

**Summary Report for Individual Task  
061-C02-0002  
Compute Safety Data  
Status: Approved**

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DISTRIBUTION RESTRICTION: Approved for public release; distribution is unlimited.

DESTRUCTION NOTICE: None

**Condition:** Given an emplaced firing battery with Fire Direction Center (FDC) preparing a database and charts, an executive officer's report, appropriate GFT and TFT, Graphical site table, an automated database, map protractor, left and right azimuth limits, range card, minimum and maximum ranges, and azimuth of fire.

**Standard:** Compute safety data without mathematical error IAW information listed in FM 6-40 and FM 6-50.

**Special Condition:** None

**Special Standards:** None

**Special Equipment:**

**Safety Level:** Low

**MOPP:**

<b>Task Statements</b>
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**Cue:** None

<b>DANGER</b>
None

<b>WARNING</b>
None

<b>CAUTION</b>
None

**Remarks:** None

**Notes:** None

## Performance Steps

1. Compute pre-occupation safety data manually.
  - a. Construct a basic safety diagram.
    - (1) Draw a line representing the AOL for the firing unit.
    - (2) Label the AOL with its azimuth and deflection.
    - (3) Draw the lateral limits.
    - (4) Draw the minimum and maximum ranges between the lateral limits.
    - (5) Compute angular measurements from the AOL to each lateral limit.
    - (6) Compute the angular measurements to the deflection corresponding to the AOL.
    - (7) Label the diagram.
  - b. Determine safety data for Shell HE.
  - c. Determine safety data for shell wp or non standard weight HE or HC.
  - d. Construct safety T.
  - e. Determine XO's MIN QE.
2. Compute Post occupation safety.
  - a. Update safety after registration.
  - b. Determine high angle safety.
    - (1) Construct a high angle safety matrix on the safety.
    - (2) Record diagram ranges from the basic safety diagram.
    - (3) Record the charge from the range safety charge.
    - (4) Enter range corrections, if necessary.
    - (5) Enter the total range.
    - (6) Enter Range K.
    - (7) Determine entry range.
    - (8) Determine Vertical interval.
    - (9) Determine Angle of Site.

(10) Divide Angle of Site by 10.

(11) Determine 10 mil Site Factor.

(12) Determine Site.

(13) Determine Elevation.

(14) Determine quadrant elevation.

(15) Determine Drift.

(16) Verify computations.

(17) Record data on the safety T.

c. Determine illumination safety.

3. Compute safety data with automated software.

a. Compute pre-occupation safety data.

Note: Pre-occupation safety data is computed with data provided by the range safety card.

(1) Establish false observer and howitzer data for safety computations.

(2) Calculate safety limits for low and high angle fire.

(3) Determine low angle deflection limit, Min TI fuze setting, and Min QE.

(4) Determine low angle deflection limit and MAX QE.

(5) Determine MIN QE and MAX QE for an unknown projectile weight.

(6) Determine high angle deflection limit and MAX QE.

b. Compute post-occupation safety data.

(1) Delete false data from pre-occupation safety computations.

(2) Enter lay data.

(3) Determine center-of-battery grid and altitude.

(4) Re-enter false howitzer with CENTER OF BATTERY location.

(5) Input average propellant temperature and average MVV for the battery.

(6) Input actual propellant weights.

(7) Update safety computations.

4. Verify safety computations.

(Asterisks indicates a leader performance step.)

**Evaluation Preparation:** Setup: Ensure that all information, references, and equipment required to perform the task are available. Use the performance measures and the references to score the Soldier's performance. Brief the Soldier. Tell the Soldier what he is required to IAW the task conditions and standards.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Computed pre-occupation safety data manually.			
2. Computed post-occupation safety data.			
3. Computed safety data with automated software.			
4. Verified safety data.			

**Supporting Reference(s):**

Step Number	Reference ID	Reference Name	Required	Primary
	FM 6-40	Tactics, Techniques, and Procedures for Field Artillery Manual Cannon Gunnery	No	No

**Environment:** Environmental protection is not just the law but also the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects.

**Safety:** In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Composite Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, NBC Protection, FM 3-11.5, CBRN Decontamination.

**Prerequisite Individual Tasks :** None

**Supporting Individual Tasks :** None

**Supported Individual Tasks :** None

**Supported Collective Tasks :**

Task Number	Title	Proponent	Status
06-4-5016	Determine Firing Data	06 - Field Artillery (Collective)	Approved
06-2-1061	Prepare for Combat	06 - Field Artillery (Collective)	Approved