

17 November 2006

Safety
Explosives Safety

***This regulation supersedes USAREUR Regulation 385-64, 26 July 2000.**

For the Commander:

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Summary. This regulation prescribes ammunition- and explosives-safety standards for the Army in Europe.

Applicability. This regulation applies to units in the Army in Europe that store and handle ammunition and explosives.

Supplementation. Organizations will not supplement this regulation without USAREUR G1 (AEAGA-S) approval.

Forms. AE and higher level forms are available through the Army in Europe Publishing System (AEPUBS).

Records Management. Records created as a result of processes prescribed by this regulation must be identified, maintained, and disposed of according to AR 25-400-2. Record titles and descriptions are available on the Army Records Information Management System website at <https://www.arims.army.mil>.

Suggested Improvements. The proponent of this regulation is the USAREUR G1 (AEAGA-S, DSN 370-8124/8084). Users may suggest improvements to this regulation by sending DA Form 2028 to the USAREUR G1 (AEAGA-S), Unit 29351, APO AE 09014-9351.

Distribution. C (AEPUBS).

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Glossary

1. PURPOSE

This regulation—

a. Establishes a single policy and integrated explosives-safety program for handling and storing ammunition and explosives (A&E) in the Army in Europe.

b. Must be used with AR 385-10 and DA Pamphlet 385-64.

2. REFERENCES

Appendix A lists references.

3. EXPLANATION OF ABBREVIATIONS AND TERMS

The glossary defines abbreviations and terms.

4. RESPONSIBILITIES

a. The Safety and Occupational Health Office, Office of the Deputy Chief of Staff, G1, HQ USAREUR/7A, in conjunction with the Public Safety Office, IMCOM-Europe, will—

(1) Establish explosives-safety policy and program requirements for the Army in Europe.

(2) Coordinate with the host nation and NATO, HQDA, USEUCOM, U.S. Army, and USAFE organizations, as appropriate, on explosives-safety matters.

b. The Chief, Safety and Occupational Health Office, will—

(1) Serve as the POC for technical explosives-safety expertise in the Army in Europe.

(2) Review site plans submitted by USAREUR elements for technical quality and mission requirements, and coordinate the submission of these plans through IMCOM-Europe to the Department of Defense Explosives Safety Board (DDESB).

(3) Coordinate with HQ USAREUR/7A staff offices on explosives-safety matters.

(4) Review requests from USAREUR units for explosives-safety exemptions and waivers. This review will consider the unit's mission requirements, the quality of the risk assessment conducted by the unit, and the technical merit of the request.

(5) Chair the U.S.-German Ammunition Technical Working Group.

(6) Provide technical input and recommendations to the USAREUR G3 and the USAREUR G4 on explosives safety, including handling, managing, storing, and transporting explosives, and on planning contingencies involving explosives.

(7) Provide technical guidance and support to USAREUR and IMCOM-Europe.

(8) Serve as the U.S. representative to the NATO Joint Ammunition Technical Working Group.

(9) Serve as the USAREUR representative to the Department of the Army Explosives Safety Council (DAESC).

(10) Serve as the vice chairperson of the Army in Europe Explosives Policy Action Committee (EPAC) (para 17).

(11) Conduct periodic audits of USAREUR elements and their explosives-safety programs for compliance with applicable explosives-safety regulations and requirements.

c. The Chief, Public Safety Office, will—

(1) Coordinate site plans submitted by USAREUR units and other tenants and activities with host nations as required and forward them through the United States Army Technical Center for Explosives Safety (USATCES) to the DDESB.

(2) Coordinate requests from USAREUR units and other tenants and activities for explosives-safety exemptions and waivers with the host nation as required. The Chief, Public Safety Office, will send copies of high-risk waivers to the Director, IMCOM-Europe, and maintain a database of all waivers and exemptions.

(3) Provide explosives-safety technical guidance and support to IMCOM-Europe elements.

(4) Serve as the vice chairperson of the Army in Europe EPAC (para 17).

(5) Conduct periodic audits of garrison explosives-safety programs for compliance with applicable explosives-safety regulations and requirements.

d. The USAREUR G3 (AEAGC-O) will—

(1) Determine when to deploy uploaded vehicles for contingency operations (CONOPS).

(2) Prescribe ammunition basic load (ABL) requirements.

(3) Provide requirements and priorities for ammunition stock and issue.

(4) Provide guidance for storing ABL outside the USAREUR area of responsibility (AOR) as required by contingency plans (CONPLANs).

e. The USAREUR G4 (AEAGD-SD) will—

(1) Establish USAREUR policy and logistic support concepts, plans, and programs for ammunition services.

(2) Develop the USAREUR Quality Assurance Ammunition Surveillance Program.

(3) Coordinate ammunition protective standards and policy with the USAREUR G1 (AEAGA-S).

(4) Provide storage requirements for A&E outside the USAREUR AOR as required by USAREUR G3 (AEAGC-O) CONPLANs.

(5) Chair the Army in Europe EPAC.

f. Commanders of USAREUR major subordinate and specialized commands (AE Reg 10-5, app A) will—

(1) Help subordinate unit commanders develop risk assessments of facilities with A&E as required by AR 385-10 and DA Pamphlet 385-64.

(2) Include explosives-safety considerations in all operation plans (OPLANs), operation orders (OPORDs), training activities, and functions involving A&E.

(3) Review, coordinate, and forward explosives safety site plans submitted by subordinate commanders to the USAREUR G1 (AEAGA-S), Unit 29351, APO AE 09014-9351, for technical review and processing.

(4) Coordinate with the appropriate garrison safety office on explosives-safety matters that affect garrison personnel, other tenant organizations, and property.

(5) Conduct explosives-safety audits of ammunition-storage and operational sites in their AOR at least every 18 months.

(6) Develop and coordinate an ammunition-storage license for each site operated with the appropriate garrison safety office, except for the Reserve Storage Activity, Miesau (RSAM). The safety officer for the RSAM will certify licenses for those facilities.

(7) Enforce the requirements of explosives-storage licenses to ensure exposed sites are protected. Discrepancies will be reported to the garrison or responsible commander.

(8) Report and investigate explosives accidents involving personnel, equipment, or facilities (AR 385-10 and DA Pam 385-40). Malfunctions will be reported according to AR 75-1 and USAREUR Regulation 700-150.

(9) Review and recommend action on explosives-safety waiver and exemption requests submitted by subordinate commanders according to paragraph 6.

(10) Ensure fire-protection support elements are provided the most current and complete list of hazards associated with the ammunition-storage facilities and operations in the garrison.

(11) Review waivers annually to ensure the control measures are still relevant and applicable. Commands will inform the garrison or responsible commander of a waiver's expiration at least 180 days before the expiration date.

(12) Prepare, review, and forward waivers for explosives operations under their command and control through the host garrison commander for concurrence according to paragraph 6.

(13) Be responsible for the safe execution of all ammunition operations conducted under their command and control.

(14) In coordination with the garrison safety office, certify explosives-storage licenses and maintain a list of all licenses, waivers, and exemptions for explosives-storage locations in their AOR.

g. Garrison commanders will—

(1) Be responsible for the safe execution of ammunition operations conducted under their command and control and for the structural maintenance of ammunition-storage facilities on their installations.

(2) Ensure personnel from the garrison safety office, the local directorate of public works (DPW), and the appropriate host-nation agency take part in maintaining and inspecting restricted areas.

(3) Ensure that the safety officer is a designated member of the master planning committee.

(4) Ensure that the master planning map shows required and approved safe separation distances (SSDs) for explosives operations and facilities on all installations.

(5) Review requests for waivers for explosives operations and facilities on their installations, and concur with and forward justified requests according to paragraph 6.

(6) Develop, implement, and apply a single explosives-safety program for installation and tenant activities that includes at least periodic audits of explosives-safety operations on their installations.

(7) Develop letters of agreement (LOAs) with their tenant facilities to define responsibilities for developing and executing an explosives-safety program that meets the requirements of AR 385-10, DA Pamphlet 385-64, and this regulation. The LOA must clearly define maintenance and support responsibilities to ensure explosives-safety locations are maintained according to regulations.

(8) Review waivers annually to ensure control measures are still relevant and applicable.

(9) Establish and control effective amnesty programs for activities in their AOR.

(10) Ensure fire-protection support elements are provided the most current and complete list of hazards associated with their ammunition-storage facilities and operations.

h. Garrison safety officers will—

(1) Develop, implement, and maintain an overall explosives-safety program for the garrison and serve as the garrison commander's POC for all safety matters.

(2) Conduct periodic audits of the explosives-safety programs being executed on all facilities by tenants of the garrison.

(3) Serve as a member of the garrison master planning committee.

(4) Review and forward to the garrison commander all waivers and exemptions received from subordinate and tenant activities.

(5) In coordination with tenants, review explosives-storage licenses at least once a year and maintain a list of all licenses, waivers, and exemptions for all explosives-storage locations on their installations.

(6) Review and coordinate all explosives-safety site plans to ensure they do not conflict with activities or facilities on their installations. The USAREUR G1 (AEAGA-S) will provide a technical review.

(7) Participate with the DPW and the appropriate host-nation agency in maintaining and inspecting restricted areas.

(8) Recommend to the garrison commander whether to approve or disapprove, as appropriate, the storage of ammunition in inhabited buildings (arms rooms) and near inhabited areas according to paragraph 7.

(9) Conduct annual inspections of unit arms rooms that are licensed to store ammunition on their installations.

(10) Review and send to the commander waivers and exemptions received for A&E operations and facilities conducted by themselves or their tenant activities.

i. Garrison DPWs will—

(1) Coordinate the establishment and maintenance of restricted areas (para 13) with the host nation according to USAREUR Regulation 210-60.

(2) Maintain consolidated engineering plans showing restricted areas according to USAREUR Regulation 210-60. DPWs will review consolidated engineering plans showing restricted areas for possible explosives-safety conflicts before planning any new facilities, operations, or renovations.

(3) Ensure that the master planning map shows required and approved SSDs for explosives operations and facilities on all installations according to DA Pamphlet 385-64.

(4) Review and certify lightning-protection systems (LPSs) (para 8). DPWs will ensure that LPSs, bonding systems, and grounding systems are tested according to the requirements of AR 385-10, DA Pamphlet 385-64, this regulation, and the garrison explosives-safety program.

(5) Verify that DDESB approval has been received for all construction projects involving A&E operations or facilities and for facilities that fall within the SSD of any A&E operation or facility.

(6) Maintain vegetation surrounding explosives-storage facilities and controls according to the requirements of AR 385-10, and DA Pamphlet 385-64, and this regulation.

(7) Provide fire-protection support for ammunition-storage facilities according to AR 420-90. DPWs will ensure that fire-protection personnel are trained on responding to emergencies at ammunition-storage facilities and are familiar with the hazards associated with handling and using A&E according to DA Pamphlet 385-64.

j. Garrison directorates of emergency services (DEs) will—

(1) Provide fire-protection support for ammunition-storage facilities according to AR 420-90 when not serviced by a garrison DPW.

(2) Ensure fire-protection personnel, including host-nation fire-protection and guard-force personnel, are trained on responding to emergencies at ammunition-storage facilities and are familiar with the hazards associated with handling and using A&E according to DA Pamphlet 385-64.

5. POLICY

a. General.

(1) While A&E items are inherently dangerous, they can be managed safely during contingency, peacetime, and wartime operations in an efficient and effective manner so that they are available when and where needed without posing an unnecessary risk.

(2) The purpose of an explosives-safety program is not to restrict the management of A&E, but to provide Army elements with high-quality, reliable, risk-based information for making decisions.

b. Responsibilities. Commanders will—

(1) Integrate A&E safety considerations into activities, concepts, equipment, facilities, plans, and procedures to control or eliminate risks and to preserve mission resources and the environment.

(2) Implement risk-management practices at all levels to analyze and select the safest strategy for executing activities involving A&E by identifying potential hazards, consequences, and possible controls.

(3) Limit the exposure of explosive material to the fewest people, for the least amount of time, and to the least amount of explosives consistent with safe and efficient operations and mission requirements.

(4) Provide training to all personnel involved with A&E so that they know the hazards associated with handling A&E.

(5) Apply the explosives SSDs of DA Pamphlet 385-64 for the storage of ABL when full compliance with SSD or compatibility requirements cannot be met for military operations other than war because of force-protection issues, the storage of unit basic load, or contingency deployments.

(a) These provisions apply only if allowed by host-nation laws or status of forces agreements.

(b) Army units stationed at installations belonging to another Service will follow U.S. Army requirements to the extent the installation commander allows.

6. RISK MANAGEMENT, WAIVERS, AND EXEMPTIONS

a. General. The goal of the Army in Europe Explosives Safety Program is to manage the storage, transportation, and use of A&E effectively, efficiently, and safely during contingencies and peace- and wartime operations.

(1) Risk-management techniques are used to eliminate or manage A&E hazards to keep the level of risk as low as possible, maintain mission integrity and resources, and preserve the environment.

(2) *Risk acceptance* is the formal process used to justify undesirable and dangerous levels of exposure to personnel, property, the mission, and the environment after control measures have been identified to reduce the exposure to the hazard.

(3) Requests for risk acceptance and waivers or exemptions from explosives-safety standards must be based on a risk assessment of the explosives-safety hazards of the mission, explosives requirements, and facilities or operations (app B).

b. Waivers. A waiver is written authority that permits temporary deviation from A&E standards and regulations for strategic or other compelling reasons.

(1) Waivers—

(a) Are generally granted for a short period not to exceed 5 years, pending the cancellation of the waiver or correction of the waived conditions.

(b) Issued according to this regulation apply only to explosives-safety criteria for storage and handling. They do not waive safety requirements for A&E accountability, control, security, or transportation.

(c) Must be reviewed each year by commanders to ensure that control measures are still relevant and applicable.

(d) Expire at midnight on their expiration date.

(2) Waivers needed to support planned operations must be incorporated into OPORDs and OPLANs as part of the commander's risk-assessment process. These waivers will be activated when the operation is implemented or activated. The need for the waiver will be reviewed for relevancy each time the plan is reviewed.

c. Exemptions.

(1) An exemption is written authority that permits long-term noncompliance (more than 5 years) with A&E standards for strategic or other compelling reasons. Exemptions may be granted by congressional action, law, or the appropriate authority (app B).

(2) An approval authority representative will review exemptions for applicability and currency at least every 5 years. An exemption may be granted only when all of the following conditions are met:

(a) A strategic or compelling need makes the exemption necessary.

(b) Long-term (more than 5 years) or permanent noncompliance with the A&E standards of AR 385-10, DA Pamphlet 385-64, or this regulation is desired.

(c) Immediate compliance with A&E standards and regulations is impracticable (for example, Congress has not authorized the purchase of additional real estate, existing facilities cannot be relocated).

(3) Commanders will ensure exemptions are reviewed each year for applicability, compliance, and currency.

d. Approval Process. Figure 1 provides procedures for submitting requests for waivers and exemptions.

(1) Units requesting a waiver or exemption must complete a risk assessment to determine hazards, identify exposures, and specify compensatory safety measures before the waiver or exemption approval authority can be determined. The risk assessment will be used to determine the level of risk associated with the explosives hazard. A qualified explosives-safety professional must review the risk assessment.

(a) Appendix B provides procedures for making risk assessments using a severity chart and a probability-determination chart.

(b) The information from the charts ((a) above) must be used with the Army in Europe Decision-Authority Matrix (app B, fig B-3) to determine the level of risk and the waiver or exemption approval authority.

(2) Commanders who approve a waiver will send a copy of the waiver and the supporting risk assessment to HQ USAREUR/7A (AEAGA-S), Unit 29351, APO AE 09014-9351, and to IMCOM-Europe (SFIM-EU-ZS), Unit 29353, Box 200, APO AE 09014-0200.

(3) Only the CG, USAREUR/7A, may approve exemptions and extremely high-risk waivers (AR 385-10).

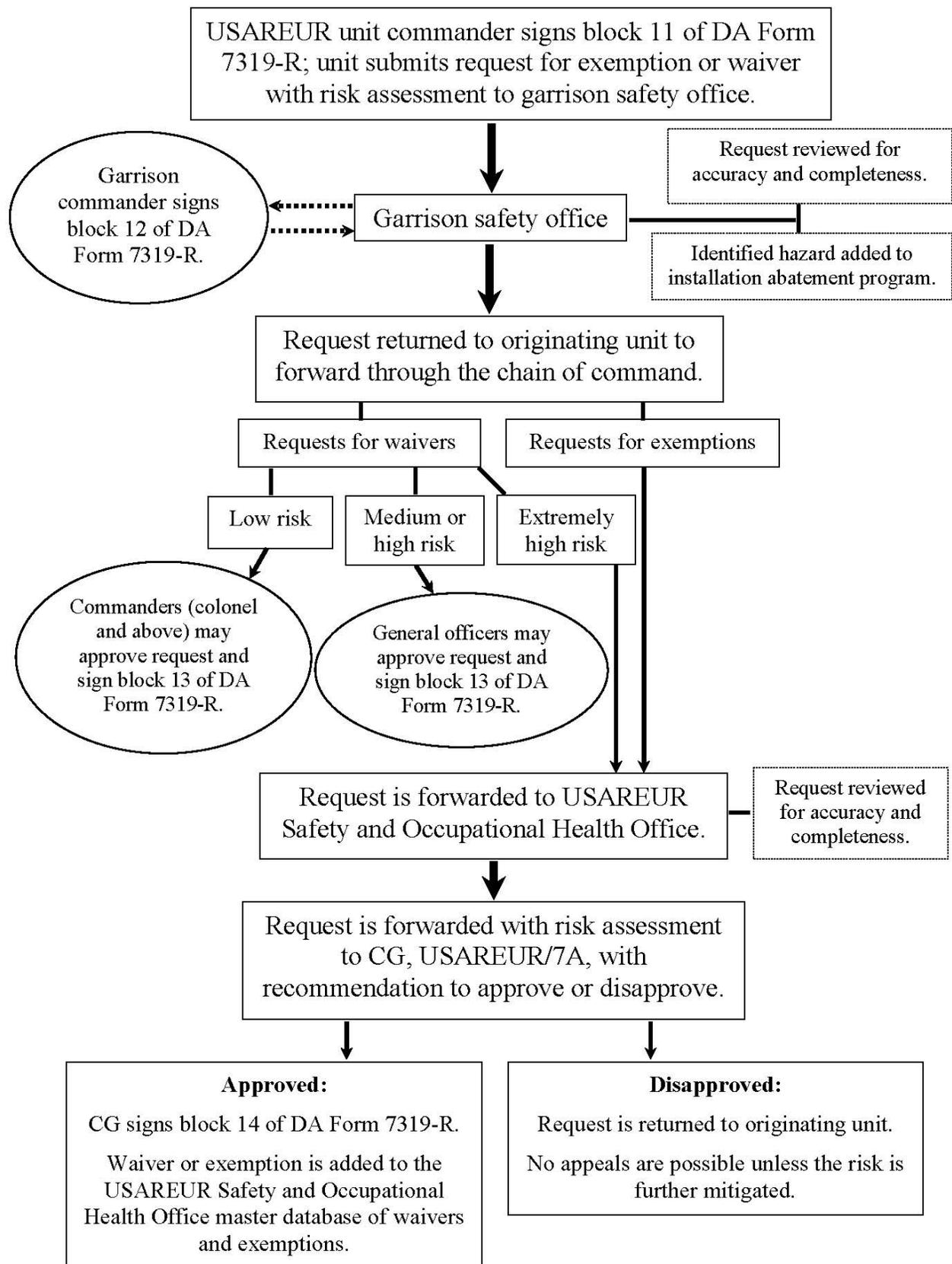


Figure 1. Procedures for Requesting Waivers and Exemptions

e. Army Risk Management Process and Waiver and Exemption Procedures. The Army Risk Management process for A&E handling, storage, and use consists of the following five steps:

(1) Identify Hazards.

(a) Identify where A&E items are stored and used, and the possible targets if the site explodes.

(b) Determine the distance to the targets and if the targets are mission-essential or special-occupancy buildings, such as headquarters and hospitals.

(2) Assess Hazards. Determine—

(a) The amount and type of A&E items and whether they represent a blast wave or fragment hazard.

(b) The probable damage to each target based on the amount and type of A&E and the distance to the target.

(3) Develop Controls and Make Decisions.

(a) Determine the appropriate distances needed to protect targets and prevent propagation and blast or fragment damage.

(b) If the level of risk increases, inform the command of the risk to ensure command awareness, participation, and acceptance of the higher risk.

(4) Implement Controls.

(a) Apply a management decision based on mission requirements and the level of risk.

(b) Issue licenses for each explosives site and implement the selected management controls.

(c) Execute waivers and exemptions as required for acceptance of greater than normal dangers to personnel, mission resources, mission accomplishment, and the environment.

(5) Supervise and Evaluate the Controls and Identified Hazards. Regularly evaluate A&E locations to ensure compliance with exemptions, licenses, and waivers, and that developments have not occurred that increase the risk associated with the explosives hazard.

f. Cancellation and Expiration.

(1) USAREUR units exercising operational control of A&E storage facilities are responsible for notifying all organizations in their chain of command when waivers and exemptions are canceled.

(2) The Public Safety Office will—

(a) Be informed if a waiver or exemption has been canceled before its expiration date (for example when corrective action has been taken and the waiver or exemption is no longer needed).

(b) Immediately cancel or suspend waivers and exemptions not in compliance with the original conditions of their approval.

(c) Coordinate with and inform the Safety and Occupational Health Office on the status of waivers and exemptions held by USAREUR units.

7. STORING AMMUNITION IN OR NEAR INHABITED BUILDINGS

DA Pamphlet 385-64 discourages but allows the storage of limited amounts of hazard division (HD) 1.2.2, HD 1.3, and HD 1.4 in arms rooms, hangers, and operations buildings without regard to explosives quantity-distance (QD) requirements if operational necessity requires this storage.

NOTE: The qualifier *operational necessity* is intended to provide commanders the flexibility to accomplish their missions and training requirements without wasting resources. It is not intended to permit the storage of ammunition in or near inhabited buildings for convenience.

a. Ammunition Storage. Storage areas in ammunition holding areas (AHAs) and at ammunition supply points (ASPs) will be used to store ammunition unless this storage would adversely affect operations or require an unusual commitment of resources (for example, require unit personnel to provide 24-hour security). Locations that have facilities authorized for storing A&E are considered ammunition-storage facilities.

b. Permitted Quantities. A maximum net explosive weight (NEW) of 50 pounds of HD 1.2.2 may be stored, but fragment barriers must be provided. The minimum acceptable fragment barriers consist of ¼-inch mild steel plate or sandbags. Up to 100 pounds of HD 1.3 and unlimited amounts of HD 1.4 are permitted without using fragment barriers.

c. Risk Assessments. Before storing ammunition in an arms room, units will conduct a risk assessment (app C) of potential storage sites to justify the storage based on operational necessity and safety considerations. The unit commander will approve (if appropriate), sign, and send the assessment to the garrison commander.

(1) When evaluating the assessment, the unit commander will consider the need to expose the fewest people to the least amount of explosives for the shortest time possible.

(2) The risk assessment must be coordinated with garrison fire-protection services, logistics personnel, quality assurance specialists (ammunition surveillance) (QASASs), the local safety office, and security personnel. QASAS support for areas without a dedicated QASAS may be coordinated by contacting the USAREUR G4 (AEAGD-SD) QASAS.

(3) The garrison or responsible safety office will keep the risk assessment on file. A copy of the risk assessment will be posted in the arms room. All arms-room personnel will be briefed on the risk assessment and will review and sign it at least once a year. This annual review must be documented.

(4) The unit commander will ensure that—

(a) Facilities used to store ammunition are properly licensed. The arms-room ammunition-storage license (fig C-2) must specify the location approved for storage, the amount of ammunition by Department of Defense identification code (DODIC) approved for storage, the time restrictions on storage, and safety, security, and fire-protection requirements. The license must be signed by the garrison or responsible safety manager.

(b) A&E items are stored in their original container with original packaging. Arms rooms that support guard forces or military police may have one outer pack of each caliber of small arms ammunition (SAA) open for use.

(c) Munitions are stored according to storage-compatibility requirements. Training ammunition must be physically separated from operational-readiness ammunition.

(d) Storage is consistent with the safety requirements of DOD 6055.9-STD and the security requirements of AR 190-11. Ammunition will be stored under the same criteria as it would be in an approved ammunition-storage facility.

(e) The appropriate fire and chemical-hazard symbols are properly posted.

d. Time Limits. The following criteria define how long training ammunition may be kept in a unit arms room:

(1) Units that are located less than 3 hours from an approved ammunition-storage facility (for example, AHA, ASP) may store limited amounts of HD 1.2.2, HD 1.3, and HD 1.4 munitions for up to 4 workdays plus the number of training days. (For example, if training will be conducted for 5 days, ammunition may be stored for up to 9 workdays (2 workdays before and 2 workdays after the training).)

(2) Units that are located more than 3 hours from an approved ammunition-storage facility may, when required, store limited amounts (the amount required to support their training needs) of HD 1.2.2, HD 1.3, and HD 1.4 munitions for up to 8 workdays plus the number of training days. (For example, if training will be conducted for 5 days, ammunition may be stored for up to 13 workdays (4 workdays before and 4 workdays after the training).)

e. Fire Protection. Fire protection for ammunition in inhabited buildings will be managed as follows:

(1) Appropriate fire and chemical-hazard symbols will be posted on the doors of ammunition-storage areas. Procedures will be established to ensure that the fire symbol shows the highest HD of ammunition stored and that chemical-hazard symbols are displayed if required. These symbols must be removed or covered when ammunition is not present.

(2) At least two class-10BC fire extinguishers will be available for immediate use when A&E items are being handled. Each fire extinguisher will be—

(a) Kept in a fully charged, operable condition.

(b) Placed in a conspicuous and readily accessible location.

(3) Small amounts of flammable or combustible liquids necessary for weapons cleaning and maintenance may be stored in approved storage containers placed at the maximum distance possible from the ammunition.

f. Ceremonial Ammunition. The storage of ceremonial ammunition is not considered an operational necessity, but a limited amount of HD 1.3 and HD 1.4 ceremonial ammunition (for example, 75 millimeter (mm) blank, 105 mm blank) may be stored in an arms room if no other practical storage means exists. The amount of HD 1.3 and HD 1.4 stored will not be more than 100 pounds NEW or three full outer packs of ammunition. All outer packs will remain closed and, if possible, secured with their original seals. Ceremonial ammunition will be physically separated from training and operational ammunition.

g. Ammunition Items Unique to Aviation Units.

(1) Cartridge actuated devices (CADs) and propellant actuated devices (PADs) are ammunition items used only for aircraft and helicopters. CADs and PADs used in aircraft escape systems and emergency life-support systems must work perfectly the first time they are used. Because CADs and PADs must be replaced periodically, controls are necessary to ensure that—

(a) They are not misplaced.

(b) Lot numbers are not lost.

(c) Items that are not installed are inventoried each month and unserviceable items are disposed of in a timely manner.

(2) Technical manual (TM) 9-1377-200-20 provides procedures for the safe handling, receipt, issue, installation, storage, shipment, and maintenance of CADs and PADs, and for repackaging expired items.

(3) When stored in inhabited buildings, CADs and PADs will be stored according to this paragraph and TM 9-1377-200-20.

8. LIGHTNING PROTECTION

a. General. An LPS is required on all structures and in areas containing A&E except for the exceptions established in DA Pamphlet 385-64.

b. Electrical Tests and Inspections of LPSs.

(1) Electrical Tests.

(a) LPSs will be tested according to this regulation. Garrison DPWs will arrange for LPS tests. At the commander's discretion, host-nation engineers or contractors may test LPSs. A QASAS will verify the adequacy of tests performed. QASAS support may be coordinated by contacting the USAREUR G4 (AEAGD-SD) QASAS.

(b) When new A&E storage facilities are built, the LPS must be tested and certified as meeting host-nation and Army in Europe requirements. The garrison DPW responsible for the site will keep copies of the initial test results permanently.

(c) LPS and bonding-system components will be electrically tested every 24 months and after any repair.

1. The maximum resistance allowed from the earth rod to earth for the LPS is 25 ohms. Facility LPSs installed with a counterpoise system may exceed 25 ohms.

2. The tester will perform continuity tests between the point of each air terminal and the earth-rod testing point. The total resistance may not exceed 1 ohm.

3. The tester will perform continuity tests to verify the adequacy of the bonding system. The maximum resistance allowed for the bonding system is 1 ohm.

4. DA Pamphlet 385-64 provides visual and electrical-testing requirements for LPS components.

5. Garrison DPWs will provide the garrison safety office copies of LPS tests and documentation of corrective actions.

6. Garrison DPWs will initiate workorders for deficiencies found during LPS tests and give copies of the workorder to the garrison safety office.

(2) Inspections.

(a) Garrison safety offices will review LPS records to verify that inspections and testing required by the DPW have been completed. This process will be part of the explosives-safety licensing and site review each year. Records will be maintained for 30 years.

(b) The supporting QASAS will conduct a visual inspection of accessible LPS components during semiannual facility inspections according to Supply Bulletin 742-1. The inspection will include air terminals, bonding-system components, connections and joints in the LPS, and down conductors. The QASAS will prepare a written report to document deficiencies. If deficiencies are found, the operating unit will initiate a workorder and send it to the garrison DPW with a copy to the garrison safety office.

c. Records. As a minimum, records for LPS tests will document ohm readings from each earth rod to earth and describe the results of continuity tests. Deficiencies found during inspections or tests and corrective actions taken must be included in the report.

d. Garrison Responsibilities. Garrison DPWs will—

(1) Inform the safety office when physical electrical tests are being performed.

(2) Submit workorders or maintenance requests to the supporting DPW or host-nation authority to correct LPS deficiencies and will track repairs to completion.

(3) Report LPS deficiencies that are not repaired by the DPW, contractor, or the host nation within 180 days after submitting a workorder or request. Deficiencies must be reported through the chain of command to the IMCOM-Europe DPW.

9. SITE AND GENERAL CONSTRUCTION PLAN

a. General.

(1) Before an A&E storage facility is built or modified, the site and general construction plan must be reviewed to ensure steps are taken to protect personnel, facilities, and the unit mission. A strong review-and-approval program can ensure that standard violations are not built into projects and that proposed projects meet the A&E safety standards of DOD, DA, and the host nation.

(2) The requesting activity will prepare and submit a package on the site and general construction plan that provides specific information on the proposed project and the surrounding area. Packages must be prepared according to AR 385-10 and DA Pamphlet 385-64.

b. Site Plan Submission Process.

(1) The USAREUR unit requiring permission for the explosives operation or facility will develop the site plan. The unit will also provide technical support to the garrison and make a risk assessment if required.

(2) The DPW will provide the unit maps of the location being considered. These maps must have a minimum scale of 1 inch to 400 feet or the metric equivalent.

(3) The garrison safety office must—

(a) Ensure that QD arcs for the new operation or facility are added to the DPW master map of installations.

(b) Send the site plan submission to the Public Safety Office for coordination with the host nation, then forward it to the DDESB and USATCES.

10. CONTINGENCY OPERATIONS

The USAREUR G3 (AEAGC-O) will determine when combat vehicles will be placed in uploaded configuration based on mission and safety requirements. CONOPS directives must prescribe which vehicles to upload, the amount and type of ammunition to be uploaded, and the uploading location.

a. If a mission requires that greater than normal dangers to personnel, equipment, ammunition, and the host nation be accepted, force-protection and risk-management factors will be integrated into deployment requirements at holding and staging areas at airfields, in garrison, at ports, and at railheads.

b. The SSD, based on the NEW of the A&E items, ensures that the loss of a single element does not catastrophically affect the entire mission. Proper SSDs must be maintained during uploading, downloading, shipping, and deployment operations to protect personnel, the public, critical mission resources, and the environment. SSDs will be used between heavy armored vehicles, light armored vehicles, and nonarmored targets according to DA Pamphlet 385-64 and the following:

(1) Heavy Armored Vehicles. Magazine distance does not apply to heavy armored vehicles. Heavy armored vehicles require no separation from other heavy armored vehicles, light armored vehicles, or nonarmored targets except for 2 meters (6.6 feet) for maneuverability purposes. Vehicle hatches must be closed. Heavy armored vehicles include the following:

(a) M1 tanks.

(b) M60A1 and M60A3 tanks.

(c) M2 and M3 Bradley fighting vehicles (may be considered as heavy armored vehicles when loaded with ammunition of not greater than HD 1.2.2).

(2) Light Armored Vehicles. Light armored vehicles are not barricaded but provide some protection against external explosions. Light armored vehicles require no separation from heavy armored vehicles, except for 2 meters for maneuverability. The D-6 distances shown in DA Pamphlet 385-64, table 14-1, apply to inhabited buildings and public traffic routes. Vehicle hatches and ramps must be closed. Light armored vehicles include the following:

(a) M2 and M3 Bradley fighting vehicles.

(b) M106 4.2-inch mortar carriers.

(c) M109 155-mm howitzers (all variants).

(d) M113 armored personnel carriers.

(e) Stryker armored vehicle. (Ammunition may be stored only within the interior of the vehicle.)

(3) Nonarmored Targets. Nonarmored targets are not expected to contain the blast or fragments of the munitions carried. Barricades may be constructed between nonarmored vehicles and sites or between nonarmored targets and light armored vehicles to reduce the distance required. Nonarmored targets include the following:

- (a) M977, cargo, 8x8, 10-ton, heavy expanded mobility tactical trucks (HEMTTs).
- (b) M270 Multiple Launch Rocket System (MLRS) launch vehicles.
- (c) Military-owned demountable containers (MILVANS) and commercial transport containers.
- (d) Open-storage pads.
- (e) Unbarricaded structures.

c. After a decision is made to upload vehicles, a risk assessment will be conducted at battalion level. The commander, in coordination with the division or USAREUR-command safety office and the garrison safety office, will identify the locations and method of uploading. Locations selected for uploading and staging vehicles will be selected according to DA Pamphlet 385-64.

d. CONOPS plans must be developed and reviewed regularly. Operational elements must work with CONOPS planners to identify ammunition logistic considerations to support missions. Operations that require a temporary deviation from ammunition or explosives standards for strategic or other valid reasons will be included in the plan before implementation to allow—

- (1) Planners to incorporate factors into the plan to compensate for the additional risks.
- (2) The unit receiving the mission to react immediately without being delayed by having to obtain a waiver.

11. ONSITE EXPLOSIVES SAFETY AUDITS

a. General.

(1) An audit is a tool used to review explosives-safety processes and identify weaknesses, risks, and areas for improvement. Audits are also used to assess previously identified nonconformance and to assess the effectiveness of new policy, procedures, and changes.

(2) Audits must be regularly scheduled so that each activity is audited at least once each audit cycle (at least every 18 months).

b. Explosives Safety Audit.

(1) Audits must be performed and documented using procedures in the explosives-safety program and relevant regulations. Things that are not in the plan or regulation should not be audited.

(2) During audits, the auditor must look for evidence indicating that processes are being managed according to established policy and procedures.

- (a) The evidence should be recorded for each section being audited.

(b) Records of the evidence must include a description of the documentation cited (for example, standing operating procedures (SOPs), storage licenses). Each document's number and date should be cited along with any other information that will help identify the documents.

(3) Audit findings must be documented, and cases of nonconformance should be reported for further action. A date should be established to correct the nonconformance. Follow-up action should then be performed to ensure the organization is in compliance.

c. Explosives Safety Audit Documentation. Documentation of explosives safety audits usually consists of the following:

(1) Audit Plan. The audit plan is to be sent to the installation or activity to be audited (preferably 30 days before the audit). The plan should include the date, time, and duration of the audit; the auditor's name; and the policy and procedures that will be checked for conformance during the audit. The plan should also mention any cases of nonconformance that were identified during the previous audit.

(2) Audit Notes. Audit notes are a checklist of questions the auditor will ask during the audit. They should include references to policy and procedures and what will be examined during the audit. This document should be used to record audit findings and comments.

(3) Audit Report. The audit report is an official document used to report findings and observations made during the audit. The report should include details about the audit, the date of the audit, the auditor's name, the policy and procedures that were checked for conformance, and findings. The report should also include any cases of nonconformance found. If nonconformance is identified, a date should be established for completing corrective actions.

12. EXPLOSIVES-STORAGE LICENSE

a. General.

(1) The licensing of explosives facilities and operations is a means of ensuring that a facility or operation meets the requirements of the local explosives-safety program and applicable explosives-safety standards and regulations.

(2) Explosives-storage licenses indicate the maximum amount of explosives that may be stored or used in a facility or during an operation. This amount is determined based on the most stringent SSD standards of DOD 6055.9-STD and DA Pamphlet 385-64. Facilities that do not meet SSD standards will not be licensed unless an applicable waiver or exemption is approved according to paragraph 6.

(3) Permanently designated ammunition-storage and operations facilities must be licensed.

(4) The explosives-storage license is a permanent document with no expiration date. Licenses will be revised or canceled under any of the following circumstances:

- (a) Encroachment changes the determining factor for the license.
- (b) Changes in QD standards require recalculation of the risk.
- (c) The host nation changes the restricted area decree (RAD).
- (d) The storage site is no longer required.

(5) Before certification, the license must be formally coordinated with the garrison safety office where the storage site is located.

(6) Licenses must be reviewed during onsite explosives safety audits. Onsite audits will be coordinated and conducted according to paragraph 11.

(7) Appendix D, figure D-1, provides an example of an explosives-storage license that incorporates the requirements of DA Pamphlet 385-64.

b. Procedures.

(1) Units responsible for ammunition operations at a storage or operating site must prepare an explosives-storage license based on mission requirements and submit it to the safety office for certification. Safety managers servicing the storage or operating site will certify and date the explosives-storage license.

(2) Safety managers must review explosives-storage licenses each year for compliance. The review must include an onsite inspection of the storage area. A recalculation of the risk may be necessary if new exposures are found within the QD arcs.

(3) The garrison safety office must maintain the explosives-storage license and maps of the explosives location and surrounding area. Copies of the current license will be provided to the—

(a) Local fire-prevention organization (DPW or DES) servicing the storage location.

(b) Servicing QASAS organization.

(c) Unit or organization servicing the operations of the explosives-storage facility or activity.

(4) The DPW and RSAM safety office will maintain maps showing all explosives facilities, operations, and structures, including identification numbers. The maps must provide accurate distances and include a distance scale in feet or meters.

13. RESTRICTED AREA DECREES

a. RADs establish safety zones or restricted areas around U.S. ammunition sites in Germany where QD arcs extend beyond U.S.-controlled real estate. The RAD limits the use of land in restricted areas and provides the same safety-protective function as a perimeter fence.

b. When QD arcs extend beyond an installation boundary and into a RAD zone, a QD arc must be established by applying the most restrictive distance according to NATO, U.S., or host-nation standards.

c. Maps of ammunition facilities with RAD zones must include QD arcs with the following color-coding as applicable:

(1) Blue: Zone III (public traffic routes).

(2) Red: Zone IV (inhabited building distance).

(3) Green: Zone V (special protected objects).

d. Restricted areas will be requested, maintained, and canceled according to USAREUR Regulation 210-60.

e. In Germany, the German authorities are responsible for ensuring compliance with RADs. However, encroachment discovered during annual or routine onsite explosives-safety audits will be documented and immediately reported to the Safety and Occupational Health Office and the Public Safety Office according to USAREUR Regulation 210-60.

f. Garrison DPWs are responsible for coordinating with the appropriate *Wehrbereichsverwaltung* (German military district administration) for annual German restricted-area inspections according to USAREUR Regulation 210-60.

14. HAZARD DIVISIONS, STORAGE-COMPATIBILITY GROUPS, AND NET EXPLOSIVE QUANTITY

a. HDs indicate the character and predominant hazard of Army A&E items.

(1) HDs are defined in DA Pamphlet 385-64 and are listed for all Army ammunition items on the Joint Hazard Classification System (JHCS) list. This list is available on the USATCES website at <https://www3.dac.army.mil/es/usatces/>.

(2) Units are authorized to mix storage-compatibility groups (SCGs) (except for items in groups A, K, and L) in amounts of up to 1,000 pounds (453,6 kilograms net explosive quantity (NEQ)) for each storage, provided the items are serviceable and packed in original or like-original containers. Appendix E provides the Army in Europe Storage-Compatibility Chart.

(3) SCGs are defined in DA Pamphlet 385-64 and are listed for Army ammunition items on the JHCS list.

(4) Storage-compatibility requirements do not apply to unit ABL when it is stored according to DA Pamphlet 385-64.

b. In NATO and the Army in Europe, the high explosives weight of an item is expressed in kilograms and is referred to as the NEQ. The NEQ is the total weight in kilograms of highly explosive material in an item.

(1) NEQ (QD) limits are listed on all explosives-storage licenses.

(2) The NEQ (QD) of an item may be less than the NEQ of the item. The NEQ is the quantity considered when transporting an item, and the NEQ (QD) is the quantity considered when storing it. The NEQ and the NEQ (QD) will often be the same.

(3) The JHCS list provides the NEQ (QD) of Army ammunition items. If an ammunition item is not listed on the JHCS list, commanders may contact the safety office or QASAS for help.

15. ARMY IN EUROPE AMNESTY PROGRAM

a. General. The Army in Europe Amnesty Program is intended to ensure the maximum recovery of A&E items that are outside the normal supply system. Units will not use amnesty programs to circumvent normal A&E turn-in procedures. Garrison commanders will establish, implement, and oversee A&E amnesty programs that comply with the following criteria:

(1) Amnesty programs must be conducted on a “no questions asked” basis to allow individuals to turn in items without fear of reprisal.

(2) Amnesty programs will be according to DA Pamphlet 710-2-1, paragraph 11-19; and this regulation.

(3) Commanders will seek legal advice before establishing an amnesty program.

b. Local Amnesty Programs. Commanders with elements that use or expend A&E will develop an amnesty program that supports the garrison commander's amnesty program. The program may be conducted in conjunction with the garrison amnesty program. The commander will—

(1) Monitor the amnesty program to ensure that it is not being used to avoid accountability or proper turn-in procedures.

(2) Ensure assigned personnel are briefed on amnesty program policy and procedures twice a year and before each exercise or training event that requires the use of A&E.

(3) Post the location and telephone number of the nearest military turn-in point and provide directions to everyone (both military and civilian personnel) who wants to turn in A&E under the program.

(4) Develop an SOP that provides specific functional responsibilities and highlights explosives safety requirements for handling amnesty items. The SOP must have the written approval of the garrison safety office, provost marshal office, and the servicing ammunition-surveillance office. The SOP should include—

(a) The location and design of the amnesty-collection container.

(b) Procedures for—

1. Checking the container.

2. Recovering ammunition from the container.

3. Repacking ammunition.

4. Handling unfamiliar ammunition.

(c) Container maintenance requirements.

c. Collection Points.

(1) Ammunition-collection points must be located where people have unrestricted access to them.

(a) Permanent amnesty-collection containers will be located to serve each organization on the installation that uses or expends A&E.

(b) Unit commanders will establish amnesty-collection points at local training areas for all training events involving A&E other than SAA (.50 caliber and smaller).

(2) For safety reasons, containers in populated areas must be designed with an opening no larger than necessary to accept .50-caliber ammunition and must not allow for items to be extracted by other than authorized personnel.

(3) Containers in unpopulated areas must have sandbag protection that is at least 12 inches thick.

(4) Containers must be available for amnesty items 24 hours a day. The telephone number for the unit responsible for the container must be stenciled on or posted next to the container with instructions for reporting amnesty items. The telephone numbers for explosive ordnance disposal (EOD) personnel, the QASAS, and other responsible personnel should also be provided.

(5) Amnesty containers will be inspected daily by trained ammunition handlers.

d. Unidentifiable Ammunition. All unidentifiable amnesty items except for SAA (.50 caliber or smaller) will be considered hazardous and be moved only by supporting EOD personnel.

(1) HD 1.4 ammunition recovered from amnesty containers may be temporarily stored in locked containers in arms rooms before it is brought to an ASP. (Documentation is not required at the ASP.) Other HD items must be moved to a facility licensed according to paragraph 12 as soon as EOD personnel determine that it is safe for movement.

(2) EOD units will store recovered amnesty items in a licensed facility and will turn in safe items to the ASP as soon as the workload permits, but no later than within 3 duty days. If the EOD storage location is not licensed according to paragraph 12, the recovered amnesty items must be turned in to an ASP as soon as possible.

NOTE: Units are exempt from the requirement to notify the ASP 24 hours in advance when turning in A&E found on an installation and amnesty items.

(3) Unsafe amnesty items must not be turned in to the ASP. These items must be rendered safe or destroyed by EOD personnel.

(4) A&E other than SAA found on an installation must be immediately reported to the garrison provost marshal (military police), safety office, and the nearest EOD unit or servicing QASAS. Suspected explosives will not be picked up or disturbed.

(5) A&E found outside an installation must be reported to local authorities (for example, host-nation police or military authorities). EOD units will provide assistance only at the request of these authorities.

(6) Amnesty containers and EOD storage areas will be used as temporary holding areas for amnesty ammunition until the items are transported to an ASP.

(7) Commanders will ensure properly trained personnel are available to evaluate A&E items before they are moved. QASASs at supporting ammunition-surveillance offices can provide qualified personnel to evaluate A&E items. Formal support agreements must be established with the nearest DOD installation having EOD capability to provide EOD support for the amnesty program.

e. Ammunition Supply Points. ASPs are the final destination for serviceable amnesty items.

(1) ASPs will accept, without question or documentation, items turned in under the provisions of the amnesty program. ASP storage personnel will respond promptly to accept A&E recovered by EOD personnel.

(2) Individuals turning in items under the amnesty program are not required to provide turn-in documentation and are exempt from the requirement to notify the ASP 24 hours in advance.

16. MILITARY WORKING DOGS

a. DA Pamphlet 190-12 specifies the types and amounts of explosives authorized for training requirements and for use in training military working dogs. AR 190-12 and USAREUR Regulation 190-12 provide program requirements.

b. Explosives-training aids must be transported and stored under the same requirements as other HD 1.1 explosive items. These aids may be transported only by qualified drivers in Government vehicles that have been certified as safe according to AE Regulation 55-4.

c. Dog-scent kits include about 5 to 10 kilograms of HC/D 1.1; therefore, the kits must be stored appropriately, such as at licensed and DDESB-approved locations. HC/D 1.1 will not be stored in arms rooms. Units with military working dogs must coordinate with the garrison safety office to store dog-scent kits.

d. The garrison commander will determine whether to allow training with military working dogs. In communities where this training is authorized, only buildings and facilities approved by the garrison commander will be used.

e. The risk assessment used to select buildings for training must consider the following factors:

- (1) The value of the training compared to the risk to exposed personnel, equipment, and facilities.
- (2) The proximity of the building to host-nation exposures.
- (3) The replacement value of the equipment and facilities that may be exposed to an explosion.
- (4) The possibility of using troop training facilities or other uninhabited structures at a location away from the main installation.
- (5) The possibility of confining training to weekends or before and after duty hours.

17. ARMY IN EUROPE EXPLOSIVES-POLICY ACTION COMMITTEE

a. Purpose. The Army in Europe EPAC provides a forum for developing policy for the Army explosives community in Europe and for discussing issues and solutions to problems.

b. Mission. The Army in Europe EPAC—

- (1) Develops explosives-safety policy for the Army in Europe.
- (2) Provides policy recommendations to the DAESC, DDESB, and NATO.
- (3) Has primary review and approval authority for regulatory and policy guidance for the Army in Europe.

c. Responsibilities.

(1) The USAREUR G4 will chair the Army in Europe EPAC. The Chief, Safety and Occupational Health Office, and the Chief, Sustainment Operations Division, Office of the Deputy Chief of Staff, G4, HQ USAREUR/7A, will co-chair the Army in Europe EPAC when the USAREUR G4 is not present.

(2) The Safety and Occupational Health Office and the Public Safety Office will—

(a) Provide administrative support for the Army in Europe EPAC.

(b) Schedule committee meetings. Meetings will be held semiannually or on special request by a co-chairperson or a member.

(c) Identify agenda topics and prepare the agenda.

(d) Address issues before the committee.

(e) Monitor the progress of actionable explosives-safety items and report on their status.

(3) If logistics, operations, or other considerations are important to an explosives-safety issue before the Army in Europe EPAC, representatives from the appropriate staff offices will be requested to provide information and advice. Other staff representatives will be invited to take part if issues under review affect their sections. Guests do not have a vote in committee proceedings.

(4) Meeting minutes will be prepared by the Chief, Safety and Occupational Health Office, signed by the chairperson, and distributed to each member.

d. Organization. The Army in Europe EPAC includes the USAREUR G4 and members from organizations involved in using, handling, storing, or transporting A&E (table 1).

Table 1	
Army in Europe EPAC Members	
USAREUR	USAREUR G4 (Chairperson)
	G1: Chief, Safety and Occupational Health Office Explosives Safety Manager
	G3: Current Operations Branch, Operations Division, representative
	G4: Chief, Sustainment Operations Division Chief, QASAS Logistics Management Specialist
IMCOM-Europe	Deputy Director
	Chief, Public Safety Office
	Chief, DPW
V Corps	Explosives safety representative G4 QASAS
21st Theater Support Command	Explosives safety representative QASAS
United States Army Southern European Task Force	Explosives safety representative G4 QASAS
Seventh United States Army Joint Multinational Training Command	Explosives safety manager
5th Signal Command	Safety manager
Europe Region Transformation Group (Nordbayern)	Safety manager
USAG Benelux	Safety manager
USAG Grafenwöhr	Safety manager
USAG Heidelberg	Safety manager
USAG Hessen	Safety manager
USAG Stuttgart	Safety manager
USAG Vicenza	Safety manager
Other individuals as invited by members.	

18. TRANSPORTATION

Explosives and other hazardous materials will be transported according to AE Regulation 55-4.

19. FIRE PREVENTION

a. DA Pamphlet 385-64 addresses fire-prevention, protection, and suppression methods.

b. Each unit responsible for an explosives-storage site or operation will develop a fire plan and coordinate it with the servicing fire department (DPW or DES) according to AR 420-90.

c. The servicing fire department will hold fire drills in explosives-storage areas at least once every 6 months. These fire drills must be documented and copies of the documentation must be provided to the servicing director of emergency services and safety office.

d. At least two class-10BC fire extinguishers suitable for the hazard involved must be available for immediate use when explosives are being handled. The extinguishers need not be permanently located at the site. Each fire extinguisher will be placed in a conspicuous and readily accessible location. Each extinguisher will be kept in a full or fully charged, operable condition. DA Pamphlet 385-64, table 3-1, lists agents for fighting fires.

e. Reciprocal agreements with host-nation fire departments must be executed consistent with the applicable status of forces agreement. Installation fire departments must contact host-nation fire departments and provide an orientation visit at the site.

f. Firefighting guidance symbols will be constructed according to DA Pamphlet 385-64 and posted according to host-nation requirements if they differ from U.S. requirements.

g. DA Pamphlet 385-64, paragraph 3-16, lists exceptions on posting fire symbols.

20. VEGETATION RESTRICTIONS

Vegetation cover of many kinds, including bushes, grass, shrubs, and trees, may be planted on magazine roofs. The DPW will consult and work with the local *Forstmeister* (German forestry official) to choose vegetation expected to do well according to the local climate and soil conditions.

a. Earth-Covered Magazines.

(1) All vegetation on the top and sides of, in front of, and within the 2-meter clear zone around earth-covered magazines must not be higher than 8 centimeters.

(2) Shrub and tree cuttings must be removed from the magazine area and not remain on or around the magazine. Drainage ditches along the roads and near the magazines must be free of cut vegetation.

(3) Shrubs may be planted outside the 2-meter clear zone, but their diameter may not exceed 12 centimeters when measured at a height of 4.5 feet above the ground (diameter at breast height).

(4) Soil erosion on earth-covered magazines may threaten the classification of the storage site. The QASAS must visually examine the earth cover during magazine inspections and report shortcomings to the DPW and safety office. Earth cover less than that which was originally built, sited, and approved must be repaired for the magazine's classification as earth-covered to remain valid.

b. Aboveground Magazines, Operating Buildings, and Pads.

(1) A 15-meter firebreak will be maintained around huts, aboveground magazines, and open-storage areas. No new trees will be planted in the firebreak. Trees may be removed only after coordination with the local *Forstmeister*.

(2) Vegetation within 3 meters of air terminals and ventilators must not be more than 20 centimeters high.

(3) Vegetation growing in firebreaks must not be more than 1 meter high for fire and security purposes.

21. INERT STORAGE SEPARATION DISTANCE

For Army facilities in Europe, a 30-meter separation is required between combustible structures and potential explosion sites. For noncombustible structures, 15 meters is required.

APPENDIX A REFERENCES

SECTION I PUBLICATIONS

DOD 6055.9-STD, DOD Ammunition and Explosives Safety Standards

AR 25-400-2, The Army Records Information Management System (ARIMS)

AR 75-1, Malfunctions Involving Ammunition and Explosives

AR 190-12, Military Police Working Dogs

AR 385-10, The Army Safety Program

AR 385-64, U.S. Army Explosives Safety Program

AR 420-90, Fire and Emergency Services

DA Pamphlet 190-12, Military Working Dog Program

DA Pamphlet 385-40, Army Accident Investigation and Reporting

DA Pamphlet 385-64, Ammunition and Explosives Safety Standards

DA Pamphlet 710-2-1, Using Unit Supply System (Manual Procedures)

Supply Bulletin 742-1, Inspection of Supplies and Equipment Ammunition Surveillance Procedures

Technical Manual 9-1377-200-20, Unit Maintenance Manual for Cartridges, Cartridge Actuated Devices, and Propellant Actuated Devices

AE Regulation 10-5, HQ USAREUR/7A and Select Commands

AE Regulation 55-4, Safe Movement of Hazardous Goods by Surface Modes

USAREUR Regulation 190-12, USAREUR Military Working Dog Program

USAREUR Regulation 210-60, Establishing Exterior-Protective or Safety Zones (*Schutzbereiche*) in Germany

USAREUR Regulation 700-150, Conventional Ammunition Services

SECTION II FORMS

DA Form 2028, Recommended Changes to Publications and Blank Forms

DA Form 7319-R, Explosive Waiver/Exemption Request

APPENDIX B

PERFORMING RISK ASSESSMENTS AND DETERMINING DECISION AUTHORITIES

The procedures in this appendix must be used to conduct risk assessments to support explosive-quantity distance exemptions and waivers. A copy of the complete assessment, including the probability and severity charts and the determination of the risk-decision authority, must be submitted with DA Form 7319-R.

B-1. SEVERITY

a. The severity of a possible explosion may be determined by computing the blast and fragmentation effects using the following formula:

$$D = KQ^{1/3}$$

D = Distance in meters

K = The severity factor used for each risk level assumed or permitted

Q = The net explosive quantity (NEQ) in kilograms

b. The formulas for determining the severity levels of the zones on the severity chart (fig B-1) are as follows:

- Zone I: $2.4Q^{1/3}$
- Zone II: $4.4Q^{1/3}$
- Zone III: $7.2Q^{1/3}$
- Zone IV: $9.6Q^{1/3}$
- Zone V: $20Q^{1/3}$

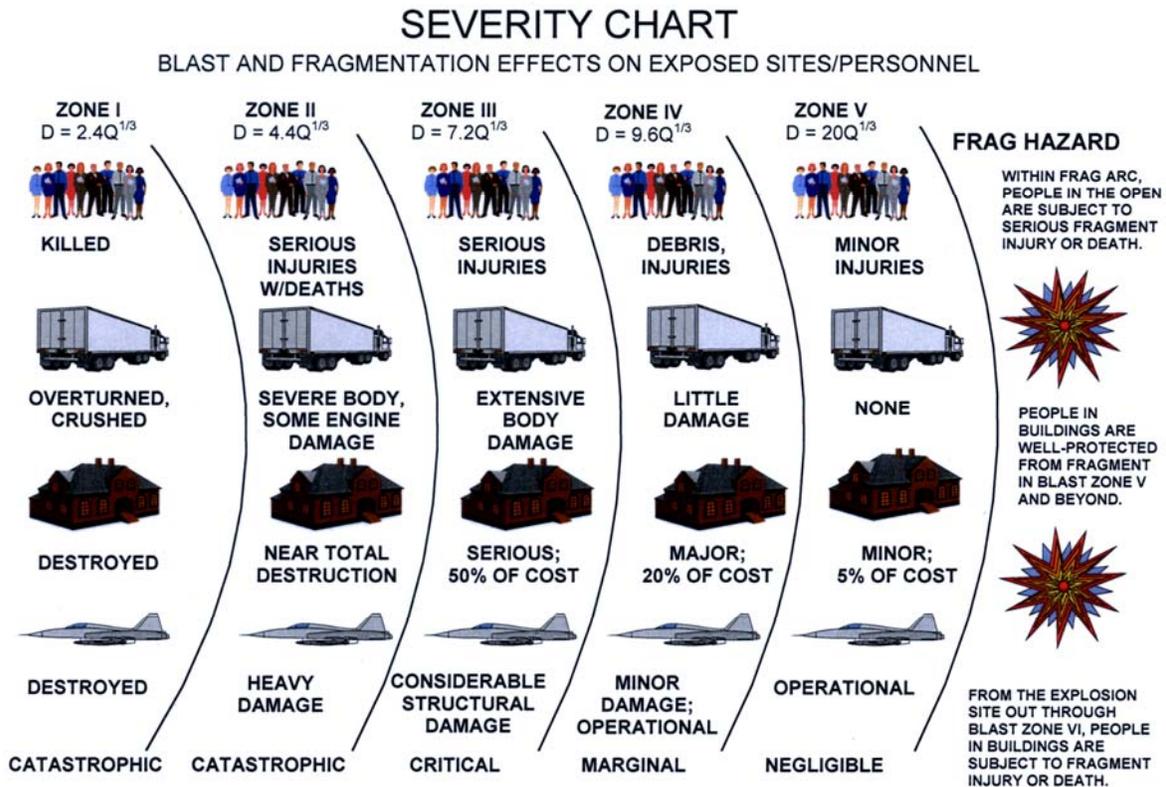


Figure B-1. Severity Chart

B-2. PROBABILITY

To determine the probability of an explosion—

- a. Select the type of activity from the left column of the probability-determination chart (fig B-2).
- b. Choose the environment from the top of the probability-determination chart from which the activity will be performed.
- c. Select the block where the two selections intersect.

PROBABILITY-DETERMINATION CHART							
Activity Type	Activity Environment						
	Operations in a hostile area	Unserviceable items awaiting destruction	Initial tests of new systems	Outdoors in inclement weather	Exercises/contingencies/alerts	Flightlines	Missile systems
Assembly/disassembly/load, assemble, and pack/maintenance/renovation	L	NA	L	O	O	O	O
Demil/demolition/disposal	L	L	NA	O	O	NA	O
Training	L	NA	NA	S	S	S	S
Handling/loading	O	O	O	S	S	S	S
Transportation—break bulk	S	NA	NA	S	S	S	S
Transportation—containerized	U	NA	U	U	U	U	U
Inspection	U	NA	O	U	U	U	U
Storage	U	NA	U	U	U	U	U
Abbreviations: L = frequent/likely, O = occasional, S = seldom, U = unlikely, NA = not applicable							

Figure B-2. Probability-Determination Chart

B-3. RISK-LEVEL AND DECISION-AUTHORITY DETERMINATION

To determine the risk level—

- a. Match the severity information (para B-1) with the appropriate severity section on the top of the Army in Europe Decision-Authority Matrix (fig B-3).
- b. Match the probability information (para B-2) with the appropriate probability section on the left side of the Army in Europe Decision-Authority Matrix.
- c. Select the block where the probability and severity intersect in the Army in Europe Decision-Authority Matrix.

Army in Europe Decision-Authority Matrix Hazard Divisions 1.1 and 1.2					
	Severity D = $KQ^{1/3}$ (D = distance, K = severity factor, Q = NEQ in kilograms)				
Probability	Catastrophic D = $2.4Q^{1/3}$	Catastrophic D = $4.4Q^{1/3}$	Critical D = $7.2Q^{1/3}$	Marginal D = $9.6Q^{1/3}$	Negligible D = $20Q^{1/3}$
Frequent/likely	Extremely high	Extremely high	Extremely high	High	Medium
Occasional	Extremely high	High	High	Medium	Low
Seldom	High	High	Medium	Low	Low
Unlikely	Medium	Medium	Low	Low	Low

DECISION AUTHORITY:

- a. General officers may approve high- and medium-risk waivers.
- b. The CG, USAREUR/7A, is the approval authority for extremely high-risk waivers and exemptions.
- c. Commanders in the Army in Europe (colonel or above) may approve low-risk waivers.

NOTES:

- 1. Off-installation exposures will be coordinated with host-nation authorities.
- 2. For exposures to military family housing or non-mission-related structures of public assembly (such as churches, hospitals, and schools), the approval authority may not be delegated below general-officer level.
- 3. All exemptions and waivers must include a risk assessment.
- 4. DA Form 7319-R must be completed for each exemption and waiver request.

Figure B-3. Army in Europe Decision-Authority Matrix

APPENDIX C

ARMY IN EUROPE ARMS-ROOM RISK ASSESSMENT AND AMMUNITION-STORAGE LICENSE

Commanders should contact their safety office for guidance concerning the risk assessment (fig C-1) The glossary defines abbreviations used in this appendix.

Part I

Hazard Classification of Ammunition Stored in Arms Rooms			
Facility Location	Only HD 1.4	Only HD 1.3 or HD 1.4	HD 1.2.2, HD 1.3, or HD 1.4
Barracks			
Office			
Stand-alone arms room			

Total Points: _____

Part II

Safety Measures		
	Yes/NA	No
Prevention		
If HD 1.2.2 items are stored in the arms room, are they stored using fragmentation barriers according to DA Pamphlet 385-64?		
If flammables are stored in the arms room, are they kept to a minimum and kept away from ammunition?		
Is ammunition kept in metal containers?		
Is ammunition kept in original packing containers?		
Has ammunition been inspected by the quality assurance specialist (ammunition surveillance) within the past 12 months?		
Have armored personnel been briefed on fire and safety procedures within the past 12 months?		
Is a current SOP available for the operation of the arms room?		
Total Points: _____		
Contingency		
Are fire symbols posted according to requirements of servicing fire departments?		
Are fire extinguishers properly placed?		
Are fire extinguishers charged and up to date?		
Total Points: _____		
Physical Security		
Have physical security concerns been addressed?		
Is housekeeping being practiced (DA Pam 385-64)?		
Total Points: _____		

Total Points: _____

Figure C-1. Risk Assessment

Part III

Total Points Assessed	
Part I, total points assessed:	
Part II, total points assessed:	
Total points assessed:	

Risk-Level Determination	
Points	Risk Level
0 to 10 points	Low
11 to 20 points	medium
21 to 30 points	High

Risk Level: _____

Risk assessment conducted by—

Name: _____

Position: _____

Signature: _____

Commander's authentication: _____

Figure C-1. Risk Assessment (Continued)

C-1. INSTRUCTIONS, PART I

a. Circle the number at the intersection of the facility location being used and the hazard division of the ammunition being stored.

b. Write the number in the block below and at the end of the risk assessment marked *Part I, Total Points*_____.

C-2. INSTRUCTIONS, PART II

a. Read the statement and circle the appropriate number under the *Yes* or *No* answer.

b. Add the number of points for each section and enter the total in the *Total Points* section.

c. Complete each section, then add the totals for each section in part II, and enter that total on the last page of the risk assessment in the *Part II, Total Points*: _____ section.

C-3. INSTRUCTIONS, PART III

- a. Add the total points from parts I and II.
- b. Determine the risk level using the values in the table and enter the level on the line provided.
- c. Sign the risk assessment.
- d. Obtain the unit commander's signature on the *commander's authentication* line.

C-4. STORAGE AUTHORIZATION

- a. Commanders—

- (1) May authorize the storage of low- and medium-risk-level ammunition in arms rooms.

- (2) Must request authorization from the next commander in their chain of command to store high-risk ammunition in arms rooms.

- b. If an arms room has a risk level of more than 30 points, ammunition will not be stored in the arms room until the level of risk is reduced.

C-5 ARMS ROOM AMMUNITION-STORAGE LICENSE

Garrison safety managers will certify and date the arms room ammunition-storage license (fig C-2).

ARMS ROOM AMMUNITION-STORAGE LICENSE				
Location:				
Building and Room Number	Hazard Division	DODIC	Quantity Authorized	Criteria
	1.4			<ul style="list-style-type: none"> ● HD 1.4 Ammunition Arms rooms supporting military police guard forces may be used to store mission-essential ammunition but may have only one outer pack of ammunition open for use.
	1.3			<ul style="list-style-type: none"> ● HD 1.3 Ammunition Maximum amount authorized for storage is 100 pounds NEW. A limited amount of ceremonial ammunition may be stored in an arms room if no other practical alternative exists. The total amount must not exceed the maximum authorized amount for HD 1.3.
	1.2.2			<ul style="list-style-type: none"> ● HD 1.2.2 Ammunition May be stored only under unique circumstances. Must use proper fragmentation shielding. The maximum amount authorized is 50 pounds NEW. Ammunition required for immediate training may be kept overnight or over a weekend only under rare circumstances.
REMARKS:				
1. This license is valid only with an approved risk assessment signed by a commander at the appropriate level in the unit chain of command.				
2. Ammunition will be secured according to AR 190-11. Security has been coordinated with the provost marshal.				
3. Fire inspections must be conducted quarterly.				
Garrison safety manager:				
Date:				
Telephone number:				

Figure C-2. Arms Room Ammunition-Storage License

**APPENDIX D
EXPLOSIVES-STORAGE LICENSE**

Figure D-1 is an example of an explosives-storage license that incorporates the requirements of DA Pamphlet 385-64.

EXPLOSIVES-STORAGE LICENSE							
Name				Date:			
Location:				Analyst:			
Hazard Class	Explosive Quantity Limits	Limiting Exposed Site		Fragment Distance in Meters		Separation Distance in Meters (Blast)	
		Name	Distance	Required	Actual	Required	Actual
Combined total of HD 1.1, 1.2, 1.3, and 1.6							
Combined total of HD 1.2, 1.3, and 1.6							
Combined total of HD 1.3 and 1.6							
Combined total of HD 1.2, 1.3, and 1.6							
Total HD 1.6							
Total HD 1.4							
NOTES:							
1	Mishaps or violations of this license must be reported immediately to the undersigned.						
2							
3							
4							
5							
Issuing Official:				Date:			
Title:							
Reviewed for adequacy and compliance.	Reviewing Official:			Date:			
	Reviewing Official:			Date:			
	Reviewing Official:			Date:			

Figure D-1. Example of a General Explosives-Storage License

APPENDIX E
ARMY IN EUROPE STORAGE-COMPATIBILITY CHART

The Army in Europe Storage-Compatibility Chart (fig E-1) is used when the command’s mission requires mixed storage of different ammunition. Except for items in groups A, K, and L, units in the Army in Europe are authorized to mix storage-compatibility groups in amounts of up to 1,000 pounds (453.6 kilograms) net explosive weight at each storage site if the items are serviceable and packed in original or like-original containers.

Group	A	B	C	D	E	F	G	H	J	K	L	N	S
A	X	Z											
B	Z	X	Z	Z	Z	Z	Z						X
C		Z	X	X	X	Z	Z					Z	X
D		Z	X	X	X	Z	Z					Z	X
E		Z	X	X	X	Z	Z					Z	X
F		Z	Z	Z	Z	X	Z						X
G		Z	Z	Z	Z	Z	X						X
H								X					X
J									X				X
K										Z			
L													
N			Z	Z	Z							X	X
S		X	X	X	X	X	X	X	X			X	X

NOTES:

1. An X at an intersection indicates these groups may be combined in storage. A Z at an intersection is equivalent to an X if the ammunition is serviceable and packed in original or like-original containers, and the storage is approved by a commander (colonel or above). Other requests for mixed storage must be sent to the USAREUR G1 (AEAGA-S), Unit 29351, APO AE 09014-9351.
2. Equal numbers of separately packaged components of complete rounds of any single type of ammunition may be stored together. When so stored, the compatibility is that of the assembled round.
3. Articles of compatibility group N must not be stored with articles in other compatibility groups except S. However, if these articles are stored with articles of compatibility groups C, D, or E, the articles of compatibility group N must be considered as having the characteristics of compatibility group D.
4. Storage-compatibility requirements do not apply to unit ammunition basic load (ABL) ammunition stored according to DOD 6055.9-STD.

Figure E-1. Army in Europe Storage-Compatibility Chart

GLOSSARY

SECTION I ABBREVIATIONS

A&E	ammunition and explosives
ABL	ammunition basic load
AE	Army in Europe
AEPUBS	Army in Europe Publishing System
AHA	ammunition holding area
AOR	area of responsibility
AR	Army regulation
ASP	ammunition supply point
bldg	building
CAD	cartridge actuated device
CG, USAREUR/7A	Commanding General, United States Army, Europe, and Seventh Army
CONOPS	contingency operations
CONPLAN	contingency plan
DA	Department of the Army
DAESC	Department of the Army Explosives Safety Council
DBH	diameter at breast height
DDESB	Department of Defense Explosives Safety Board
DES	directorate of emergency services
DOD	Department of Defense
DODAC	Department of Defense ammunition code
DODIC	Department of Defense identification code
DPW	directorate of public works
EPAC	Explosives-Policy Action Committee
EOD	explosive ordnance disposal
G1	Deputy Chief of Staff, G1, United States Army, Europe
G3	Deputy Chief of Staff, G3, United States Army, Europe
G4	Deputy Chief of Staff, G4, United States Army, Europe
HD	hazard division
HQ USAREUR/7A	Headquarters, United States Army, Europe, and Seventh Army
HQDA	Headquarters, Department of the Army
IMCOM-Europe	United States Army Installation Management Command, Europe Region
in	inches
JHCS	Joint Hazard Classification System
LOA	letter of agreement
LPS	lightning-protection system
mm	millimeter
NA	not applicable
NATO	North Atlantic Treaty Organization
NEQ	net explosive quantity
NEW	net explosive weight
OPLAN	operation plan
OPORD	operation order
PAD	propellant actuated device
POC	point of contact
QASAS	quality assurance specialist (ammunition surveillance)

QD	quantity-distance
RAD	restricted area decree
RSAM	Reserve Storage Activity, Miesau
SAA	small arms ammunition
SCG	storage-compatibility group
SOP	standing operating procedure
SSD	safe separation distance
TM	technical manual
U.S.	United States
USAFE	United States Air Forces in Europe
USAG	United States Army garrison
USAREUR	United States Army, Europe
USATCES	United States Army Technical Center for Explosives Safety
USEUCOM	United States European Command

SECTION II

TERMS

ammunition

A type of munition normally containing explosives, initiating composition, propellant, pyrotechnics, or chemical material designed to inflict damage on personnel, material, military objectives, or structures. Ammunition includes bombs, cartridges, detonators, fuses, grenades, mines, projectiles (such as bullets), propellants, pyrotechnics, as well as shot and their primers.

approved

In compliance with this regulation and CG, USAREUR/7A, instructions or with provisions of other approving agencies cited in this regulation.

blast

The brief and rapid movement of air or fluid away from a center of outward pressure, as in an explosion, or the pressure accompanying this movement.

chemical agent

A chemical compound used in military operations to incapacitate, injure, or kill people.

employees and personnel

Persons employed in the confines of an installation and all authorized transients.

explosives

Any chemical compound or mechanical mixture that when subjected to heat, impact, friction, detonation, or other suitable initiation undergoes a rapid chemical change with the evolution of large volumes of heated gases that exert pressure on the surrounding medium. The term applies to material that either detonates or deflagrates.

flammable material

An easily ignited material that readily burns.

fragmentation

The chemical compound material or mechanical mixture that breaks up when an explosion takes place. Fragments may be complete items, subassemblies, or pieces of buildings or equipment.

operational necessity

A peace or wartime operation that justifies the risk or loss of personnel and equipment.