

TRAINING SUPPORT PACKAGE (TSP)

TSP Number/Title 55B40B02 Inspect Ammunition Operations for Safety

Task Number(s)/ Title(s) None

Effective Date 21 August 1998

Supersedes TSP(s) MP-03/B 645-55B40
MP-04/B 645-55B40

TSP User USAOMMCS, Redstone Arsenal, Alabama and accredited Ordnance TASS Battalion

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Foreign Disclosure Restrictions If Allied students are scheduled to attend this class, coordination with Security Division (ATSK-AS) is required to determine if the information can be released to Allied students.

Preface

Purpose

This training support package provides the instructor with a standardized lesson plan for presenting instruction for:

LESSON TITLE:	Safety In Ammunition Operations for Safety
CONDITIONS:	In a classroom environment, given TM 9-1300-206, FM 9-6, and TB 43- 0142
STANDARD:	Identify the steps for inspecting munitions operations and facilities and recommend corrective measures and references with seventy-percent (70%) accuracy.

This TSP Contains

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(21 August 1998)

SECTION I. ADMINISTRATIVE DATA

All Courses Including this Lesson	<u>COURSE NUMBER(S)</u>	<u>COURSE TITLE(S)</u>
	645-55B40	Ammunition Specialist, ANCOC

Task(s) Taught or Supported	<u>TASK NUMBER</u>	<u>TASK TITLE</u>
	None	

Reinforced Task(s)	<u>TASK NUMBER</u>	<u>TASK TITLE</u>
	None	

Academic Hours The academic hours required to teach this lesson are as follows:

	<u>ADT HOURS/METHOD</u>
Conference	2.0 / CO
Practical Exercise	2.0 / PE2
<hr/>	
Total hours	4.0

Test Lesson Number		<u>Hours</u>	<u>Lesson No.</u>
	Testing:	3.0 TE2	55B40B10
	Review of test results:	1.0 CO	55B40B11

Prerequisite Lesson(s)	<u>LESSON NUMBER</u>	<u>LESSON TITLE</u>
	55B40B01	Surveillance Operations

Clearance and Access

Unclassified - If Allied students are scheduled to attend this class, coordination with Security Division (ATSK-AS) is required to determine if the information can be released to Allied students.

References Required

<u>Number</u>	<u>Title</u>	<u>Date</u>	<u>Additional Information</u>
TB 43-0142	Safety Inspection and Testing of Lifting Devices	30 AUG 93	
FM 9-6	Munitions Support in the Theater of Operations	20 MAR 98	
TM 9-1300-206	Ammunition and Explosives Standards	30 AUG 73	w/changes 1-10

Related

None

Student Study Assignments

None

Instructor Requirements

One instructor

Additional Support Personnel Requirements

None

Equipment Required

Overhead Projector

**Materials
Required**

INSTRUCTOR MATERIALS: References listed above. Viewgraphs
55B40B02, VG#01 - VG#18

STUDENT MATERIALS: References listed above and Worksheet
55B40B02-PE2 Practical Exercise

**Classroom,
Training Area,
and Range
Requirements**

One 30-person classroom

**Ammunition
Requirements**

None

**Instructional
Guidance**

Before presenting this lesson, instructors must thoroughly prepare by
studying this lesson and identified reference material.

**Proponent
Lesson Plan
Approvals**

<u>Name</u>	<u>Rank</u>	<u>Position</u>	<u>Date</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

SECTION II. INTRODUCTION

Method of instruction: CO
 Instructor-to-student ratio: 1:12
 Time of instruction: 0.1 hours

Motivator Good morning/afternoon, class. I am _____. I will be your primary instructor for this lesson. One of two primary reasons for having ammunition specialists is to ensure safety. For the ammunition specialist, safety is a way of life. As an ammunition inspector, you must be fully aware of all aspects of safety in order to reduce to a minimum the possibility of accidents of any type.

Terminal Learning Objective Note: Inform the students of the following terminal learning objective requirements.
 At the completion of this lesson, you (the student) will:

ACTION:	Inspect Munitions Operations for Safety
CONDITIONS:	In a classroom environment, given TM 9-1300-206, FM 9-6, and TB 43-0142
STANDARD:	Identify the steps for inspecting munitions operations and facilities and recommend corrective measures and references with 70 percent accuracy.

Safety Requirements None

Risk Assessment Level Low

Environmental Considerations None

Evaluation On a written end-of-annex examination the student must score a minimum of 70 percent to achieve a GO.

Note:

Show VG01 (Lesson Title).

**Instructional
Lead-in**

Munitions are designed specially to kill or destroy. We are well aware that munitions must be kept in a safe condition and must be handled with the proper care and caution to minimize hazards. During this lesson we will cover the safety items to inspect during munitions operations.

SECTION III. PRESENTATION

1. Learning Step/Activity 1: Describe general safety and personnel and explosive limits. (Reference TM 9-1300-206 paragraphs 2-1 and 2-2)

Method of instruction: CO
Instructor-to-student ratio: 1:12
Time of instruction: 0.4 hours
Media: Viewgraphs

Note: Show VG02 (General Safety).

a. **General Safety.** The destructive nature of munitions demands constant awareness on the part of those who use it. Carelessness causes destructive and possibly fatal incidents that hamper or disrupt tactical operations. Carelessness can result in the loss of the munitions, equipment, or personnel. These considerations and the concern for safety of personnel and property are paramount in Army regulations that have been written to ensure that the destructive potential of munitions is not prematurely unleashed.

- (1) All personnel engaged in operations in which munitions or other hazardous materials are involved shall be thoroughly trained in explosive safety and be capable of recognizing any hazardous condition. Safety must become a firmly established habit when working with, or in the vicinity of items having explosive, flammable, or toxic hazards.
 - (2) Improper, rough, and careless handling of munitions not only may result in malfunctioning but also may cause accidents that result in loss of life, injury, or property damage. The history of accidents that have occurred in the use, handling, shipping, and storage of munitions shows that, in many instances where the cause was determined, the accidents have been due to human error and circumstances that were avoidable.
-

Note: Show VG03 (Responsible Personnel Actions).

- (3) Personnel charged with responsibilities for munitions must be motivated and continuously impressed with the fact that their safety, as well as that of others, depends upon the care they use in the performance of assigned duties. Responsible personnel must ensure the following actions are practiced.

- (a) Reduce the exposure rate.

- (b) Ensure that no more personnel work on an operation than are necessary.
 - (c) See that safety precautions are vigorously observed and enforced.
 - (d) Post safety signs in working areas.
 - (e) Discipline careless workers and reward careful ones.
 - (f) See that no unauthorized operations are performed.
 - (g) See that all operations are properly supervised.
-

Note: **Show VG04 (Personnel Limits).**

b. Personnel Limits.

Personnel limits are the minimum number of personnel that will be exposed for a minimum time to the smallest quantity of explosives consistent with safety and efficiency. However, at least one person should be available near the hazard area during explosive operations, such as disposal or testing, to give warning and assist in rescue activities in the event of an accident. The following apply in the establishment of personnel limits:

- (1) Tasks not necessary to the explosive operations will be prohibited within the immediate vicinity of the hazard.
 - (2) Unnecessary personnel will be prohibited from visiting the operation.
 - (3) Dividing walls or barricades will be present when it is essential to perform concurrent operations in a single building.
 - (4) A conspicuously placed poster or placard will be posted to indicate the maximum number of operators, supervisors, and visitors permitted at any one time in an immediate working area containing explosives.
-

Note: **Show VG05 (Explosive Limits).**

c. Explosive Limits.

Limits for munitions, explosives, and pyrotechnic materials shall be determined by a careful analysis of all facts, including operation, timing, transportation methods, size of the items, and the chemical and physical characteristics of the material.

- (1) Limits shall be established for each operation, rather than on an overall basis, so that each worker will be charged with the responsibility of not exceeding the established limit.
 - (2) Except for storage buildings, explosive limits shall not be established on the basis of the maximum quantity of explosives permitted by explosive safety quantity-distance separation when smaller quantities will suffice for the operation.
 - (3) The maximum amount of explosives, expressed by weight and units of munitions as applicable, permitted in each room, cubicle, or building containing explosives will be conspicuously posted in each such area.
-

Note: **Check on student learning.**

QUESTION: In many instances when accidents involve munitions, what is the cause determined to be a direct result of?

ANSWER: Human error and circumstances that were avoidable.

QUESTION: What is the minimum number of personnel permitted when conducting explosive operations?

ANSWER: Two.

QUESTION: What must be present when conducting concurrent operations in a single building?

ANSWER: Divided walls or barricades.

-
2. Learning Step/Activity 2: Describe fire prevention policies.
(Reference TM 9-1300-206 paragraphs 3-2 through 3-4)

Method of instruction: CO
Instructor-to-student ratio: 1:12
Time of instruction: 0.4 hours
Media: Viewgraphs

Note: Show VG06 (Fire Prevention).

- a. Fire Prevention.** The most important aspect of fire prevention is personnel awareness. All personnel should practice the procedures implemented to reduce the possibility of a fire and know what to do if one should occur.
- (1) Matches or other flame- or spark-producing devices will not be permitted in any magazine area or explosives area except by written authority of the commanding officer or his designated representative. When such authority has been received, a metal carrying device, too large to fit into the pockets, should be used for matches, lighters, and similar materials. The carrying of and use of "strike anywhere matches" are prohibited.
 - (2) Smoking within areas containing explosives, munitions, or highly combustible materials shall be strictly regulated and controlled. Where it is believed that smoking can be safely regulated, specifically designated smoking locations, approved by the commander, must be established. Smoking is not permitted in vehicles passing through such areas. As a minimum, the smoking area will have the following:
 - (a) Suitable receptacles must be provided for cigarette and cigar butts and pipe discards.
 - (b) Only permanently installed electric lighters of approved types shall be used when serviced by electricity.
 - (c) At least one class 1A-rated portable fire extinguishers will be provided.
-

Note: Personnel whose clothing is contaminated with explosives or other hazardous materials are not permitted in the smoking area.

Note: Show VG07 (Vegetation).

- (3) Vegetation: Vegetation in the form of grass, undergrowth, or weeds, which is or may become a fire hazard will be controlled by any of the following methods:
- (a) Weed Killer which does not contain chlorates or other substances that may ignite.
 - (b) Mowing.
 - (c) Plowing.
 - (d) Cutting. Cut vegetation and undergrowth will be removed from each storage site.
 - (e) Livestock grazing under supervised conditions.
 - (f) Burning only in calm weather and with proper control.
 - 1 When authorized, burning will not be permitted within 50 feet of any earth-covered magazine or within 200 feet of any above-ground type magazine or outdoor storage site containing explosive or munitions.
 - 2 During burning operations, all windows, doors, and ventilators will be closed.
 - 3 During burning operations around magazines, fire fighting equipment must be available at the site.
-

Note: **Show VG08 (Firefighting Facilities).**

b. Firefighting Facilities.

- (1) Water barrels, pails, sand boxes, and shovels provide a recognized means of combating fires just starting in explosives and munitions storage areas where the combustible material consists principally of grass, wood, dunnage, or munitions boxes. Where used, at least one water barrel and two pails or two water-type extinguishers, winterized when necessary and treated to repel mosquitoes, should be available for immediate use by workmen in and around a magazine.
- (2) Under normal conditions, however, water barrels and pails are not recommended in extensive explosives and munitions storage areas if:
 - (a) Vegetation control is complied with.
 - (b) Working crews in the magazine area are equipped with two water-type hand extinguishers, preferably of the 2 1/2 gallon capacity, pressurized, the 4-gallon back pack hand pump type, or with multipurpose dry chemical extinguishers with a minimum classification of 3A.

- (c) The installation has a firefighting plan and an organized firefighting force equipped with pumpers or brush trucks, tank trucks, and other necessary equipment.
- (d) A fire map is maintained at the fire station, and a copy is kept in the vicinity of the storage area indicating the location of each storage site and indicating the general hazard at each location or site.

Note: **Check on student learning.**

QUESTION: Who may permit matches or other flame- or spark-producing devices in a magazine or explosive area?

ANSWER: The commanding officer or his designated representative.

QUESTION: What type of lighter is permitted in an authorized smoking area when serviced by electricity?

ANSWER: Permanently installed electric lighters.

QUESTION: When burning vegetation is authorized, what is the minimum distance the burning operation must be from any above-ground type magazine?

ANSWER: 200 feet.

-
3. Learning Step/Activity 3: Describe equipment safety.
(Reference TM 9-1300-206 paragraph 2-5)

Method of instruction: CO
Instructor-to-student ratio: 1:12
Time of instruction: 0.3 hours
Media: Viewgraphs

Note: Show VG09 (Equipment Safety).

Equipment Safety.

- (1) Tools and equipment used in the maintenance of munitions presents various safety problems due primarily to misuse or misunderstanding by operators. Tools and equipment are designed to be safe when operated in the prescribed manner and when properly maintained.
- (2) Safety hand tools are constructed of wood and other non-sparking or spark-resistant materials such as:
 - (a) Bronze.
 - (b) Lead.
 - (c) Beryllium alloys.
 - (d) "K" monel metal.
- (3) Hand tools or other implements used in the vicinity of hazardous materials must be handled carefully and kept clean. If ferrous metal handballs are required because of their strength, the immediate area should be free from exposed explosives.
- (4) Steel wool is a fire hazard and must be stored in a closed metal container. Steel wool should not be used for cleaning purposes where possible contact with exposed explosives exists. Copper wool should be substituted in these instances. (TM 9-1300-206, page 8-11, paragraph. 8-16 i.)

- (5) Operation of material handling equipment (MHE) requires extreme caution. The design and size of this equipment make movement awkward. Safety rules for MHE operators and those working near such equipment should be established and enforced. (TM 9-1300-206, paragraph. B-6)
- (a) All material handling equipment for which specific test instructions have been published, will be inspected, tested, and maintained in accordance with the appropriate standards.
- (b) Overhead guards are required for forklift trucks of all types. Exceptions may be granted in writing by installation commanders only when the height of the overhead guard would deny entry of the fork lift into the work locations.
- (c) Gasoline and diesel-powered equipment shall not be refueled within 20 feet from inert warehouses and 90 feet from an explosive location or building.
- 1 During gasoline refueling, an electrically continuous path to ground shall be maintained between the tank being filled and the tank being emptied. The entire system shall be grounded before the refueling operation is begun.
 - 2 In the event of a fuel spill during refueling, the motors of the refueling truck and material handling equipment will not be started until the area is thoroughly washed down with water or until the equipment is first moved by hand at least 50 feet from where the spillage occurred.
 - 3 The motor of the equipment shall be run after refueling for a sufficient length of time to assure that any fire which might result from fuel vapors on the equipment will not occur in the operating or storage building.
- (d) Periodic load testing of forklifts is not required. However, prior to initial use, all new, extensively repaired, or altered lifting devices shall be load tested. The load rating and date of the next periodic inspection shall be stenciled on booms and other basic units. The stencil should be of sufficient size and be located so it will be clearly visible from the ground and from the operator's position. Periodic inspections shall be conducted by organizational maintenance personnel at least every 12 months and just prior to the use of lifting devices which have been idle for 6 months or more. (TB 43-0142, pages 2 and 3)

Note:

Check on student learning.

QUESTION: If ferrous metal hand tools are required because of their strength, what action should be taken?

ANSWER: The immediate area should be free of exposed explosives.

QUESTION: What is the minimum distance that refueling may be permitted from an explosive location or building?

ANSWER: 90 feet.

QUESTION: When authorized in writing, when can the overhead guard be removed from a forklift truck?

ANSWER: Only when the height of the overhead guard would deny entry of the forklift into work locations.

4. Learning Step/Activity 4: Describe standard operating procedure requirements. (Reference TM 9-1300-206, paragraph 2-10)

Method of instruction: CO

Instructor-to-student ratio: 1:12

Time of instruction: 0.2 hours

Media: Viewgraphs

Note: Show VG10 (Standing Operating Procedure)

Standing Operating Procedures (SOP).

- (1) A written SOP will be prepared prior to conducting operations involving munitions and explosives. The SOP will include:
 - (a) Safety requirements.
 - (b) Personnel and explosive limits.
 - (c) Quality control and quality assurance procedures.
 - (d) Description of work to be accomplished.
 - (e) Designation of equipment to be used.
 - (f) Location and sequence of operations.

Note: Show VG11 (Standing Operating Procedure (SOP), Continued).

(2) Additionally, the SOP will:

- (a) Indicate action to be taken in the event of electrical storms, utility or mechanical failures.
 - (b) When indigenous personnel are employed in operations involving explosives, the SOP will be written in English and in the language the employee understands.
 - (c) Be approved by the commander or by a qualified member of his staff whom he has delegated to review and approve procedures.
 - (d) Be approved by personnel designated as being responsible for performance of an operation.
-

Note: Show VG12 (Standing Operating Procedure, Continued).

- (e) No change to an SOP will be permitted unless approved in writing by the approving authority.
 - (f) All personnel having operational duties or supervision thereof will enforce the SOP requirements for their particular operation and have ready access to the SOP for reference.
 - (g) Applicable portions of the approved SOP shall be conspicuously posted convenient to all stations involved in the operation for guidance of all personnel.
-

Note: Check on student learning.

QUESTION: When must a written standing operating procedure (SOP) be prepared?

ANSWER: Prior to conducting operations involving munitions and explosives.

QUESTION: Who approves the SOP?

ANSWER: The commander or a qualified member of his staff whom he has delegated to review and approve procedures.

-
5. Learning Step/Activity 5: Describe destruction site operations.
(Reference TM 9-1300-206, paragraph 9-5)

Method of instruction: CO
Instructor-to-student ratio: 1:12
Time of instruction: 0.4 hours
Media: Viewgraphs

Note: Show VG13 (Destruction Site Operations).

- a. **Destruction site operations.** Destruction site safety consists of proper site selection and maintenance before and after operations, in addition to safety observed during the operation.
-

Note: Show VG14 (Site Selection).

- b. **Site Selection:** As a minimum, the site selected for destruction of munitions and explosives will meet the following requirements:
- (1) The site will be located at the maximum practical distance but not less than 2,400 feet from:
 - (a) All magazines.
 - (b) Inhabited buildings.
 - (c) Public traffic routes.
 - (d) Operating buildings.
 - (2) The site must be located in relation to direction of prevailing winds so that sparks will not be blown towards explosives.
 - (3) Where possible, have natural barricades constructed between the site and operating building or magazines.
 - (4) The site will be serviced with telephone or two-way radio communications.
 - (5) The site will be located where firefighting facilities are readily available to extinguish brush or grass fires and wet down the ground between burnings and at the close of each day's operations.

Note: **Show VG15 (Maintenance of Grounds).**

c. Maintenance of Grounds.

- (1) Ordinary combustible rubbish shall be destroyed at a location removed from places where explosives and explosive-contaminated material are destroyed.
 - (2) Where limited space does not permit separate burning areas, a part of the explosive destruction ground may be reserved for burning rubbish, provided the two areas are not operated simultaneously and the area where rubbish has been burned is wet down and inspected before explosive burning is resumed.
 - (3) All dry grass, leaves, and other flammable material within a radius of 200 feet from the point of destruction will be removed.
 - (4) Burning shall not be repeated on previously burned-over plots within 24 hours unless the burning area has been soaked thoroughly with water and an inspection by competent personnel has been made.
-

Note: **Show VG16 (Personnel Protection).**

d. Personnel protection.

- (1) Shelters affording overhead and frontal protection should be located at the appropriate inhabited building distance for the quantity and type of materials being detonated, but in no case less than 300 feet.
- (2) Personnel must use such protection when explosive materials are destroyed by detonation or when explosive materials which may detonate are being burned.
- (3) When Class 1.3 materials are being destroyed by burning, personnel must remain at the greatest practical distance from the burning site, but in no case closer than the applicable public traffic route distance.
- (4) The signal for the destruction of the charges must be governed by the individual operating the blasting machine and only after all personnel in the vicinity are protected or have reached a safe distance.
- (5) If an electric blasting machine is used, the wires will not be connected to the terminals until all personnel have reached cover and the person in charge is assured that the area is cleared of all personnel.

- (6) Personnel engaged in burning activities should be provided with fire-resistant outer clothing.
 - (7) During operations, the number of personnel in the area exposed to the hazard should be kept to a minimum, but no fewer than two.
-

Note: **Show VG17 (Servicing of Destruction Site).**

e. Servicing of Destruction Site.

- (1) Trucks transporting explosive materials to the destruction site shall be inspected and meet the requirements of DD Form 626 (Motor Vehicle Inspection). No more than two persons shall ride in the cab.
 - (2) Upon arriving at the destruction site, trucks may distribute explosive containers or explosive items to be destroyed at sites where destruction is to take place. As soon as all items have been unloaded, trucks shall be withdrawn to a safe location until destruction is completed. Containers of explosives shall not be opened until the truck has been withdrawn.
 - (3) Materials awaiting destruction shall be stored at no less than the intraline distance from adjacent temporary stores of explosive materials and from explosives being destroyed. The material shall be protected against accidental ignition or explosion from fragments, grass fires, burning embers, or blast overpressures originating in materials being destroyed.
 - (4) Containers of explosives or munitions to be destroyed shall be spotted and opened at least 10 feet from each other and from explosive material previously laid for destruction to prevent rapid transmission of fire in event of premature ignition.
 - (5) Empty containers shall be closed and moved a sufficient distance away to prevent charring or damage during burning of explosives. Empty containers may be picked up by truck on the return trip after delivery of the next quantity to be destroyed.
 - (6) Guards, safety signals, and warning signals will be used as required to keep unauthorized personnel from danger areas during destruction operations.
-

Note: **Check on student learning.**

QUESTION: How many personnel can ride in the cab of the truck that is transporting explosive materials?

ANSWER: Two.

QUESTION: How far apart should containers of explosives or munitions to be destroyed be spotted or opened?

ANSWER: Ten Feet.

QUESTION: Where limited space does not permit separate burning areas, a part of the explosive destruction ground may be reserved for burning rubbish under what conditions?

ANSWER: Provided the two areas are not operated simultaneously.

6. Learning Step/Activity 6: Perform Practical Exercise.

Method of instruction: PE2

Instructor-to-student ratio: 1:12

Time of instruction: 2.0 hours

Media: None

a. Directions to Instructor:

- (1) Ensure each student has a copy of the Practical Exercise Worksheet 55B40B02-PE2.
- (2) Inform students of directions listed below.
- (3) Provide assistance as required.
- (4) Critique the exercise upon conclusion.

b. Directions to Students:

- (1) The purpose of this practical exercise is for you to demonstrate how well you have retained the material we have covered in this lesson.
- (2) Talking between students is not allowed during the practical exercise.
- (3) Raise your hand for assistance, if needed.
- (4) Using the reference material provided answer the questions and cite the reference where you found the answer.
- (5) You have 100 minutes to complete this Practical Exercise.

SECTION IV. SUMMARY

Note:

Show VG18 (Summary).

Method of instruction: CO.
Instructor-to-student ratio: 1:12
Time of instruction: 0.2 hours.

**Review/
Summarize
Lesson**

During this lesson, we have discussed general safety, personnel and explosive limits, fire prevention, equipment safety, SOPs, and destruction site operations. We have also conducted a practical exercise to reinforce the instruction.

**Check on
Learning**

Determine if students have learned the material presented by:

- a. Soliciting student questions and explanations.
 - b. Asking questions and getting answers from the students.
 - c. Correcting student misunderstandings.
-

**Transition to
Next Lesson**

Your next lesson will be on inspecting munitions maintenance facilities.

SECTION V. STUDENT EVALUATION

Testing Requirements Upon completion of this annex, your performance will be evaluated through a comprehensive end of annex examination.

Note: Refer students to the Student Evaluation Plan.

- Feedback Requirement**
- a. Schedule and provide feedback on the evaluation and any information to help answer students' questions about the test.
 - b. Provide remedial training as needed.
-

Note: Rapid, immediate feedback is essential to effective learning.

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Practical Exercise Work Sheet

(STUDENT NAME) (RANK) (CLASS) (DATE)

1. What is the minimum distance that bulk munitions boxes, dunnage, and lumber may be stored from a magazine containing high explosives?

ANSWER:

REFERENCE:

2. What must be considered when establishing personnel limits for an operation involving explosives?

ANSWER:

REFERENCE:

3. During an operation in an earth-covered magazine, is it authorized to use gasoline-powered material handling equipment?

ANSWER:

REFERENCE:

4. What are the authorized destruction methods of explosives?

ANSWER:

REFERENCE:

5. During munitions operations, what is the minimum distance from the operation that munitions handling equipment may be refueled?

ANSWER:

REFERENCE:

6. What type of quantity-distance is required between temporary stores of explosive materials and explosives being destroyed?

ANSWER:

REFERENCE:

7. What must be done whenever an electrical storm approaches a munitions area?

ANSWER:

REFERENCE:

8. What reference is used to conduct the safety inspection and testing of lifting devices?

ANSWER:

REFERENCE:

9. How is the public withdrawal distance (feet) determined when dealing with more than 500,000 pounds of division 3 munitions involved in a fire?

ANSWER:

REFERENCE:

10. How is the "test load" determined on a lifting device?

ANSWER:

REFERENCE:

11. What type of sweeping compound may be used for cleaning floors in buildings containing exposed explosives?

ANSWER:

REFERENCE:

12. Who may enforce an SOP in a munitions area?

ANSWER:

REFERENCE:

13. Define "Load Rating."

ANSWER:

REFERENCE:

14. How can the management effectively publicize the personnel limit permitted at any one time in the immediate working area of an operation involving explosives?

ANSWER:

REFERENCE:

15. During an operation involving explosives, can the explosive limit be established according to the overall basis?

ANSWER:

REFERENCE:

16. At a minimum, how many 1A-rated portable fire extinguishers will be provided at a designated smoking area or location?

ANSWER:

REFERENCE:

17. What type of lighters are authorized in a designated smoking location in munitions areas?

ANSWER:

REFERENCE:

18. What type of material is used to construct safety tools?

ANSWER:

REFERENCE:

19. How is the quantity-distance determined for a service storage building from the operating line?

ANSWER:

REFERENCE:

20. Is it permissible to use bale hooks to handle munitions?

ANSWER:

REFERENCE:

SOLUTION SHEET

1. Answer: 100 ft.
Reference: TM 9-1300-206, page 3-3, paragraph 3-2L.
2. Answer: A minimum number of personnel will be exposed for a minimum time to the smallest quantity of explosives consistent with safety and efficiency.
Reference: TM 9-1300-206, page 2-1, paragraph 2-2a.
3. Answer: No.
Reference TM 9-1300-206, page B-8, paragraph B-6b(3)(b).
4. Answer: Detonation and burning.
Reference: TM 9-1300-206, page 9-1, paragraph 9-3.
5. Answer: 90 ft.
Reference: TM 9-1300-206, page B-9, paragraph B-6b(4)(a).
6. Answer: Intraline distance
Reference: TM 9-1300-206, page 9-4, paragraph 9-5i.
7. Answer: Personnel shall be evacuated from locations at which there is a hazard from explosives that could be initiated by lightning.
Reference: TM 9-1300-206, page 2-4, paragraph 2-11a.
8. Answer: TB 43-0142.
Reference: TM 9-1300-206, page B-13, paragraph B-6e (2).
9. Answer: Using inhabited building distance.
Reference: TM 9-1300-206, page 3-8, paragraph 3-7d (1) (d) 5.
10. Answer: By multiplying the desired load rating by the applicable factor.
Reference: TB 43-0142, page 3, paragraph 4a(1).
11. Answer: Sweeping compound which is nonabrasive and compatible with the explosives involved.
Reference: TM 9-1300-206, page 2-4, paragraph 2-9c.
12. Answer: All personnel having operational duty or supervision.
Reference: TM 9-1300-206, page 2-4, paragraph 2-10c.

13. Answer: The "Load Rating" is the maximum authorized load that may be lifted by a lifting device.
Reference: TB 43-0142, page 2, paragraph 3c.
14. Answer: By conspicuously placing posters or placards.
Reference: TM 9-1300-206, page 2-2, paragraph 2-2a(4).
15. Answer: No, limits shall be established for each operation.
Reference: TM 9-1300-206, page 2-2, paragraph 2-2b(1).
16. Answer: At least one.
Reference: TM 9-1300-206, page 3-1, paragraph 3-2b(4).
17. Answer: Permanently installed electric lighters.
Reference: TM 9-1300-206, page 3-1, paragraph 3-2b(3).
18. Answer: Wood, non-sparking or spark resistant materials.
Reference: TM 9-1300-206, page 2-2, paragraph 2-5a.
19. Answer: Intraline distance based on the quantity of explosives in the service storage building.
Reference: TM 9-1300-206, page 2-2 paragraph 2-2b(3) & page 5-3, para 5-3d(2).
20. Answer: No.
Reference: TM 9-1300-206, page 2-2, paragraph 2-4a.