Headquarters United States Army Europe Wiesbaden, Germany Army in Europe Regulation 385-64*

Headquarters United States Army Installation Management Command Europe Sembach, Germany

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Safety

Explosives Safety

*This regulation supersedes AE Regulation 385-64, 17 November 2006.

For the Commander:

JARED S. SEMBRITZKI Brigadier General, GS Chief of Staff

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

Summary of Change. This revision-

• Updates organizational names, telephone numbers, and other administrative information throughout.

• Replaces provisions on risk management, waivers, and exemptions with the USAREUR Explosives Management Program (para 6).

• Prescribes the use of DA Form 7632 (Deviation Approval and Risk Acceptance Document (DARAD)) as a written authority to permit temporary deviations from ammunition and explosives (A&E) standards (para 6). The term "waiver" was changed to "DARAD" throughout the regulation.

• Requires that facility inspections of lightning protection systems are conducted in accordance with Technical Manual 5-690.

• Changes the decision authority for approval of high-risk DARADs from general officers to USEUCOM (app B).

• Adds paragraphs on vegetation restrictions (para 20), unexploded ordnance (para 21), ranges (para 22), and intentional burns and detonations (para 23).

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

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 in the Army Records Information Management System are provided at *https://www.arims.army.mil*.

Supplementation. Organizations will not supplement this regulation without approval of the Office of Safety, Office of the Chief of Staff, HQ USAREUR (mil 537-0392).

Suggested Improvements. The proponent of this regulation is the Office of Safety, Office of the Chief of Staff, HQ USAREUR (mil 537-0392). Users may send suggested improvements to this regulation by email to the Office of Safety at *usarmy.wiesbaden.usareur.list.safety-office-mbx*.

Distribution. This regulation is available only electronically and is posted on AEPUBS at *https://www.aepubs.eur.army.mil/*.

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Glossary

1. PURPOSE

This regulation—

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

b. Must be used with Defense Explosives Safety Regulation 6055.09, 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 Office of Safety, Office of the Chief of Staff (OCoS), HQ USAREUR, in conjunction with the Safety Office, HQ IMCOM-Europe, will—

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

(2) Coordinate with host nations (HNs) and NATO, HQDA, USEUCOM, the U.S. Army, the United States Air Forces in Europe/United States Air Forces Africa, the United States Marine Forces Europe, and the United States Naval Forces Europe organizations, as appropriate, on explosives-safety matters.

b. The Director, Office of Safety, OCoS, will-

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

(2) Review Explosives Safety Site Plans (ESSPs) submitted by USAREUR elements for technical quality control and for 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 staff offices on explosives-safety matters.

(4) Review requests from USAREUR units for explosives safety risk assessments including Deliberate Risk Assessment Worksheets (DRAWs) (DD Form 2977) and Deviation Approval and Risk Acceptance Documents (DARADs) (DA Form 7632). Reviews will consider unit 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 Deputy Chief of Staff, G3, HQ USAREUR and the Deputy Chief of Staff, G4, HQ USAREUR 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 annual audits of USAREUR elements and their explosives-safety programs for compliance with applicable explosives-safety regulations and requirements.

c. The Chief, Safety Office, HQ IMCOM-Europe, will-

(1) Coordinate ESSPs submitted by USAREUR units and other tenants and activities with HNs as required and forward them through the unit's chain of command to the Office of Safety, OCoS, HQ USAREUR. The Office of Safety will forward these plans 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 DRAWs and DARADs with the HN as required. The Chief, Safety Office, HQ IMCOM-Europe will send copies of high-risk DARADs to the Director, IMCOM-Europe, and maintain a database of all risk assessments, including DRAWs, DARADs, Munition Risk Assessments (MRAs) and ESSPs.

(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 annual audits of garrison explosives-safety programs for compliance with applicable explosives-safety regulations and requirements.

d. The Office of the Deputy Chief of Staff, G3, HQ USAREUR (ODCS, G3), 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 operations (AO) as required by contingency plans (CONPLANs).

e. The Chief, Sustainment Operations Division, Office of the Deputy Chief of Staff, G4, HQ USAREUR (ODCS, G4), 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 updates with the Office of the Assistant Chief of Staff, G1, HQ IMCOM-Europe.

(4) Provide storage requirements for A&E outside the USAREUR AO as required by the CONPLANs of the ODCS, G3.

(5) Chair the Army in Europe EPAC.

f. Commanders of USAREUR major subordinate commands (MSCs) and commands under USAREUR operational control will—

(1) Help subordinate unit commanders develop risk assessments of facilities with A&E as required by Defense Explosive Safety Regulation (DESR) 6055.09, 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 ESSPs submitted by subordinate commanders to the Office of Safety, OCoS, by sending an email message to *usarmy.wiesbaden.usareur.list.safety-office-mbx* @*mail.mil* to request technical review and processing.

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

(5) Conduct explosives-safety audits of ammunition-storage and operational sites in their AO at least every 12 months.

(6) Develop and coordinate a risk assessment and explosives license for each site operated with the appropriate garrison safety office, except for the Ammunition Center Europe (ACE)-operated ammunition storage areas (to include former ammunition supply points (ASPs) Vilseck (#1), Hohenfels (#2), Vicenza (#4), Miesau (#7), and Baumholder (#9)), which are operated and controlled by the 21st Sustainment Command (21st SC). The Theater Communications Security Logistics Support Center will develop and coordinate risk assessments and explosives licenses for these five ammunition storage areas.

(7) Enforce the requirements of explosives licenses to ensure exposed sites are protected; report discrepancies to the garrison or responsible commander.

(8) Report and investigate explosives accidents involving personnel, equipment, or facilities according to AR 385-10 and DA Pamphlet 385-40; and report malfunctions according to AR 75-1 and AE Regulation 700-150. Report incidents involving ammunition and explosives to quality assurance specialist (ammunitions surveillance) (QASAS) and safety personnel. Coordinate with range safety and QASAS personnel for incidents on ranges.

(9) Review and recommend action on explosives-safety risk assessments, including DRAW and DARAD requests submitted by subordinate commanders according to paragraph 6.

(10) Ensure that 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 DARADs annually to ensure that the control measures are still relevant and applicable; inform the garrison or responsible commander of DARAD expirations at least 180 days before the expiration date.

(12) Prepare, review, and forward DARADs 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, validate explosives licenses and maintain a list of all risk assessments and explosives licenses including DRAWs and DARADs for explosives-storage locations in their AO.

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 ammunition supply activity (ASA) operating organizations' safety professional, the local directorate of public works (DPW), and the appropriate HN agency take part in maintaining and inspecting restricted areas.

(3) Ensure that the safety officer is a designated member of the garrison Master Planning Committee.

(4) Ensure that the master planning map shows required and approved (glossary) explosives safety quantity distance (ESQD) arcs for explosives operations and facilities on all installations.

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

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

(7) Develop memorandums of agreement (MOAs) or memorandums of understanding (MOUs) with their tenant organizations to define responsibilities for developing and executing an explosivessafety program that meets the requirements of AR 385-10, DA Pamphlet 385-64, and this regulation. The MOA or MOU must clearly define maintenance and support responsibilities to ensure explosives-safety locations are maintained according to regulations.

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

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

NOTE: ASAs will operate their own internal amnesty program.

(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 annual audits of the explosives-safety programs being executed on all facilities by tenants of the garrison. Garrison safety offices will maintain copies of all annual audits of any ammunition facility or operation within their garrison footprint.

(3) Serve as a member of the garrison Master Planning Committee.

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

(5) In coordination with tenants and installation elements (physical security, fire protective services, and ammunition surveillance), review explosives licenses at least once a year and maintain a list of all risk assessments including DRAWs, DARADs, MRAs, and ESSPs for all explosives-storage locations on their installations.

(6) Review and coordinate all ESSPs to ensure that they do not conflict with activities or facilities on their installations. The Office of Safety, OCoS, will provide a technical review.

(7) Participate with DPW and the appropriate HN 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 A&E on their installations.

(10) Review and send to the commander DARADs and exemptions received for A&E operations and facilities resulting from inspections conducted by themselves.

i. Garrison DPWs will-

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

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

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

(4) Review and certify lightning-protection systems (LPSs) (para 8); ensure that LPSs, bonding systems, and grounding systems are tested according to the requirements in DESR 6055.09, 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 ESQD of any A&E operation or facility.

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

j. Garrison directorates of emergency services (DESs) will-

(1) Provide fire-protection support for ammunition-storage facilities according to AR 420-1.

(2) Ensure fire-protection personnel, including HN 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 DESR 6055.09 and 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 risks.

(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-assessed 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 minimum number of persons, for a minimum amount of time, and to the minimum amount of ammunition consistent with safe and efficient operations to accomplish mission requirements.

(4) Provide training to all personnel involved with A&E so that they know the hazards associated with handling A&E in accordance with DA Pamphlet 385-64, paragraph 1-8, including figure 1-1.

(5) Apply the explosives ESQD prescribed in DESR 6055.09 for the storage of ABL in a basic load ammunition holding area (BLAHA) or ammunition holding area (AHA) when full compliance with ESQD or compatibility requirements cannot be met for military operations other than war because of force-protection issues, the storage of unit basic loads, or contingency deployments.

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

(b) Army units stationed on installations belonging to another Service will follow U.S. Army requirements to the extent that the installation commander allows unless the use of more stringent criteria has been agreed to or is mandatory in accordance with the DESR 6055.09.

(6) Fulfill the responsibilities of DA Pamphlet 385-64, paragraph 1-5.

6. USAREUR EXPLOSIVES SAFETY MANAGEMENT PROGRAM

a. General. The goal of the USAREUR Explosives Safety Management Program (ESMP) is to manage the storage, transportation, and use of A&E effectively, efficiently, and safely during contingencies; and in peace- and wartime operations. All locations that store A&E will have an approved risk assessment (for example, ESSP, DARAD) and license. Risk management will be conducted and approved at the appropriate level. Installation or garrison commanders will complete and approve an ESMP and a listing of all A&E storage locations situated within the installation or garrison footprint. All arms rooms storing A&E will have an arms room license (app C).

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

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

(3) Requests for risk acceptance and deviations from explosives-safety standards must be based on a risk assessment of the explosives-safety hazards of the mission; on explosives requirements; and on facilities or operations (app B), not for convenience.

(4) The qualifications for appointment as the USAREUR Safety Director are provided in AR 385-10 and in AE Regulation 1-10.

(5) USAREUR risk-level and decision-authority determinations are designated in DA Pamphlet 385-30, appendix B-3.

(6) The responsibilities of USAREUR and IMCOM-Europe organizations, including installation and tenant activities with an explosives mission, are described in paragraph 4.

b. Deviation Approval and Risk Acceptance Document. A DARAD (DA Form 7632) is the written authority that permits temporary deviations from A&E standards and regulations for strategic or other compelling reasons.

(1) DARADs—

(a) Consist of waivers and exemptions in accordance with DA Pamphlet 385-30 and are generally granted for a short period not to exceed 5 years, pending the cancellation of the DARAD or a correction of the deviation.

(b) Are issued according to this regulation and apply only to explosives-safety criteria for storage and handling. DARADs do not waive the 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) DARADs needed to support planned operations must be incorporated into OPORDs and OPLANs as part of the commander's risk-assessment processes. These DARADs will be activated when the operation is implemented or activated. The need for the DARAD will be reviewed for relevancy each time the associated plan is reviewed.

(3) DARAD procedures are outlined in DA Pamphlet 385-30.

7. EXPLOSIVES SAFETY AND MUNITIONS RISK MANAGEMENT

Explosives safety and munitions risk management is a systematic approach that integrates risk analysis into operational planning, military training exercises, and CONOPS with the goal of identifying potentially adverse consequences associated with munitions operations, risk reduction alternatives, and risk acceptance criteria for senior officials to make informed decisions.

a. Ammunition Storage. Storage areas in AHAs and at ASPs will be used to store A&E 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 (22.7 kilogram (kg)) of hazard division (HD) 1.2.2 may be stored, but fragment barriers must be provided. Minimum acceptable fragment barriers consist of a ¹/₄-inch (6 millimeter (mm)) mild steel plate or 2-feet (ft) (61 centimeter (cm)) thick sandbags. Up to 100 pounds (45.4 kg) of HD 1.3 and mission essential quantities 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 (glossary) and safety considerations. The unit commander will approve by signature (if appropriate per DA Pamphlet 385-30), and send the assessment to the garrison commander. For locations not supported by USAGs, send to the risk authority of the MSC in accordance with DA Pamphlet 385-30.

(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 (QASASs), the garrison safety office, and security personnel. QASAS support for areas without a dedicated QASAS may be coordinated by contacting the QASAS, Sustainment Operations Division, ODCS, G4, Unit 29351, APO AE 09014-9351.

(3) The garrison or responsible organization safety office will keep the risk assessment on file.

(a) A copy of the risk assessment will be posted in the arms room.

(b) 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 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 (d below); and the safety, security, and fire-protection requirements. The explosive license must fulfill the requirements of DA Pamphlet 385-64, chapter 5, and 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) A&E items are stored according to storage-compatibility requirements. The storage of A&E items must be consistent with the safety requirements in DESR 6055.09 and the security requirements in AR 190-11. Ammunition will be stored under the same criteria as it would be in an approved ammunition-storage facility.

(d) Training ammunition must be physically separated from operational-readiness ammunition.

(e) The appropriate fire and chemical-hazard symbols are properly posted, unless security requirements prevent posting in accordance with DA Pamphlet 385-64.

d. Time Limits. The criteria below define how long training A&E 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, an AHA or ASP) may 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 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). Quantity limits for all HDs are less than 50 pounds (22.7 kg) NEW.

(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). Quantity limits for all HDs are less than 50 pounds (22.7 kg) NEW.

e. Fire Protection. Fire protection for A&E in inhabited buildings will be managed as follows:

(1) Appropriate fire and chemical-hazard symbols will be posted on the doors of ammunitionstorage 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 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 (45.4 kg) 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 fixed-wing 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) In inhabited buildings, CADs and PADs will be stored according to this paragraph and TM 9-1377-200-20.

(4) Follow DA Pamphlet 385-64, paragraph 8-32 for aviation-related ESQD exemptions.

8. LIGHTNING PROTECTION SYSTEMS

a. General. An LPS is required on all structures and in areas containing A&E other than the exceptions established in DESR 6055.09 and DA Pamphlet 385-64.

b. Electrical Tests and Inspections of LPSs.

(1) Electrical Tests.

(a) Garrison DPWs will arrange for LPS tests. At the commander's discretion, HN engineers or contractors may test LPSs. A QASAS will verify the adequacy of tests performed. QASAS support may be coordinated by contacting the QASAS, Sustainment Operations Division, ODCS, G4, Unit 29351, APO AE 09014-9351.

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

(c) LPS and bonding-system components will be electrically tested in accordance with the requirements in DA Pamphlet 385-64, table 17-1, this regulation, and after any repair.

<u>1</u>. The maximum resistance allowed from the earth rod to the earth for the LPS is 25 ohms. Any facility LPSs installed with a counterpoise (earth/ground electrode ring) may exceed 25 ohms.

 $\underline{2}$. 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.

<u>3</u>. 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.

 $\underline{4}$. DA Pamphlet 385-64 provides the visual and electrical-testing requirements for LPS components.

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

<u>6</u>. Garrison DPWs will initiate work orders for deficiencies found during LPS tests and will give copies of the work order 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. The Safety Office, HQ IMCOM-Europe will maintain the records for 15 years. These records will be reviewed for deficiencies and for trend analysis. Significant variances will be analyzed to determine causes, and indicated repairs must be made.

(b) The supporting QASAS will conduct a visual inspection of accessible LPS components during semiannual facility inspections in accordance with TM 5-690, and will annotate the results on DA Form 7452-6-R. The inspection will include air terminals, bonding-system components, connections, and joints in the LPS and in down conductors. The QASAS will prepare a written report to document deficiencies. If deficiencies are found, the operating unit will initiate a work order and send it to the garrison DPW and to the garrison safety office.

c. Records. At a minimum, records for LPS tests will document ohm readings from each earth rod to the earth and will 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 work orders or maintenance requests to the supporting contractor or HN authority to correct LPS deficiencies and track repairs to completion.

(3) Report LPS deficiencies that are not repaired by the DPW, contractor, or the HN within 180 days after submitting a work order or request through the chain of command to the G4, HQ IMCOM-Europe.

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 by IMCOM-Europe if construction is located at a garrison and reviewed by the USAREUR Safety Office to ensure steps are taken to protect personnel, facilities, and the unit mission. For military construction (MILCON), see subparagraph c below. A strong review-and-approval program can ensure that violations of standards are not built into projects and that proposed projects meet the A&E safety standards of DOD, DA, and the HN.

(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, DA Pamphlet 385-64, and DA Pamphlet 385-65.

b. Site Plan Submission Process.

(1) The requesting USAREUR activity 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. Units will submit the risk assessment through their chain of command to the Office of Safety, OCoS, for review. Follow DA Pamphlet 385-64 and DA Pamphlet 385-65 for the submission process.

(2) The DPW will provide maps of the location being considered to the unit. 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 the ESQD arcs for the new operation or facility are added to the DPW master map of installations.

(b) Send the site plan submission to the Office of Safety, OCoS, and the Safety Office, HQ IMCOM-Europe and for coordination with the HN; then forward it to USATCES. USATCES sends submissions to the DDESB in accordance with DA Pamphlet 385-65.

c. Military Construction (MILCON).

(1) In accordance with DA Pamphlet 385-65, DDESB approval of the final ESSP is required before inclusion of the project in the proposed budget year authorization; or before NATO or HN approval. Army Commands, Army Service Component Commands, or Direct Reporting Units will indicate in all DD Forms 1391 (FY_ Military Construction Project Data) submitted to HQDA that either the project is not subject to these standards, or that it complies with them; and will indicate the date and currency of the DDESB approval.

(2) The lead engineering organization completes DD Form 1391 for USATCES and DDESB-level reviews per the 2016 HQDA Memorandum, SUBJECT: Explosives Safety Management of U.S. Army Construction Projects.

(3) For MILCON projects that do not meet the requirements of DESR 6055.09, and that do not exceed the established MILCON low-cost threshold, see subparagraph d below.

d. Construction Not Following DESR 6055.09.

(1) Construction not following DESR6055.09 must follow DESR 6055.09 for a Secretarial Certification (DA FORM 7632).

(2) For construction activities performed in support of CONOPS at contingency locations, follow Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 4360.01B for a munitions risk assessment.

10. CONTINGENCY OPERATIONS

The commander (or as delegated to the Operations Division, Office of the Deputy Chief of Staff, G3/3, HQ USAREUR) will determine when combat vehicles will be placed in an 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, A&E, and the HN must be accepted, then 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 ESQD, 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 ESQDs must be maintained during uploading, downloading, shipping, and deployment operations to protect personnel, the public, critical mission resources, and the environment. ESQDs will be used between heavy armored vehicles, light armored vehicles, and nonarmored targets according to DESR 6055.09 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 6.6 ft (2 meters (m)) for maneuverability purposes. Vehicle hatches must be closed. Heavy armored vehicles include the following:

(a) M1 tanks.

(b) M60A1 and M60A3 tanks.

(c) Bradley Fighting Vehicles (BFVs). BFVs are expected to contain blast (glossary) and fragments from their HD 1.2, 25 mm ammunition. If a BFV is only uploaded with 25 mm ammunition, it can be considered as 'heavy' armor in accordance with DA Pamphlet 385-64, paragraph 9-4.

(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 6.6 ft (2 m) for maneuverability. Per DESR 6055.09 table V4.E5.T12, D-4 distances apply to public traffic routes and D-5 distance apply to inhabited building distances. Light armored vehicles include the following:

(a) M2 and M3 BFVs.

(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. Refer to DESR 6055.09, table V4.E5.T12 for distances. Nonarmored targets include the following:

(a) M977, cargo, 8x8, 10-ton, heavy expanded mobility tactical trucks (HEMTTs), and high-mobility multipurpose wheeled vehicles (HMMWVs).

(b) M270 multiple launch rocket system (MLRS) launch vehicles.

(c) Military demountable containers (MILVANs) and commercial transport containers.

(d) Open-storage pads.

(e) Unbarricaded structures.

c. Battalion commanders will conduct risk assessments during the upload of vehicles. The commander, in coordination with the division or USAREUR Safety Office and the garrison safety office, will identify the locations and methods 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 DARAD.

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 12 months).

b. Explosives Safety Audit.

(1) Audits must be performed and documented using procedures in the explosives-safety program and relevant regulations. Elements 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 (subpara c(3) below).

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

(1) Audit Plan. USAREUR subordinate command safety offices will send the applicable audit plan to the installation or activity to be audited (no fewer than 30 calendar 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. The audit notes 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 to ensure the organization is in compliance.

12. EXPLOSIVES LICENSES

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 ESQD standards in DESR 6055.09 and DA Pamphlet 385-64. Facilities that do not meet ESQD standards will not be licensed unless an applicable DARAD 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. It must, however, be reviewed for adequacy and compliance yearly (per procedure in b(2) below). Licenses will be revised or canceled under any of the following circumstances:

(a) Encroachment changes the determining factor for the license.

(b) Changes in ESQD standards require recalculation of the risk.

(c) The HN changes the restricted area decree (RAD).

(d) The storage site is no longer required.

(e) Increased NEW.

(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 the format for 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 ESQD 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 Reserve Storage Activity, Miesau 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 and other countries in which ESQD 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 ESQD arcs extend beyond an installation boundary and into a RAD zone, an ESQD arc must be established by applying the most restrictive distance according to NATO, U.S., or HN standards unless an international agreement allows otherwise.

c. Maps of ammunition facilities with RAD zones must include QD arcs with the following colorcoding 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 AE 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 Office of Safety, OCoS, and the Safety Office, HQ IMCOM-Europe, according to AE Regulation 210-60.

f. Garrison DPWs are responsible for coordinating with the appropriate *Kompetenzzentrum Baumanagement (KompZBauMgmt)* of the *Bundesamt für Infrastruktur, Umweltschutz und Dienstleistungen der Bundeswehr (BAIUDBw)* for annual German restricted-area inspections according to AE 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. The USATCES Hazards Classification of U.S. Military Explosives and Ammunition ("Yellow Book") can be used as an unofficial source.

(2) Units are authorized to mix storage-compatibility groups (SCGs) (except for items in groups A, K, and L) in amounts of up to 453.6 kg (1,000 pounds) 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 DESR 6055.09 and 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 explosive 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 A&E items. If an A&E item is not listed on the JHCS list, commanders may contact their command or garrison 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 carried out according to DA Pamphlet 700-16, paragraph 12-17, and this regulation.

(3) Garrison 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-

- <u>1</u>. Checking the container.
- 2. Recovering ammunition from the container.

<u>3</u>. Repacking ammunition.

- <u>4</u>. Handling unfamiliar ammunition.
- (c) Container maintenance requirements.

(d) Procedures to ensure that military personnel are briefed on the program at least every 180 days and prior to operations or exercises.

(e) Instructions to complete the risk-assessment process in accordance with DA Pamphlet 385-30.

c. Collection Points.

(1) Amnesty 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 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 must have sandbag protection that is at least 12 inches (30.5 cm) 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 collection containers will be inspected daily by the DES or the provost marshal.

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

(1) HD 1.4 ammunition recovered from amnesty collection 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 QASAS or EOD personnel determine that it is safe for movement.

(2) EOD units or QASAS will store recovered amnesty items in a risk-assessed and 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 of the discovery of the unidentifiable ammunition. 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 usual requirement to notify the ASP 24 hours in advance when turning in amnesty items and A&E found on an installation.

(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, HN police or military authorities). EOD units will provide assistance only at the request of these authorities.

(6) Amnesty collection 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, as well as with the HN for authorized A&E items, 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 provides the program requirements for military working dogs.

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 for the transport of explosives according to AE Regulation 55-4.

c. Dog-scent kits include approximately 5 to 10 kg (11 to 22 pounds) of hazard class/division (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. Personnel conducting risk assessments for the selection of 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 HN facilities.

(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 in Europe explosives community 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, Office of Safety, OCoS, and the Chief, Sustainment Operations Division, ODCS, G4, will co-chair the Army in Europe EPAC when the USAREUR G4 is not present.

(2) The Office of Safety, OCoS, and the Safety Office, HQ IMCOM-Europe, will-

(a) Provide administrative support to 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 the Army in Europe EPAC determines that applicable logistics, operations, or other considerations are to be presented at an Army in Europe EPAC, the EPAC will request that the appropriate staff offices provide the relevant 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, Office of Safety, OCoS, signed by the chairperson, and distributed to each member of the EPAC.

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) Chief, Office of Safety, OCoS Explosives Safety Manager, Office of Safety, OCoS						
	 G3: A representative from the Current Operations Branch, Operations Division G4: Chief, Sustainment Operations Division Chief, QASAS Logistics Management Specialist 						
ACE	ACE Safety Manager						
IMCOM-Europe	Deputy Director Chief, Safety Office, HQ IMCOM-Europe						
21st Sustainment Command	Explosives safety representative QASAS						
7th Army Training Command	Explosives Safety Manager						
USAG Ansbach	Safety Manager						
USAG Bavaria	Safety Manager						
USAG Benelux	Safety Manager						
USAG Rheinland-Pfalz	Safety Manager						
USAG Wiesbaden	Safety Manager						
USAG Stuttgart	Safety Manager						
USAG Italy	Safety Manager						
10th Combat Aviation Brigade	Safety Manager						
12th Combat Aviation Brigade	Safety Manager						
2d Cavalry Regiment	Safety Manager						
173d Brigade Combat Team	Safety Manager						
10th Army Air & Missile Defense Command	Safety Manager						
1st Infantry Division (FWD)	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 420-1.

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; copies of the documentation must be provided to the servicing director of emergency services and to the 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 in accordance with the applicable HN and U.S. laws. Each extinguisher will be kept in a full or fully charged, operable condition. DA Pamphlet 385-64, table 6-1, lists agents for fighting fires.

e. Reciprocal agreements with HN fire departments must be executed consistent with the applicable status of forces agreement. Installation fire departments must contact HN 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 HN requirements if they differ from U.S. requirements.

g. DA Pamphlet 385-64, paragraph 6-15, lists exceptions on posting fire symbols.

h. For Army facilities in Europe, a 30-m (98.4-ft) separation (inert storage separation distance) is required between combustible structures and potential explosion sites. For noncombustible structures, 49.2 ft (15 m) is required.

20. VEGETATION CONTROL

a. 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.

b. The primary purpose of vegetation control is to limit the potential spread of an uncontrolled fire in ammunition and explosives storage and operating locations. The control of combustible materials, such as long dry grass or brush, heavy clippings, or dead wood, is designed to slow the spread of a fire. Garrison or installation safety offices must determine what vegetation control measures are required and develop a vegetation control program. Units should consider the following items in a vegetation control program:

(1) Except for firebreaks, grounds in or near explosives areas or locations should be maintained as unimproved grounds.

(2) Periodic maintenance by mowing or application of herbicides should be carried out. Such maintenance should be limited to prevent the waste of natural resources (for example, erosion) and to prevent or suppress fires. Intensive maintenance should not be performed.

(a) Earth-Covered Magazines (ECMs).

<u>1</u>. All vegetation on the top and sides, in the front, and within the 6.6-ft (2-m) clear zone around ECMs must not be higher than 3.1 in (8 cm).

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

 $\underline{3}$. Shrubs may be planted outside the 6.6-ft (2-m) clear zone, but their diameter may not exceed 4.7 in (12 cm) when measured at a height of 4.5 ft (1.4 m) above the ground (diameter at breast height).

<u>4</u>. Soil erosion on ECMs may threaten the classification of the storage site. The QASAS must examine the depth of the earth cover with a soil depth gauge 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. ECMs will be cited as aboveground magazines if they fail to maintain earth cover as designed and required.

(b) Aboveground Magazines, Operating Buildings, and Pads.

 $\underline{1}$. A 50-ft (15-m) 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*.

 $\underline{2}$. Vegetation within 9.8 ft (3 m) of air terminals and ventilators must not be more than 7.9 in (20 cm) high.

<u>3</u>. Vegetation growing in firebreaks must not be more than 3.3 ft (1 m) high for fire and security purposes.

21. UNEXPLODED ORDNANCE (UXO)

a. All unidentifiable amnesty items except for SAA (.50 caliber or smaller) will be considered hazardous and be moved only by supporting EOD personnel. Contact QASAS or EOD if UXO is discovered.

b. Take actions to prohibit or deter access that may include establishing access controls to former defense sites (for example, fencing the area, establishing roving security patrols) and providing public notifications (such as, posting UXO hazard warning signs, conducting UXO safety education programs) of any potential hazards. When used, signs must be legible and, when appropriate, multilingual or include pictograms.

c. Commanders at every level will ensure their units are educated on the 3Rs (Recognize, Retreat, Report) of explosives safety (information available at *https://denix.osd.mil/uxo/for-military-their-families/military/*).

d. Follow DESR 6055.09, volume 7, enclosure 3, as applicable.

22. RANGES

a. Explosives and other hazardous materials on ranges will be store and expended in accordance with AR 385-63 and DA PAM 385-63.

b. Contact Range Safety and QASAS if a malfunction or other incident involving A&E occurs.

c. EOD Proficiency Training Ranges are sited according to DESR 6055.09, volume 5, enclosure 3.2.11.

23. INTENTIONAL BURNS AND DETONATIONS

Follow siting requirements of the DESR 6055.09, volume 5, enclosure 3, for procedures for recurring locations that EOD uses for intentional burns and detonations. This requirement does not apply to emergency response personnel. Follow HN requirements on demilitarization procedures.

APPENDIX A REFERENCES

SECTION I PUBLICATIONS

Chairman of the Joint Chief of Staff Instruction (CJCSI) 4360.01B, Explosives Safety and Munitions Risk Management for Joint Operations Planning, Training, and Execution

Defense Explosives Safety Regulation (DESR) 6055.09, 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 190-11, Physical Security of Arms, Ammunition, and Explosives
- AR 190-12, Military Working Dogs
- AR 385-10, The Army Safety Program
- AR 420-1, Army Facilities Management
- DA Pamphlet 190-12, Military Working Dog Program
- DA Pamphlet 385-30, Risk Management
- DA Pamphlet 385-40, Army Accident Investigations and Reporting
- DA Pamphlet 385-64, Ammunition and Explosives Safety Standards
- DA Pamphlet 385-65, Explosive and Chemical Site Plan Development And Submission

DA Pamphlet 700-16, The Army Ammunition Management System

Technical Manual 5-690, Grounding and Bonding in Command, Control, Communications, Computer, Intelligence, Surveillance, and Reconnaissance (C4ISR) Facilities

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

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

- AE Regulation 210-60, Establishing Exterior Protective or Safety Zones (Schutzbereiche) in Germany
- AE Regulation 700-150, Conventional Ammunition Services

SECTION II FORMS

- DD Form 1391, FY_ Military Construction Project Data
- DD Form 2977, Deliberate Risk Assessment Worksheet
- DA Form 2028, Recommended Changes to Publications and Blank Forms
- DA Form 7452-6-R, Lightning Protection Grounding Subsystem Checklist for Existing Facilities
- DA Form 7632, Deviation Approval and Risk Acceptance Document (DARAD)

APPENDIX B RISK ASSESSMENT PROCEDURES FOR SEVERITY AND PROBABILITY

The procedures in this appendix must be used to conduct risk assessments to support explosive-quantity distance exemptions and to complete the Deviation Approval and Risk Acceptance Document (DARAD) (DA Form 7632) unless international agreement requires other risk assessment process (for example, host nation specific explosives safety standards). 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 7632.

B-1. SEVERITY

a. The severity of a possible explosion may be determined by computing the blast and fragmentation (glossary) 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 in the severity chart (fig B-1) are as follows:

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



Figure B-1. Severity Chart

c. Severity charts with English units are acceptable, provided the metric units are clearly marked (fig B-2). Per DESR 6055.09 V1.E7.5.1 on QD K-factors, the NEW is used to calculate QD by means of a formula of the type D (ft) = $K \cdot W^{1/3}$, where "D" is the distance in feet, "K" is a factor (also called K-factor) that is dependent upon the risk assumed or permitted, and "W" is the NEW or NEWQD in pounds. When metric units are used, the symbol "Q" denotes NEQ in kilograms. In the formula D (m) = Km·Q^{1/3}, the distance "D" is expressed in meters.

(1) The units of the K-factor are $ft/lb^{1/3}$ ("K" in the English system) and $m/kg^{1/3}$ ("Km" in the metric system).

(2) The value of "K" in English units is approximately 2.52 times "Km." For example, if D (m) = $6 \cdot Q^{1/3}$, then D (ft) = $15.12 \cdot W^{1/3}$.

(3) Distance requirements determined by the formula with English units are sometimes expressed by the value of "K," using the terminology K9, K11, K18, to mean K = 9, K = 11, and K = 18.



Figure B-2. Severity Chart with Examples for English and Metric Units



*Delayed Propagation is possible from firebrands (lobbed or projected flaming debris). Prompt Propagation (sympathetic detonation) of <u>PACKAGED AMMO</u> is not likely. NOTE: The effects shown in each column are the effects that can be expected at or near the distance on the left side of the column and will diminish with increased distance.

Figure B-2. Severity Chart with Examples for English and Metric Units—Continued

d. The severity chart of DA Pamphlet 385-30, Table 3-2, may be used provided a quantitative tool such as the Department of Defense Explosives Safety Board Technical Paper (TP) 23. The Automated Safety Assessment Protocol- Explosives (ASAP-X) calculator is used to determine potential consequences of an explosion in number of fatalities or injuries and replacement cost.

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-3).

b. Choose the environment from the top of the probability-determination chart from which the activity will be performed.

PROBABILITY-DETERMINATION CHART										
	Activity Environment									
Activity Type	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	0	0	0	0			
Demolition/disposal	L	L	NA	0	0	NA	0			
Training	L	NA	NA	S	S	S	S			
Handling/loading	0	0	0	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	0	U	U	U	U			
Storage	U	NA	U	U	U	U	U			
Abbreviations: L = frequent/likely,	O = occasi	onal, S = se	eldom, U =	unlikely, N	A = not app	olicable				

Figure B-3. Probability-Determination Chart

c. Select the block where the two selections intersect.

d. Figure B-4 should be used in conjunction with current and historical data to determine probability.

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-4).

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 (fig B-4).

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 1.1-1.3										
Severity D = KQ1/3 (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. USEUCOM reserves the right and is the approval authority for all extremely high- and high- risk operations; DARADs, and MRAs in accordance with the CJCSI 4360.01B unless the USEUCOM commander delegates the authority of high-risk operations, DARADs, and MRAs to a General Officer (O-7 or equivalent).

b. General Officers (O-7 or equivalent) may approve medium-risk ammunition and explosives (A&E) operations and DARADs that exceed 5 years in accordance with DA Pamphlet 385-30. Written delegation to an O-6 or equivalent is authorized.

c. Commanders in the Army in Europe (Colonel/O-6 and equivalent) may approve low-risk DARADs for up to five years in accordance with DA Pamphlet 385-30. Written delegation to an O-5 or equivalent is authorized.

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 deviations must include an assessment of risk.

4. The risk matrix of DA Pamphlet 385-30, Table 3-3, may also be used provided the requirements of subparagraph B-1(d) are fulfilled.

Figure B-4. Army in Europe Decision-Authority Matrix

APPENDIX C ARMY IN EUROPE ARMS-ROOM RISK ASSESSMENT AND LICENSES (AMMUNITION STORAGE)

Commanders should contact their safety office for guidance concerning risk assessment (fig C-1). If the arms room is located in a forward area without a garrison, staff will document the location and notify the area support group or mission command. The glossary defines abbreviations used in this appendix.

C-1. INSTRUCTIONS

Follow the instructions below to fill out the arms-room risk assessment (fig C-1).

a. Part I.

(1) Circle the facility location used for ammunition storage and circle the hazard division of the ammunition storage In the intersection of two categories, Enter 0 points for YES and 1 point for NO.

(2) Write the number in the block below, add the number of points and, enter the total at the end of the risk assessment marked Part I, Total Points.

b. Part II.

(1) Read the statement and circle the appropriate number under the YES or NO response. Enter 0 points for YES and 1 point for NO.

(2) Add the number of points for each section and enter the total in the "total points" section.

(3) Complete each section (prevention, contingency, and physical security), then add the totals for each section. Enter that total on the last page of the risk assessment in the Part II, Total Points: section.

c. Part III.

(1) Add the total points from Parts I and II.

(2) Determine the risk level using the values in the table and enter the level on the line provided.

- (3) Sign the risk assessment.
- (4) Obtain the unit commander's signature on the commander's authentication line.

Part I

Hazard Classification of Ammunition Stored in Arms Rooms										
Facility Location	HD 1.2.2, HD 1.3, and HD 1.4									
Barracks										
Office										
Stand-alone arms room										
Total Points:										

Part II

Safety Measures								
Prevention	Yes/ NA	No						
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) (QASAS) 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 (Prevention):								
Contingency	Yes	No						
Are fire symbols all posted according to requirements of servicing fire departments?								
Are fire extinguishers properly placed?								
Are fire extinguishers charged and up to date?								
Total Points (Contingency):								
Physical Security	Yes	No						
Have physical security concerns been addressed?								
Is housekeeping being practiced (DA Pam 385-64)?								
Total Points (Physical Security):								
Total Points (Prevention + Contingency + Physical Security):								

Figure C-1. Risk Assessment

Part III

Total Points Assessed									
Part I, total points ass	sessed:								
Part II, total points assessed:									
Total points assessed:									
Risk-Level De	eterminatio	on							
Points	Risk I	_evel							
0 to 10 points	low								
11 to 20 points	med	ium							
21 to 30 points	hig	jh							

Risk Level: _____

Risk assessment conducted by-

Name: _____

Position: _____

Signature: _____

Commander's authentication:

Figure C-1. Risk Assessment—Continued

C-2. 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.

(3) May delegate the authority to sign low and medium-risk-level determinations in writing to garrison safety managers.

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-3. ARMS ROOM AMMUNITION-STORAGE LICENSE

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

	Location:										
DODIC	Quantity Authorized	Criteria									
		• 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.									
		• HD 1.3 Ammunition The maximum amount authorized for storage is 100 pounds of the net explosive weight (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.									
		• HD 1.2.2 Ammunition May be stored only under unique circumstances. Must use proper fragmentation shielding. The maximum amount authorized is 50 pounds of the NEW. Ammunition required for immediate training may be kept overnight or over a weekend only under rare circumstances.									
th an approved. d according to <i>i</i>	l risk assessme AR 190-11. Sec	nt signed by a commander at the appropriate level eurity has been coordinated with the provost									
	DODIC	DODIC Authorized Image: Dodic state of the									

Garrison safety manager:	
Date:	
Telephone number:	

Figure C-2. Format for an Arms Room License

APPENDIX D EXPLOSIVES LICENSES (STORAGE)

Figures D-1 and D-2 are examples of explosives-storage licenses that incorporate the requirements of DA Pamphlet 385-64.

EXPLOSIVES-STORAGE LICENSE											
Name:					Date:						
Location:					Analys	st:					
		Explosive Quantity	Limiting Ex	posed	l Site	Fra	gment in M	Distance eters	Separation in Meter	n Distance s (Blast)	
Hazard Clas	SS	Limits	Name	Dist	ance	Req	uired	Actual	Required	Actual	
Combined tota HD 1.1, 1.2, 1.3, and 1.6	al of										
Combined tota HD 1.2, 1.3, and 1.6	al of										
Combined tota HD 1.3 and 1.	al of 6										
Combined total of HD 1.2, 1.3, and 1.6								_			
Total HD 1.6											
Total HD 1.4											
NOTES:		• •									
1	Mis	haps or violation	s of this licens	e must	be rep	orted	immed	liately to the	undersigne	d.	
2											
3											
4											
5											
Issuing Officia	l:							Date	:		
Title:											
Reviewed for		Reviewing Offic	cial: Date:								
adequacy and		Reviewing Offic	ial: Date:								
compliance.		Reviewing Offic	ial: Date:								

Figure D-1. Format for a General Explosives License

USAREUR EXPLOSIVE STORAGE LICENSE

Structure:	[Potential Explosion Site]	Name] Explosives License v	/alid	[Date] to [Date]		Prepared B [Name] [Organiza Location: [y: ation/Unit] Coordinates]	
Mixed Total	Cumulative total not to excee and/or 1.3 ammunition (A&E) on the pad will be considered a together, the licensed amount r 1.2.1 and 1.2.2 stored together	d [Net Explosives Weight poun is stored with HC/D 1.1 A&E, al s HC/D 1.1. The total NEW (NE effers to how much of each can be consider each sub-division separ	ds][(N l A&E Q) wil e stored ately a	et Explosives Quantity k is considered to be HC/D not exceed the amount lic d without consideration of nd apply the most restriction	ilograms)] HC/D 1. 1.1 A&E. Therefore censed for HC/D 1.1 the other and apply ve weight. HC/D 1.4	1-1.3 at the [P , the total explo A&E. When 1. the most restric has no effect o	ES name]. Wher sives weight of a 2 and 1.3 A&E a tive weight. Whe n mixed HC/D.	11.2 ill A&E re stored n HC/D
HOD	Amount of P	ermitted Explosives		Limiting Target Information	D	vistance		
HC/D	Pounds (lb)	Kilograms (kg)	ID	Name	Relationship	Actual	Required	Notes
						ft(m)	ft (m)	1-6
1.1			N/A	[PES Type]	[e.g. IMD]			
1.2.1			N/A	[PES Type]	[e.g. IMD]			
1.2.2			N/A	[PES Type]	[e.g. IMD]			
1.2.3			N/A	[PES Type]	[e.g. IMD]			66
1.3			N/A	[PES Type]	[e.g. IMD]			
1.4	Mission Essential Quantities	Mission Essential Quantities	N/A	[PES Type]	[e.g. IMD]			**
Notes: 1. This license w 2. Any mishap o 3. Ammunition 1 4. ["Ammunitio 5. Detonators an fins), or small 6. This explosive	as prepared IAW Defense Explosive violation of this license will be rep nust be serviceable and packed in or n will be stored IAW US ammunit d/or blasting caps, when stored with arms ammunition may be used for th s license is associated with [Risk de	es Safety Regulation (DESR) 6055.00 orted immediately to the Mission CD ginal or like original containers. ion and explosive safety regulation combat load ammunition, will be sep his purpose. The wall must be stable ccument , e.g. Site Plan or DARAD	Ed. 1, R and t s. Z co parated and pro numbe	13 Jan 2019 and DA PAM 3 he undersigned. mpatibility storage is autho from other types of explosive vide line-of-sight protection r] [(Risk Level, e.g. Mediu S	85-64, 24 May 2011 w rized.", if applicable] ss by a heavy dividing to the other explosives m).]	/RAR 10 Oct 20 wall. Sandbags, h	13, Chapter 8. eavy inert materia	l (bomb
	Issuing Official: [Co	mmander or delegated authorit	y]		I	ssue Date:	[Date]	
Reviewed for ade	equacy and compliance by: QA	SAS Representative]			Ι	Date:	[Date]	
ceviewed for ade	Ι	Date:	[Date]					
Reviewed for ade	equacy and compliance by: [Fi	re/Emergency Services or Secu	rity as	required]	Ι	Date:	[Date]	
	Periodic Inspections: [Nat	I	Date:	-				

Figure D-2. Example Template for a USAREUR Explosives 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 (SCG) in amounts of up to 8,818 pounds net explosive weight (NEW) (4,000 kg net explosive quantity (NEQ)) in accordance with DESR 6055.09 at each storage site if the items are serviceable and packed in original or like-original containers.

	CGs													
13		Α	В	С	D	Е	F	G	Н	J	K	L	N	S
1	Α	X	Z											
	В	Z	X	Z	Ζ	Ζ	Z	Ζ					X	X
	C	10000	7.	X	X	X	Z	7.					X	X
13	D		7	X	X	X	7	7					X	X
13	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$											X		
S												X V		
Ŭ	G				7	7	7							
3	U		L	L	L	L	L	Λ	v				L	
13	Н								Λ	V				
	J									Λ	7			Λ
-	K										L			
								_						
	N		X	X	X	X	Z	Z					X	X
	S		X	X	X	X	X	X	X	X			X	X
	A (CT 7	· · · ·					1	1.	1	01			-141	
а	An X	ited or re	itersectio	n indical	es mat u	h Footne	s may be	combine	ed in stor	age. Oth	ierwise, r	nixing is	eitner	
b	A "Z"	at an inte	ersection	indicate	s that wi	nen warra	anted by	operatio	nal consi	derations	s or maga	azine nor	-availabi	lity
	and wh	nen safet	y is not s	acrificed	, the Dol) Compo	onents m	ay appro	ve mixed	storage	of limite	d quantit	ies of so	ne
	items f	from diff	erent gro	ups. Suc	h approv	al docu	nentation	n must be	e kept on	site. Co	mponent	approva	l of mixe	d
	storage	e in comj	pliance w	vith Z int	ersection	s does no	ot require	e a waive	r or exer	nption. 1	Mixed sto	orage of :	items wit	hin
	groups	where n	io X or Z	exists at	that pair	's inters	ection be	yond the	prohibit	ions and	limitatio	ns of Foo	otnote g,	
	howev	er, requi	res an ap	proved w	aiver or	exempti-	on. Exar	nples of	acceptab	le storag	e combin	ations in	clude:	
	2	HD 1.17	bulk pr	opellants	or hage	ed prope	lling cha	ges with	HD 1 30	3 of more 3 pyrote	chnic sub	eproteci	ive reatu	165.
С	Equal	numbers	of separ	ately pac	kaged co	mponen	ts of haza	ard-class:	ified con	iplete roi	inds of a	ny single	type of .	AE
	may be	e stored t	ogether.	When s	stored,	compati	bility is t	hat of the	e comple	te round.				
d	CG K	requires	separate	storage f	rom othe	r groups	, and also	o may ree	quire sep	arate sto	rage with	in the gr	oup. The	e
	contro.	lling Dol	D Compo	onent wil	l determi	ne which	n items u	nder CG	K may b	e stored	together	and which	ch must t	be
0	stored	separate	Iy. Such	docume	tation n	iust be K	Close 1	e.	ining air	nilorhoz	ard factu	rag hut	whara the	
е	explos	ive haza	e may be	ninates a	s describ	ed in na	Class I . soranh V	A = conta $1 = 6.2$	l 1 Non	mar naz -Class 1	AF and (Tes, but v	F assion	ed the
	same (CG may l	be stored	together	, account	ea in pa	- agruph v	1.1.0.2.	INOII	Cruss I	ring ond v		L usign	sa ulo
f	The D	oD Com	ponents r	nay auth	orize AE	-designa	ted "Prac	ctice" or	"Training	g" by no	menclatu	re, regar	dless of t	he CG
	assign	ed, to be	stored w	ith the ta	ctical AI	E it simul	lates. Su	ch docur	nentatior	n must be	e kept on	site.		
g	The D	oD Com	ponents 1	nay auth	orize the	mixing	of CGs, e	except ite	ems in CO	G Α, Κ, ε	nd L, in	limited c	uantities	
	genera	lly of 1,0	000 lbs [4	454 kg] t	otal NEV	VQD or 1	ess. Suc	h docum	entation	must be	kept on s	ite.		
h	For pu	rposes of	t mixing,	allAEr	nust be p	ackaged	in its sta	ndard sto	brage and	l shippin	g contain	er. AE c	container	s will
	not be	opened i	for issuin	g items i	rom stor	age locat	10ns. Ot	iter conta	aners ma	ay be ope	ened in st	orage loo	ations fo	or
	ammu	nition	iu ioi illa	igazines	storing o	шу пр .	1.4 menns.	, шраскі	ng, mspe	soung, ar	iu repack	aging m	5 ND 1.4	2
i	When	using the	e Z mixir	ig author	ized by I	Footnote	b for arti	cles of e	ither CG	B or CG	F. each	will be s	egregated	1 in
	storage	e from ar	ticles of	other CG	s by me	ans that I	prevent p	ropagatio	on of CG	B or CC	Farticle	es to artic	cles of ot	her
	CGs.						on acordada dan basar dan s a	10				a waa canaa a maadadaa a		annandit)
j	If dissi	milar HI	D 1.6N A	E are mi	xed toge	ther and	have not	been tes	ted to en	sure non	-propaga	tion, the	mixed A	E are
	individ	lually co	nsidered	to be HI) 1.2.1D	or HD 1	.2.2D bas	sed on th	eir NEW	QD or o	verriding	fragmen	tation	
	charac	teristics	for purpe	ses of tra	ansportat	ion and s	storage.	When m	IXING CG	NAEW	nth CG E	3 through	CG G o	r with
	CG S,	see para	graphs V	T.E7.2.3	1.1., V1	.E7.2.3.4	., VI.E7	.2.3.10.,	and V1.E	1.2.3.11	. to deter	mine the	HD for	the
	mxtur	е.												

Figure E-1. Army in Europe Storage-Compatibility Chart (DESR 6055.09 Table V1.E6.T1)

NOTES:

1. An "X" at an intersection indicates that 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 Office of Safety, ODCS, at email: *usarmy.wiesbaden.usareur.list.safety-office-mbx@mail.mil.*

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. Storage-compatibility requirements do not apply to unit ammunition basic load (ABL) ammunition stored according to DESR 6055.09.

Figure E-1. Army in Europe Storage-Compatibility Chart (DESR 6055.09 Table V1.E6.T1)—Continued

GLOSSARY

SECTION I ABBREVIATIONS

A&E	ammunitions and explosives
ABL	ammunition basic load
ACE	Ammunition Center Europe
AE	Army in Europe
AEPUBS	Army in Europe Publishing System
AHA	ammunition holding area
AO	area of operations
AR	Army regulation
ASA	ammunition supply activity
BFV	Bradley Fighting Vehicle
BLAHA	basic load ammunition holding area
ASP	ammunition supply point
CAD	cartridge actuated device
CG, USAREUR	Commanding General, United States Army Europe
CJCSI	Chairman of the Joint Chiefs of Staff Instructions
cm	centimeter
CONOPS	contingency operations
CONPLAN	contingency plan
DA	Department of the Army
DAESC	Department of the Army Explosives Safety Council
DARAD	Deviation Approval and Risk Acceptance Document
DDESB	Department of Defense Explosives Safety Board
DES	Directorate of Emergency Services
DESR	Defense Explosive Safety Regulation
DOD	Department of Defense
DODIC	Department of Defense identification code
DPW	directorate of public works
DRAW	Deliberate Risk Assessment Worksheet
ECM	earth-covered magazine
EOD	explosive ordnance disposal
EPAC	Explosives Policy Action Committee
ESMP	Explosive Safety Management Program
ESQD	explosives safety quantity distance
ESSP	Explosives Safety Site Plan
ft	foot or feet
G4	Deputy Chief of Staff, G4, United States Army, Europe
HC/D	hazard class/division
HD	hazard division
HEMTT	heavy expanded mobility tactical truck
HMMWV	high-mobility multipurpose wheeled vehicles
HN	host nation
HQ USAREUR	Headquarters, United States Army Europe
HQDA	Headquarters, Department of the Army
IMCOM-Europe	United States Army Installation Management Command-Europe
in	inches

JHCS	Joint Hazard Classification System
kg	kilogram
LOA	letter of agreement
LPS	lightning-protection system
m	meter
MILCON	Military construction
MILVAN	military demountable container
MLRS	multiple launch rocket system
mm	millimeter
MOA	memorandum of agreement
MRA	munition risk assessment
MSC	major subordinate command
NATO	North Atlantic Treaty Organization
NEQ	net explosive quantity
NEW	net explosive weight
OCoS	Office of the Chief of Staff, Headquarters, United States Army Europe
ODCS, G1	Office of the Deputy Chief of Staff, G1, Headquarters, United States Army Europe
ODCS, G3	Office of the Deputy Chief of Staff, G3, Headquarters, United States
	Army Europe
ODCS, G4	Office of the Deputy Chief of Staff, G4, Headquarters, United States Army Europe
OPLAN	operations plan
OPORD	operations order
PAD	propellant actuated device
QASAS	quality assurance specialist (ammunitions surveillance)
QD	quantity-distance
RAD	restricted area decree
SAA	small arms ammunition
SCG	storage-compatibility group
SOP	standing operating procedure
SSD	safe separation distance
TM	technical manual
U.S.	United States
USAFE/AFAFRICA	United States Air Forces in Europe/United States Air Forces Africa
USAG	United States Army garrison
USAREUR	United States Army Europe
USAREUR G3	Deputy Chief of Staff, G3, HQ USAREUR
USAREUR G4	Deputy Chief of Staff, G4, HQ USAREUR
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, and pyrotechnics (as well as shot and their primers).

approved

In compliance with this regulation; with the provisions of other approving agencies cited in this regulation; and with instructions provided by the CG, USAREUR

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

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.

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

personnel

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