ADJUSTMENT TABLE.

TARGET POSTURE					VISIBILITY				SUPPRESSION		
Moving or Open	Hasty (In Position Less Than 2 Hours)	Improved (In Position 2-8 Hours)	Prepared (In Position 8-24 Hours) or in Towns	Canalized Crossing, Obstacle Covered by Fire	Day- light	Fog, Snow, Heavy Rain, Sleet, Smoke	Night (Illumi- nation)	Night (No Illumi- nation)	Hot Sup- pres- sion	Light Sup- pres- sion*	Heavy Sup- pres- sion**
1	1	1	0	2	1	1	1	0	1	1	1
2	2	1	1	3	2	2	1	1	2	2	1
3	2	2	1	4	3	2	2	1	3	2	2
4	3	2	1	5	4	3	2	1	4	3	2
5	4	3	1	6	5	4	3	1	5	4	3
6	5	3	2	8	6	5	3	2	6	5	3
7	5	4	2	9	7	5	4	2	7	5	4
8	6	4	2	10	8	6	4	2	8	6	4
9	7	5	2	12	9	7	5	2	9	7	5
10	8	5	3	13	10	8	5	3	10	8	5
11	8	6	3	15	11	8	6	3	11	8	6
12	9	6	3	16	12	9	6	3	12	9	6
13	10	7	3	17	13	10	7	3	13	10	7
14	11	7	4	19	14	11	7	4	14	11	7
15	11	8	4	20	15	11	8	4	15	11	8
16	12	8	4	21	16	12	8	4	16	12	8
17	13	9	4	23	17	13	9	4	17	13	9
18	14	9	5	24	18	14	9	5	18	14	9
19	14	10	5	25	19	14	10	5	19	14	10
20	15	10	5	27	20	15	10	5	20	15	10
21	16	11	5	28	21	16	11	5	21	16	11
22	17	11	6	29	22	17	11	6	22	17	11
23	17	12	6	30	23	17	12	6	23	17	12
24	18	12	6	31	24	18	12	6	24	18	12
25	19	13	6	34	25	19	13	6	25	19	13
26	20	13	7	36	26	20	13	7	26	20	13
27	20	14	7	37	27	20	14	7	27	20	14
28	21	14	7	37	28	21	14	7	28	21	14
29	22	15	7	38	29	22	15	7	29	22	15
30	23	15	8	39	30	23	15	8	30	23	15

**LEGEND**

\*Light Suppression - 2 or fewer batteries.      \*\*Heavy Suppression - more than 2 batteries.

TABLE 28. DIRECT FIRE ENGAGEMENT (AVKP).

UNIT	POTENTIAL ARMORED VEHICLE KILLS PER 5 MINUTES			
	RANGE IN METERS	50-1,000	1,000-2,000	2,000-3,000 PERSONNEL
<b>US</b>				
Tank platoon (3 tanks, 105-mm)	3	1	1	8
Tank platoon (4 tanks, 105-mm)	3	2	1	10
Tank platoon (5 tanks, 105-mm)	4	2	1	12
Tank platoon (3 tanks, 152-mm)	1	3	1	5
Tank platoon (4 tanks, 152-mm)	1	3	2	6
Tank platoon (5 tanks, 152-mm)	1	4	2	8
Armored cavalry platoon	3	4	2	13
Scout platoon	2	3	1	10
Rifle platoon (mechanized)	3	-	-	20
Rifle platoon (foot)	2	-	-	15
Combat engineer platoon	1	-	-	10
Combat engineer platoon (CEV)	2	-	-	10
TOW section (2 TOWs)	1	2	1	3
AH platoon	3	4	4	10
Air cavalry section (2 AH, 2 OH)	1	2	2	4
FA battery (155-mm/8-inch)	2	1	1	36
FA battery (105-mm)	2	2	1	24
Vulcan ADA platoon	-	-	-	12
<b>OPFOR</b>				
Tank company	7	5	2	18
Motorized rifle company	8	9	2	23
Reconnaissance company	2	2	1	11
Antitank company (100-mm)	2	1	-	6
Antitank company (missile)	1	2	1	3
AH company (Hind)	5	6	5	18
FA battery	2	1	1	25

LEGEND: CEV - combat engineer vehicle OH - observation helicopter

*Notes:* The data above is a guide. Controllers must adjust for target posture, visibility, and suppression. They must apply judgment to account for reduced effectiveness because of combat losses.

Crew loss per armored vehicle kill is 3 personnel.

Against wheeled or unarmored vehicles, the above losses double.

Personnel casualties are the total casualties against a dismounted element, regardless of total elapsed time of engagement.

Potential armor vehicle kills for a 105-mm FA battery are not valid against tanks.

To determine personnel casualties in a pure infantry versus infantry combat situation, refer to Tables 30, 31, and 32.

**TABLE 29. INFANTRY FIRES VERSUS INFANTRY PERSONNEL.**

ATTACKING UNIT	TARGET UNIT	
(Infantry, Stationary)	(Infantry, Open or Moving) Casualties/Probabilities	
	PLATOON	COMPANY
Mounted platoon	2/1-85 4/86-100	2/1-50 4/51-67 6/68-83 8/84-100
Mounted company	2/1-34 4/35-50 8/51-100	3/1-34 8/35-68 12/69-85 20/86-100
Dismounted platoon	2/1-50 4/51-68 6/69-85 8/86-100	2/1-34 4/35-50 6/51-68 8/69-100
Dismounted company	2/1-50 6/51-68 10/69-85 12/86-100	10/1-34 12/34-50 14/51-68 20/69-85 24/86-100
	TARGET	ADDED CASUALTIES
	Dismounted platoon (attack)	11
	Dismounted company (attack)	18
	Defending platoon	4
	Defending company	9

*Note:* To obtain probabilities, umpires use Table 44 and then enter the target unit column for casualties. The table assumes light or moderate indirect fires. For heavy fires (Battery 4, Battalion 1, or above), umpires add casualties, as shown above.

**TABLE 30. INFANTRY AMBUSH.**

ATTACKING UNIT  (Infantry, Stationary)	TARGET UNIT  (Infantry, Open or Moving) Casualties/Probabilities	
	PLATOON	COMPANY
Mounted platoon	2/1-50	2/1-17
	6/51-85	4/18-50
	8/86-100	8/51-68
		10/69-85 12/86-100
Mounted company	2/1-17	12/1-17
	6/18-34	14/18-34
	8/35-50	18/35-50
	10/51-68	21/51-67
	12/69-85	26/68-85
	18/86-100	32/86-100
Dismounted platoon	2/1-17	4/1-17
	4/17-50	6/17-34
	6/51-67	10/51-67
	10/68-100	12/68-85
		14/86-100
Dismounted company	4/1-17	22/1-17
	8/18-50	26/18-34
	10/51-67	40/34-50
	14/68-85	48/51-67
	24/86-100	66/86-100
	<b>TARGET</b>	<b>ADDED CASUALTIES</b>
	Dismounted platoon (attack)	11
	Dismounted company (attack)	18
	Defending platoon	4
	Defending company	9

*Notes.* This table is for use during an ambush or the initial assault phase of airborne operations. It should be used until the landing zone is secured.

To obtain probabilities, umpires use Table 44 and then enter the target unit column for casualties. The table assumes light or moderate indirect fires. For heavy fires (Battery 4, Battalion 1, or above), umpires add casualties, as shown above.

TABLE 31. CLOSE ASSAULT (ATTACKER/DEFENDER FRACTIONAL LOSSES).										
RANDOM NUMBER	ATTACK TO DEFENSE RATIO									
	1:3	1:2	1:1	2:1	3:1	4:1	5:1	6:1	7+:1	
1-17	A .50/0	A .45/.05	A .40/.10	A .35/.15	A .30/.20	A .25/.25	B .20/.30	C 0/0	D .10/.40	D .10/.40
18-34	A .45/.05	A .40/.10	A .35/.15	A .30/.20	A .25/.25	B .20/.30	C 0/0	D .10/.40	D .05/.45	D .05/.45
35-50	A .40/.10	A .35/.15	A .30/.20	A .25/.25	B .20/.30	C 0/0	D .10/.40	D .05/.45	D .05/.45	E 0/1.0
50-67	A .35/.15	A .30/.20	A .25/.25	B .20/.30	B .15/.30	C 0/0	D .05/.45	D 0/1.0	E 0/1.0	E 0/1.0
68-85	A .30/.20	A .25/.25	B .20/.30	B .15/.35	C 0/0	D .05/.45	E 0/1.0	E 0/1.0	E 0/1.0	E 0/1.0
86-100	A .25/.25	B .20/.30	B .15/.35	C 0/0	D .05/.45	E .10/1.0	E 0/1.0	E 0/1.0	E 0/1.0	E 0/1.0

**LEGEND:**  
 A Attacker retreats 200 meters.  
 B Attacker and defender retreat 200 meters.  
 C Attacker and defender are pinned. Recalculate after 20 minutes.  
 D Defender retreats 400 meters.  
 E Defender is eliminated.

*Notes.* To calculate the attacker-to-defender ratio, umpires use the column to the left of the computed ratio if the defender is occupying prepared positions. Umpires assume light to moderate indirect fire and use opposing unit sizes for a rough force ratio. If either side uses heavy or intense indirect fires (CAS, Battery 4, Battalion 1, or higher), umpires increase the unit factor by 1. For example, if a company attacks a platoon position, the rough ratio is 3:1. If the platoon calls for and receives the allocated 105-mm FPF (final protective fire), the corrected initial ratio is 3:2 or 1.5:1 or, rounded to the nearest whole number, 2:1. For surprise, flank, or rear attack, umpires add 1 to 4 to the attacker ratio.

## INDIRECT FIRE TABLES

To determine the effects of indirect fires, umpires apply the tables below, as appropriate.

**TABLE 32. CONVENTIONAL INDIRECT FIRE DAMAGE ASSESSMENT.**

**SECTION A**

Munitions effects radii for various indirect fire weapon systems using HE ammunition.

4.2-in mortar platoon - 100 meters	8-in howitzer battery - 175 meters
120-mm mortar platoon - 100 meters	Single Lance (HE) - 250 meters
105-mm howitzer battery - 100 meters	36-tube 110-mm MRL - 300 meters
155-mm howitzer battery - 150 meters	

**SECTION B**

Standardized target arrays in normal battlefield configurations.

Tanks	-	5 vehicles
APCs	-	4 vehicles
FA	-	7 SP (155)/6 towed weapons (105-mm)/5 SP vehicles (8-in/175-mm)
Mortars	-	5 vehicles
Troops	-	25 individuals
Missile/rocket	-	1 target element
Antitank/ADA	-	4 SP/towed/ground-mounted weapons
Trucks	-	5 vehicles
Radar	-	3 targeted elements
Helicopters	-	5 aircraft
Towed/ground-mounted artillery crew	-	4 individuals

**SECTION C**

Number of HE rounds, by caliber, necessary to destroy one target element of the type indicated:

Target	Mortars		Field Artillery			Rocket/Missile	
	4.2-in	120-mm	105-mm	155-mm	8-in	MLRs	Lance
<b>Armor/mechanized</b>							
Tank	-	-	-	120	40	To be	
APC	24	24	24	18	12	published	-
M551	36	36	36	24	16	-	



**TABLE 32. CONVENTIONAL INDIRECT FIRE DAMAGE ASSESSMENT.**  
(Section C Continued)

Target	Mortars		Field Artillery			Rocket/ Missile	
	4.2-in	120-mm	105-mm	155-mm	8-in	MLRs	Lance
<b>Antitank/ADA</b>							
Ground-mounted weapon	12	12	12	6	4	-	-
SP weapon	24	24	24	18	12	-	-
Ground-mounted weapon crewman	1	1	1	.75	.5	-	-
<b>Mortar/FA</b>							
Towed weapon	12	12	12	6	4	-	-
Towed weapon crewman	1	1	1	.75	.5	-	-
SP weapon (mortar)	24	24	24	18	12	-	-
SP weapon (FA)	36	36	36	24	16	-	-
Other armored vehicle	24	24	24	18	12	-	-
Radar (including ADA)	16	16	16	12	8	-	1
Rocket/missile	50	40	50	36	20	-	1
<b>CP/Trains/FARP*</b>							
Trucks	8	8	8	6	4	-	.25
Armored vehicles	24	24	24	18	12	-	-
Helicopters	8	8	8	6	4	-	.25
Troops	1	1	1	.75	.5	-	.06
<b>Dismounted Troops</b>							
In open	1	1	1	.75	.5	-	.06
Dug-in	4	4	4	3	2	-	.33

\*For helicopters.

**LEGEND:** FARP - forward arming and refueling point MRL - multiple rocket launcher SP - self-propelled

*Note:* The artillery round-off rule applies. Fractions 0.5 and greater are rounded to the next higher number; those below 0.5 are rounded to the next lower number.

**TABLE 33. INDIRECT FIRE ENGAGEMENT.**

<b>TARGET</b>	<b>POTENTIAL LOSSES INFLICTED PER BATTERY VOLLEY*</b>
<b>Armor</b>	1 crewman per 11 battery volleys 1 vehicle per 27 battery volleys (stationary targets) 1 vehicle per 35 battery volleys (moving targets)
<b>Mortars/artillery</b>	1 crewman per volley 1 truck per 2 volleys 1 tube (towed) per 16 volleys 1 tube (SP) per 27 volleys
<b>ADA/antitank weapons</b>	1 crewman per 3 volleys 1 weapon (ground-mounted) per 6 volleys 1 weapon (SP) per 27 volleys
<b>CPs, trains, FARP</b>	1 soldier per volley 1 truck per 2 volleys 1 armored vehicle per 27 volleys
<b>Dismounted Troops</b>	
<b>In open</b>	3 soldiers per volley
<b>In hasty positions</b>	1 soldier per volley
<b>In improved positions</b>	1 soldier per 4 volleys
<b>In prepared positions</b>	1 soldier per 10 volleys

\*Mortar platoon volleys count as 1/2 FA battery volley.

**TABLE 34. COUNTERBATTERY TARGETING.**

<b>Target</b>	<b>Average Percentage Acquired per Hour</b>
<b>Mortar platoon</b>	<b>60</b>
<b>MRL batteries</b>	<b>40</b>
<b>Howitzer batteries</b>	<b>30</b>
<b>Gun batteries</b>	<b>20</b>
<b>Missile/rocket batteries</b>	<b>10</b>

**TABLE 35. MAXIMUM DAILY INDIRECT FIRE EXPENDITURES.**

Caliber and Unit	Ammunition Type			
	HE	Smoke	WP	Illumination
<b>US</b>				
81-mm mortar platoon (light infantry battalion)	600	-	150	80
81-mm mortar platoon (mechanized infantry battalion)	600	-	200	100
4.2-in mortar platoon (light infantry battalion)	450	-	100	50
4.2-in mortar platoon (mechanized infantry battalion)	550	-	100	50
105-mm howitzer battalion (towed)	9,500	1,000	1,500	300
110-mm MRL battalion (towed)	7,500	3,000	4,500	-
120-mm mortar platoon (mechanized infantry battalion)	600	-	150	75
155-mm howitzer battalion (towed)	4,000	300	700	-
155-mm howitzer battalion (SP)	5,000	400	1,100	200
8-in howitzer battalion (SP)	2,800	-	-	-
<b>OPFOR</b>				
120-mm mortar battery	1,400	-	300	60
122-mm MRL battalion	7,500	-	-	-
122-mm howitzer battalion	8,500	400	800	300
152-mm howitzer battalion	4,000	200	400	150
130-mm gun battalion	7,500	-	-	-

## AIR DEFENSE ARTILLERY TABLES

To determine the effects of ADA, umpires apply the tables below, as appropriate.

TABLE 36. ADA ENGAGEMENT.

ADA FIRE UNIT	POTENTIAL AIRCRAFT KILLS PER ENGAGEMENT		
	Rotary Wing	High Performance	High Performance with ECM
<b>Combat Arms Companies</b>			
Redeye (US)	.10	.10	.07
Blowpipe (UK)	.10	.10	.07
Stinger (US)	.32	.40	.40
<b>SHORAD Platoons</b>			
20-mm Vulcan (US)	.10	.04	.04
20-mm S-530 (FR)	.08	.03	.03
30-mm HSS-83I (FR)	.12	.05	.05
40-mm L/70 Sergeant York gun (US)	.45	.27	not available
40-mm gun (UK)	.12	.05	.05
Gephardt (GE)	.28	.12	.09
Rapier (UK)*	.20	.20	.15
Roland (GE/FR)*	.30	.72	.52
Chaparral (US)*	.70	.92	.55
<b>Medium Altitude Missile Fire Units</b>			
Bloodhound (UK)	.85	.55	.30
HAWK (US)	.85	.84	.60
Patriot (US)	-	.92	.70

\*Potential kills are per missile fired.

## LEGEND:

ECM - electronic countermeasures  
FR - France

SHORAD - short-range air defense  
UK - United Kingdom

*Notes.* To use this table, umpires add all kill potentials and round off to the nearest whole number to determine aircraft losses.

Umpires should add all kill potentials for overflight at low altitude (below 3,000 feet). For higher altitudes, they add kill potentials only for medium altitude missile batteries during entry and egress and for combat arms companies and SHORAD platoons only in the target area. For example, four SU-7 aircraft without ECM enter Blue airspace at an altitude above 3,000 feet. They drop down below that level to attack the target. En route, they enter the fan of two HAWK batteries (2 X .60 = 1.2) and strike a target protected by one Roland platoon (1 X .30 = .3). During exit, the surviving aircraft fly at medium altitude, entering the fan of one HAWK battery (1 X .60 = .6). Total losses incurred are two aircraft (1.2 + .3 + .6 = 2.1). One is lost before delivering its ordnance; the other is lost en route home.

**TABLE 37. ATTRITION OF HIGH-PERFORMANCE AIRCRAFT WITH ECM.**

CHAPARRAL/ RAPIER			AIRCRAFT				CHAPARRAL/ RAPIER			AIRCRAFT			
HAWK	Array	Vulcan	1	2	3	4	HAWK	Array	Vulcan	1	2	3	4
0	0	0	0	0	0	0	2	0	0	0	1	1	2
0	0	1	0	0	0	0	2	0	1	0	1	2	2
0	0	2	0	0	0	0	2	0	2	0	1	2	2
0	0	3	0	0	0	0	2	0	3	0	1	2	2
0	1	0	0	0	0	0	2	1	0	0	1	2	2
0	1	1	0	0	0	0	2	1	1	0	1	2	2
0	1	2	0	0	0	1	2	1	2	0	1	2	2
0	1	3	0	0	0	1	2	1	3	0	1	2	2
0	2	0	0	0	1	1	2	2	0	0	1	2	3
0	2	1	0	0	1	1	2	2	1	0	1	2	3
0	2	2	0	0	1	1	2	2	2	0	1	2	3
0	2	3	0	0	1	1	2	2	3	0	1	2	3
0	3	0	0	1	1	1	2	3	0	0	1	2	3
0	3	1	0	1	1	1	2	3	1	1	1	2	3
0	3	2	0	1	1	1	2	3	2	1	1	2	3
0	3	3	0	1	1	2	2	3	3	1	1	2	3
1	0	0	0	0	1	1	3	0	0	0	1	2	3
1	0	1	0	1	1	1	3	0	1	0	1	2	3
1	0	2	0	1	1	1	3	0	2	0	1	2	3
1	0	3	0	1	1	1	3	0	3	1	1	2	3
1	1	0	0	1	1	2	3	1	0	1	1	2	3
1	1	1	0	1	1	2	3	1	1	1	1	2	3
1	1	2	0	1	1	2	3	1	2	1	1	2	3
1	1	3	0	1	1	2	3	1	3	1	1	2	3
1	2	0	0	1	1	2	3	2	0	1	1	2	3
1	2	1	0	1	1	2	3	2	1	1	1	2	3
1	2	2	0	1	1	2	3	2	2	1	1	2	3
1	2	3	0	1	2	2	3	2	3	1	1	2	3
1	3	0	0	1	2	2	3	3	0	1	1	2	3
1	3	1	0	1	2	2	3	3	1	1	1	2	3
1	3	2	0	1	2	2	3	3	2	1	1	2	3
1	3	3	0	1	2	2	3	3	3	1	1	2	3

**TABLE 38. ATTRITION OF HIGH-PERFORMANCE AIRCRAFT WITHOUT ECM.**

CHAPARRAL/ RAPIER			AIRCRAFT				CHAPARRAL/ RAPIER			AIRCRAFT			
HAWK	Array	Vulcan	1	2	3	4	HAWK	Array	Vulcan	1	2	3	4
0	0	0	0	0	0	0	2	0	0	1	1	2	3
0	0	1	0	0	0	0	2	0	1	1	1	2	3
0	0	2	0	0	0	0	2	0	2	1	1	2	3
0	0	3	0	0	0	0	2	0	3	1	1	2	3
0	1	0	0	0	0	1	2	1	0	1	1	2	3
0	1	1	0	0	0	1	2	1	1	1	2	2	3
0	1	2	0	0	1	1	2	1	2	1	2	2	3
0	1	3	0	0	1	1	2	1	3	1	2	2	3
0	2	0	0	0	1	1	2	2	0	1	2	2	3
0	2	1	0	1	1	1	2	2	1	1	2	2	3
0	2	2	0	1	1	1	2	2	2	1	2	2	3
0	2	3	0	1	1	1	2	2	3	1	2	2	3
0	3	0	0	1	1	2	2	3	0	1	2	3	3
0	3	1	0	1	1	2	2	3	1	1	2	3	3
0	3	2	0	1	1	2	2	3	2	1	2	3	3
0	3	3	0	1	1	2	2	3	3	1	2	3	3
1	0	0	0	1	2	2	3	0	0	1	2	3	3
1	0	1	0	1	2	2	3	0	1	1	2	3	3
1	0	2	0	1	2	2	3	0	2	1	2	3	4
1	0	3	0	1	2	2	3	0	3	1	2	3	4
1	1	0	0	1	2	2	3	1	0	1	2	3	4
1	1	1	0	1	2	3	3	1	1	1	2	3	4
1	1	2	0	1	2	3	3	1	2	1	2	3	4
1	1	3	0	1	2	3	3	1	3	1	2	3	4
1	2	0	0	1	2	3	3	2	0	1	2	3	4
1	2	1	0	1	2	3	3	2	1	1	2	3	4
1	2	2	1	1	2	3	3	2	2	1	2	3	4
1	2	3	1	1	2	3	3	2	3	1	2	3	4
1	3	0	1	1	2	3	3	3	0	1	2	3	4
1	3	1	1	1	2	3	3	3	1	1	2	3	4
1	3	2	1	1	2	3	3	3	2	1	2	3	4
1	3	3	1	1	2	3	3	3	3	1	2	3	4

**TABLE 39. POTENTIAL KILL PROBABILITY (AIR DEFENSE ARRAY).**

SYSTEM	HIGH PERFORMANCE	
	WITHOUT ECM	WITH ECM
Blowpipe (UK)	.10	.07
Redeye (US)	.10	.07
Stinger (US)	.15	.10
20-mm Vulcan (US)	.04	.04
20-mm S-530 (FR)	.03	.03
30-mm HSS-831 (FR)	.05	.05
40-mm gun (UK)	.05	.05
Gephardt (GE)	.12	.09
Rapier (UK)	.20	.15
Roland (GE/FR)	.30	.22
Chaparral (US)	.20	.15
Bloodhound (UK)	.55	.30
HAWK (US)	.60	.35

**TABLE 40. POTENTIAL KILL PROBABILITY (AIR DEFENSE ENGAGEMENT).**

SYSTEM	LOW PERFORMANCE		HIGH PERFORMANCE	
	ROTARY WING	FIXED WING	WITHOUT ECM	WITH ECM
Redeye (US)	.10	.10	.05	.05
20-mm Vulcan (US)	.60	.60	.04	.04
Rapier (UK)	.60	.60	.60	.50
Chaparral (US)	.40	.40	.16	.16
HAWK (US)	.80	.60	.40	.35
Small arms	.06*	.01	.01	.01

\*Small arms against hovering rotary wing aircraft have a .24 kill probability.



**TABLE 41. REDEYE VERSUS AIRCRAFT.**

ROTARY AND FIXED WING					HIGH PERFORMANCE				
N	N	N	N	N	N	N	N	N	N
N	KILL	N	N	N	N	N	N	N	N
N	N	N	KILL	N	N	N	KILL	N	N
N	N	N	N	N	N	N	N	N	N

*Note:* Based on the type of aircraft engaged, umpires enter the corresponding table and read one square per engagement reported. For each engagement, they read one successive entry in the table. After using the last entry, they return to the first entry and begin again. They report the results of each engagement to the player element.

**TABLE 42. SMALL ARMS VERSUS AIRCRAFT.**

N	N	N	N	N	N	N	N	N	N
N	N	N	N	N	N	KILL	N	N	N
N	N	N	N	N	N	N	N	N	N
N	N	N	N	N	N	N	N	N	KILL
N	N	N	N	N	N	N	N	N	N
N	N	KILL	N	N	N	N	N	N	N
N	KILL	N	N	N	N	N	N	N	N
N	N	N	N	N	N	N	N	KILL	N
N	N	N	N	N	N	N	N	N	N
N	N	N	N	KILL	N	N	N	N	N

*Note:* Umpires enter the table and read one square per engagement reported. For hovering rotary wing aircraft, they must read four squares per engagement. For each engagement, they read successive entries in the table, returning to the first entry and beginning again after using the last entry. They report the results of each engagement to the player element.

**TABLE 43. ADA ENGAGEMENT (OPFOR).**

ADA FIRE UNIT	POTENTIAL AIRCRAFT KILLS PER ENGAGEMENT		
	Rotary Wing	High-Performance	High-Performance with ECM
<b>Maneuver Battalions</b>			
SA-7	-	-	-
SA-9	-	-	-
ZSU 23-4	.60	.50	.30
ZSU 57-2	-	-	-
<b>Division Rear</b>			
57-mm S-60	.12	.07	.05
<b>Medium Altitude Missile Fire Units</b>			
SA-4	-	.40	.25
SA-6	-	.45	.30

**TABLE 44. RANDOM NUMBERS.**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	22	17	68	65	84	68	95	23	92	35	87	02	22	57	51	61	09	43	95	06	58	24	82	03	47
2	19	36	27	59	46	13	79	93	37	55	39	77	32	77	09	85	52	05	30	62	47	83	51	62	74
3	16	77	23	02	77	08	51	87	25	21	28	06	24	25	93	16	71	13	59	78	23	05	30	16	25
4	78	43	76	71	61	20	44	90	32	64	97	67	63	99	61	46	38	03	93	22	69	81	21	99	21
5	03	28	28	26	08	73	37	32	04	05	69	30	16	09	05	88	69	58	23	99	35	07	44	75	47
6	93	22	53	64	39	07	10	63	76	35	87	03	04	79	88	08	13	13	85	51	55	34	57	72	69
7	78	76	58	54	74	92	38	70	96	92	52	06	79	79	45	82	63	18	27	44	69	66	92	19	09
8	23	68	35	26	00	99	53	93	61	28	62	70	05	48	34	56	65	05	61	86	90	92	10	70	80
9	15	39	25	70	99	93	86	52	77	65	15	33	59	05	28	22	87	26	07	47	86	96	98	29	06
10	58	71	96	30	24	18	46	23	34	27	85	13	99	24	44	49	18	09	79	49	74	16	32	23	02
11	57	35	27	33	72	24	53	63	94	09	41	10	76	47	91	44	04	95	49	66	39	60	04	59	81
12	48	50	86	54	48	22	06	34	72	52	82	21	15	65	20	33	29	94	71	11	15	91	29	12	03
13	61	96	48	95	03	07	16	39	33	66	98	56	10	56	79	77	21	30	27	12	90	49	22	23	62
14	36	93	89	41	26	29	70	83	63	51	99	74	20	52	36	87	09	41	15	09	98	60	16	03	03
15	18	87	00	42	31	57	90	12	02	07	23	47	37	17	31	54	08	01	88	63	39	41	88	92	10
16	88	56	53	27	59	33	35	72	67	47	77	34	55	45	70	08	18	27	38	90	16	95	86	70	75
17	09	72	95	84	29	49	41	31	06	70	42	38	06	45	18	64	84	84	31	65	52	53	37	97	15
18	12	96	88	17	31	65	19	69	02	83	60	75	86	80	68	24	64	64	35	51	56	61	87	39	12
19	85	94	57	24	16	92	09	84	38	76	22	00	27	69	85	29	81	81	78	70	21	94	47	90	12
20	38	64	43	59	98	98	77	87	68	07	91	51	67	62	44	40	98	98	93	78	23	32	65	41	18
21	53	44	09	42	72	00	41	86	79	79	68	47	22	00	28	35	55	31	51	51	00	83	63	22	55
22	40	76	66	26	84	57	99	99	90	37	36	63	32	08	58	37	40	13	68	97	87	64	81	07	83
23	02	17	79	18	05	12	59	52	57	02	22	07	90	47	03	28	14	11	30	79	20	69	22	40	98
24	95	18	82	06	53	31	51	10	96	46	92	06	88	07	77	56	11	50	81	69	40	23	72	51	39
25	35	76	22	42	92	96	11	83	44	84	34	68	35	48	77	33	42	40	90	60	73	96	53	97	86

TABLE 45. BOMB DAMAGE ASSESSMENT.

SECTION A Aircraft and Ordnance	PERSONNEL		VEHICLES			
	Pro- tected	Unpro- tected	Armored Tanks	APC	Soft	Bridges
<b>G91/F104/ Buccaneer/Jaguar</b>						
GP bombs	.10	.30	.05	.10	.30	.10
Napalm	.20	.20	0	0	.40	0
Strafing	.10	.20	0	0	.35	0
CBU	.05	.35	.10	.15	.40	0
Rockets	.05	.10	.10	.15	.30	0
BLU-755	.10	.40	.25	.30	.45	0
<b>A-10</b>						
GP bombs	.20	.65	0	0	0	.10
GBU	.10	.45	0	0	0	.60
Strafing	.10	.20	0	0	0	0
Rockeye	.50	.70	1.50	1.50	2.00	0
Maverick	0	0	1.00	1.00	1.50	.30
GAU-8	0	0	1.00	1.00	1.50	0
<b>F4/A7/F-111</b>						
GP bombs	.10	.65	.15	.20	.40	.10
GBU	.10	.45	.40	.50	.60	.60
Strafing	.05	.20	.10	.15	.40	0
CBU	.10	.45	.25	.30	.45	0
Maverick	0	0	.45	.50	.50	.30
Redeye	.40	.50	.45	.50	.70	0
<b>F-111 Beacon/F-4/ ASRT/LORAN</b>						
GP bombs	.15	.30	.15	.20	.40	.10
CBU	.40	.10	.20	.25	.30	0
Rockeye	.50	.80	.30	.35	.40	0
<b>OPFOR Air</b>						
GP bombs	.03	.45	.04	.14	.36	.05
Rockets	.10	.10	.24	.48	.87	0
Strafing	.05	.10	0	0	.40	0
CBU	.33	.33	.32	.64	.64	0

**LEGEND:** CBU - cluster bomb unit GBU - guided bomb unit GP - general purpose

TABLE 45. BOMB DAMAGE ASSESSMENT (continued).

SECTION B PROBABILITY	TARGETS AT RISK											
	1	2	3	4	5	10	15	20	25	30	40	50
.05	.1	0	0	0	0	1	1	1	1	2	2	3
.10	.1	0	0	0	1	1	2	2	3	3	4	5
.15	.2	0	0	1	1	2	2	3	4	5	6	8
.20	.2	0	1	1	1	2	3	4	5	6	8	10
.25	.3	1	1	1	1	3	4	5	6	8	10	13
.30	.3	1	1	1	2	3	5	6	8	9	12	15
.35	.4	1	1	1	2	4	5	7	9	11	14	18
.40	.4	1	1	2	2	4	6	8	10	12	16	20
.45	.5	1	1	2	2	5	7	9	11	14	18	23
.50	.5	1	2	2	3	5	8	10	13	15	20	25
.55	.6	1	2	2	3	6	8	11	14	17	22	28
.60	.6	1	2	2	3	6	9	12	15	18	24	30
.65	.7	1	2	3	3	7	10	13	16	20	26	33
.70	.7	1	2	3	4	7	11	14	18	21	28	35
.75	.8	2	2	3	4	8	11	15	19	23	30	38
.80	.8	2	2	3	4	8	12	16	20	24	32	40
.85	.9	2	3	3	4	9	13	17	21	26	34	43
.90	.9	2	3	4	5	9	14	18	23	27	36	45
.95	1.0	2	3	4	5	10	14	19	24	29	38	48

*Notes:* Umpires enter Section A at proper aircraft and ordnance. They read across, entering the column with the proper target category, and determine probability.

They then find the probability in Section B. Umpires read across to determine number of target kills under the columns indicating the type and number of targets at risk for each sortie. They interpolate, if required. To use this table for vehicle kills, umpires assume a maximum of 5 targets at risk per sortie.

Umpires multiply the target kills by the number of sorties for the total bomb damage assessment (BDA). For bridge destruction, target kills must equal 1.0 or more.

Umpires assume a single pass on the target (no reattack) for all except A-10. To determine the A-10 BDA against vehicles, umpires use the actual number of passes made and the ordnance used. They assume the first pass will be made with Rockeye, if Rockeye is loaded. All subsequent passes will be made with either Maverick or GAU-8.

Any fraction of a vehicle appearing in the final calculation will be reported as damage.

## ENGINEER TABLES

To determine the effects of obstacle emplacement and breaching operations, umpires apply the table below, as appropriate.

**TABLE 46. OBSTACLE EMPLACEMENT.**

OBSTACLE TYPE	DENSITY/ AREA COVERAGE	MANPOWER/ TIME REQUIRED
Standard pattern minefield	1-1-1 (100m x 50m)	3 platoon hours
Standard pattern minefield	1-4-8 (100m x 50m)	8 platoon hours
Row minefield	1.5-0-0 (100m x 35m)	1/2 platoon hour
Hasty crater	(20 foot roadbed)	2 squad hours
M180 crater	1m x 10m x 3m	1/2 squad hour 5M180 kits
Abatis	(20m x 75m)	1 1/2 platoon hours
Tank ditch (100m long)		2 dozer hours

TRANSPORTATION REQUIRED	LOSSES PRODUCED
5T or two 2 1/2T	Two armored vehicles Two dismounted troops
Two 5T or three 2 1/2T	Two armored vehicles Six dismounted troops
5T or 2 1/2T	Two armored vehicles
5T or 2 1/2T	15 minutes and first vehicle in column if crater is covered by fire
N/A	Consideration of losses by covered fire
N/A	10 minutes delay and two armored vehicles if ditch is covered by fire

*Note.* Row minefields can be laid in 1/3 hour with a mechanical mineplanter or emplaced by one sortie when air delivered.

**TABLE 47. OBSTACLE-BREACHING REQUIREMENTS.**

OBSTACLE	BREACHING OPTION	EQUIPMENT	EFFORT	REMARKS
Minefield (1-0-0 density) Initial loss of 2 armored vehicles	Deliberate breach "Bull through"	Miscellaneous demolitions, rope, or mine detectors Line charge	1 squad hour (engineer) 2 squad hour (maneuver) 1/2 squad hour 15 minutes	All minefield breaching requirements listed are for clearance of one vehicle lane through 100m of minefield.
Standard pattern minefield (1-2-2 density) Initial loss of 2 armored vehicles	Deliberate breach "Bull through"	Mine detectors, probes, and rope or miscellaneous demolitions Line charge	2 platoon hour (engineer) 3 platoon hour (maneuver) 1/2 squad hour 15 minutes	Figures must be adjusted for increased minefield depth, density, or lane width.
Tank Ditch Triangular Trapezoidal	Tactical bridge Excavate/fill lane Cross in tactical formation	AVLB with launcher* Dozer/tank-dozer/CEV Adjust opposing unit AVKP	10 minutes 30 minutes 15 minutes	Add one platoon hour to effort required if nuisance mines are present.
Road Crater Abatis (75m long)	Tactical bridge Excavate/fill lane Clear trees from route	AVLB with launcher* Dozer/front-end loader/CEV Dozer/front-end loader and chain saws	15 minutes 15 minutes 1 hour	*AVLB used only for gaps less than 60m. For larger gaps, refer to TOC or consult engineer.
Bridge demolition Wire obstacles Double apron fence concertina bands	Tactical bridge Bangalore	AVLB with launcher* 5 Bangalore sections (one box)	15 minutes 1/4 squad-hour	

**LEGEND:** AVLB - armored vehicle launched bridge    CEV - combat engineer vehicle

*Notes:* For breaching standard pattern minefields, umpires assess initial loss of two armored vehicles.

For bull through operations, umpires assess a 30 percent loss of all vehicles entering.

To assess losses for a unit breaching an obstacle covered by opposing direct fire antitank weapons, umpires use the target posture Canallized, Crossing Obstacle Covered by Fire in Table 28. Umpires must use subjective judgment when only part of a unit covers an obstacle.

When a unit crosses a tank ditch while deployed in a tactical formation, umpires use the target posture Moving or Open from Table 29. Umpires adjust the AVKP to account for the increased vulnerability of the tanks crossing the ditch. Breaching times apply only after the equipment is on site and ready to work.

**TABLE 48. DEMOLITION REQUIREMENTS FOR CONVENTIONAL TACTICAL OBSTACLES.**

TARGET	TNT	40-LB CRATERING CHARGE	40-LB SHAPED CHARGE	AMMONIUM NITRATE	COMPOUND C-4
<b>Gap in Average Reinforced Concrete Bridge</b>					
Up to 100 feet	500				
Up to 200 feet	600				
Up to 300 feet	700				
Up to 400 feet	800				
<b>Road Craters</b>					
2-lane road (6 meters)		7	4		
4-lane road (21 meters)		19	12		
<b>Timber Cutting</b>					
18-inch timber	7				5
24-inch timber	12				8
30-inch timber	18				12
40-inch timber	30				21
<b>Tank Ditch</b>					
100 meters	720			1,500	
100 meters	1,440			3,000	

*Note.* All weights are expressed in pounds.



**TABLE 49. PRECHAMBER ROAD CRATER EMPLACEMENT GUIDELINES.**

Number of Shafts	Engineer Squad Hours Required	DM 41 Charges Required (in pounds)
3	1	3,600
4	1.3	4,800
5	1.6	6,000
6	2.0	7,200
7	2.3	8,400
8	2.6	9,600

*Notes:* One DM 41 charge weighs 50 pounds and displaces 1.2 cubic feet.

The one-way vehicle haul time to 5-ton bunker is 45 minutes.

The upload time is 1 hour per vehicle.

**TABLE 50. ADM CRATER BREACH WORK RATES.**

Size	Equipment	Dry Soil (Hours)	Wet Soil (Hours)	Dry Rock (Hours)	Wet Rock (Hours)
1.0 KT	One dozer	4	9	1.9	2.3
	Two dozers	2	4.5	1	1.1
	Scraper team (three scrapers, one dozer)	5.5	12.7	2.8	3.3
5.0 KT	One dozer	18.7	40.8	10	15.4
	Two dozers	9.3	20.4	5	7.7
	Scraper team (three scrapers, one dozer)	26.7	12.7	14.3	22

**LEGEND:** KT - kiloton

TABLE 51. CRATER DIMENSIONS.

YIELD: 1.0 KT											
DEPTH OF BURST	CRATER RADIUS DRY SOIL	CRATER DEPTH DRY SOIL	CRATER RADIUS DRY ROCK	CRATER DEPTH DRY ROCK	CRATER RADIUS WET SOIL	CRATER DEPTH WET SOIL	CRATER RADIUS WET ROCK	CRATER DEPTH WET ROCK	CRATER RADIUS WET ROCK	CRATER DEPTH WET ROCK	CRATER DEPTH WET ROCK
-5	4	2	0	0	8	3	2	1			
-4	5	3	1	0	9	4	4	2			
-3	7	4	3	1	11	5	6	4			
-2	10	4	6	3	14	6	9	5			
-1	13	5	9	4	18	8	12	6			
0	19	9	15	7	25	9	18	9			
1	26	12	22	9	30	12	26	11			
2	31	14	25	11	33	14	29	13			
3	34	14	27	12	35	16	31	14			
4	35	15	28	13	37	17	33	15			
5	36	16	29	14	38	18	34	16			
10	40	20	35	18	45	22	40	20			
YIELD: 5.0 KT											
-5	13	6	6	2	19	9	11	6			
-4	15	7	8	4	22	10	13	8			
-3	18	7	11	5	25	11	16	9			
-2	22	8	14	7	29	13	20	10			
-1	26	11	18	9	35	14	24	12			
0	32	15	26	11	43	16	30	15			
1	38	18	32	13	46	18	38	16			
2	44	21	37	16	50	31	43	18			
3	49	22	40	17	53	23	46	20			
4	52	23	41	18	55	24	49	21			
5	54	23	43	19	57	26	51	22			
10	60	27	50	24	64	31	57	27			

Notes: All dimensions are in meters.  
 Minus signs preceding figures indicate distances above ground.

TABLE 52. CLASS IV BARRIER HAUL GUIDELINES.

VEHICLE	ROLLS OF BARBED WIRE	ROLLS OF CONCERTINA	LONG U-SHAPED PICKETS #
5-ton dump	100	50	800
2 1/2-ton cargo	100	50	800
1 1/2-ton trailer	35	25	350

## NBC ASSESSMENT TABLES

To determine the effects of NBC warfare, umpires apply the tables below, as appropriate.

TABLE 53. CHEMICAL STRIKE COMPUTATION CHARTS.

### NONPERSISTENT CHEMICAL CASUALTIES (GB)

	Masked Before Attack	Masked Within 15 Seconds	Not Masked Within 15 Seconds
Direct Hit:	0	10%	25%
Close:	0	5%	10%

### PERSISTENT CHEMICAL CASUALTIES

MOPP 4	MOPP 3	MOPP 2	MOPP 1	No MOPP
	2%	10%	12%	30%

*Notes:* Persistent chemical contamination lasts for 24 hours unless units perform decontamination. Units in contaminated areas suffer 10 percent additional casualties per hour unless they are in full mission-oriented protection posture (MOPP) or have withdrawn to a safe area. Contaminated units in MOPP 4 will suffer 10 percent casualties per hour, starting six hours after persistent attack, unless they exchanged chemical protective ensembles before their overgarments lose effectiveness.

A chemical strike is considered a direct hit when 50 percent or more of the targeted company-size unit is located within the radius of damage around ground zero.

A close hit results when 50 percent or more of a unit is located in the downwind chemical zone from ground zero.

TABLE 54. NUCLEAR TARGET CATEGORY CODES.

CATEGORY CODE	TYPE	MEANING OF NUMBER TRANSMITTED
V	Towed artillery, mortars, ADA, small arms, machine guns, masonry or concrete bridges, dismounted antitank weapons, wheeled vehicles, and rockets.	Radius within which 30 percent are moderately damaged. Within 1/2 of this radius, the equipment will be severely damaged.
T	Supply dump, barbed wire; highway, railroad, and float supplies.	Radius within which 30 percent of the supplies are severely damaged.
P	Personnel in tanks, foxholes, APCs, SP artillery, or buildings.	Radius within which 30 percent are immediate casualties; twenty percent will be casualties within 1 hour.
X	Personnel in the open.	Radius within which 30 percent are immediate casualties; twenty percent will be casualties within 1 hour.
DP	Delayed casualties among personnel in tanks, foxholes, and APCs.	Of the personnel in the zone between ring P and ring DP, 30 percent will be casualties within 1 hour; 20 percent will be casualties within 4 hours.
DX	Delayed casualties to exposed personnel.	Of the personnel in the zone between ring X and ring DX, 30 percent will be casualties within 1 hour; 20 percent will be casualties within 4 hours.
TB	Tree blowdown.	Radius within which 60 percent of trees are blown down.
AC	Aircraft.	Radius within which all aircraft are severely damaged; those within 1/2 of this radius are destroyed.

**TABLE 55. DAMAGE CIRCLE RADII.**

<b>DELIVERY SYSTEM</b>	<b>V</b>	<b>T</b>	<b>P</b>	<b>X</b>	<b>DP</b>	<b>DX</b>	<b>TB</b>	<b>AC</b>
<b>A (0.5 KT)</b>	<b>2</b>	<b>4</b>	<b>7</b>	<b>10</b>	<b>10</b>	<b>14</b>	<b>4</b>	<b>22</b>
<b>B (1 KT)</b>	<b>3</b>	<b>6</b>	<b>9</b>	<b>12</b>	<b>12</b>	<b>16</b>	<b>5</b>	<b>28</b>
<b>C (5 KT)</b>	<b>5</b>	<b>10</b>	<b>12</b>	<b>16</b>	<b>16</b>	<b>20</b>	<b>10</b>	<b>56</b>
<b>D (2 KT)</b>	<b>4</b>	<b>7</b>	<b>10</b>	<b>13</b>	<b>14</b>	<b>18</b>	<b>6</b>	<b>34</b>
<b>E (5 KT)</b>	<b>5</b>	<b>10</b>	<b>12</b>	<b>16</b>	<b>16</b>	<b>20</b>	<b>10</b>	<b>56</b>
<b>F (10 KT)</b>	<b>8</b>	<b>14</b>	<b>14</b>	<b>20</b>	<b>18</b>	<b>24</b>	<b>14</b>	<b>72</b>

**TABLE 56. SAMPLE NUCLEAR ASSESSMENT REPORTS.****1. Nuclear Assessment Report.**

- a. Date-time group (DTG) of assessment: \_\_\_\_\_
- b. Grid coordinates of strike: \_\_\_\_\_
- c. Damage/casualties assessed: \_\_\_\_\_
  - (1) WIA: \_\_\_\_\_
  - (2) KIA: \_\_\_\_\_
  - (3) Vehicles damaged: \_\_\_\_\_
  - (4) Vehicles destroyed: \_\_\_\_\_

**2. Brigade Nuclear Damage Report.**

- a. From: (Bde designation) controller.
  - b. Thru: (OPFOR/US) FSE controller.
  - c. To: Arty Section, controller TOC.
  - d. From: (DTG) to (DTG)
- (12-hour report as of 0800 and 2000, due 1200 and 2400 to the controller group HQ).
- e. Total damages/casualties assessed as a result of nuclear fires during the period indicated above.
    - (1) WIA: \_\_\_\_\_
    - (2) KIA: \_\_\_\_\_
    - (3) Vehicles damaged: \_\_\_\_\_
    - (4) Vehicles destroyed: \_\_\_\_\_