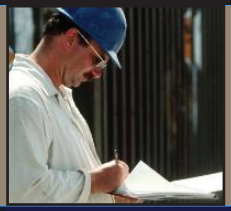
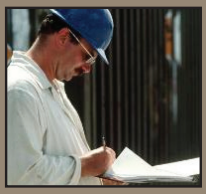




ARMY SAFETY CAREER PROGRAM 12 EXPLOSIVES SAFETY HANDBOOK

September 2012

U.S.ARMY





ARMY SAFETY CAREER PROGRAM 12 EXPLOSIVES SAFETY HANDBOOK

September 2012

U.S.ARMY

LMI

U.S. ARMY COMBAT READINESS/SAFETY CENTER

FOREWORD

One of the most challenging duties of our safety professionals is managing the safety of our ammunition and explosives commodities to maximize the readiness of our warfighters and the ability to deliver lethality to the enemy while minimizing the inherent risks associated with these items. Throughout the ammunition and explosives life cycle safety professionals have the responsibility to ensure ammunition and explosives are developed, transported, handled, stored, used, and disposed of in a safe manner. Accomplishment of these missions requires highly specialized knowledge and abilities, explosives safety risk management tools, and readily accessible data and information.

Over the past three years we have been engaged in a campaign to improve ammunition and explosives safety at all levels. Using a four-pronged approach focused on leader awareness, doctrine and policy, safety professional competency, and tools and information, the majority of our efforts have been directed to improving the competency of safety professionals. Our objective was to develop a structure to provide comprehensive, high quality explosives safety training to safety professionals and implement a certification process to confer impartial, third-party endorsement of explosives safety knowledge and experience. These efforts are captured in the Army Safety Career Program 12 Explosives Safety Handbook, which serves as a ready reference for CP-12 explosives safety responsibilities, competency and training requirements, the CP-12 Explosives Safety Certificate Program, and sources of information.

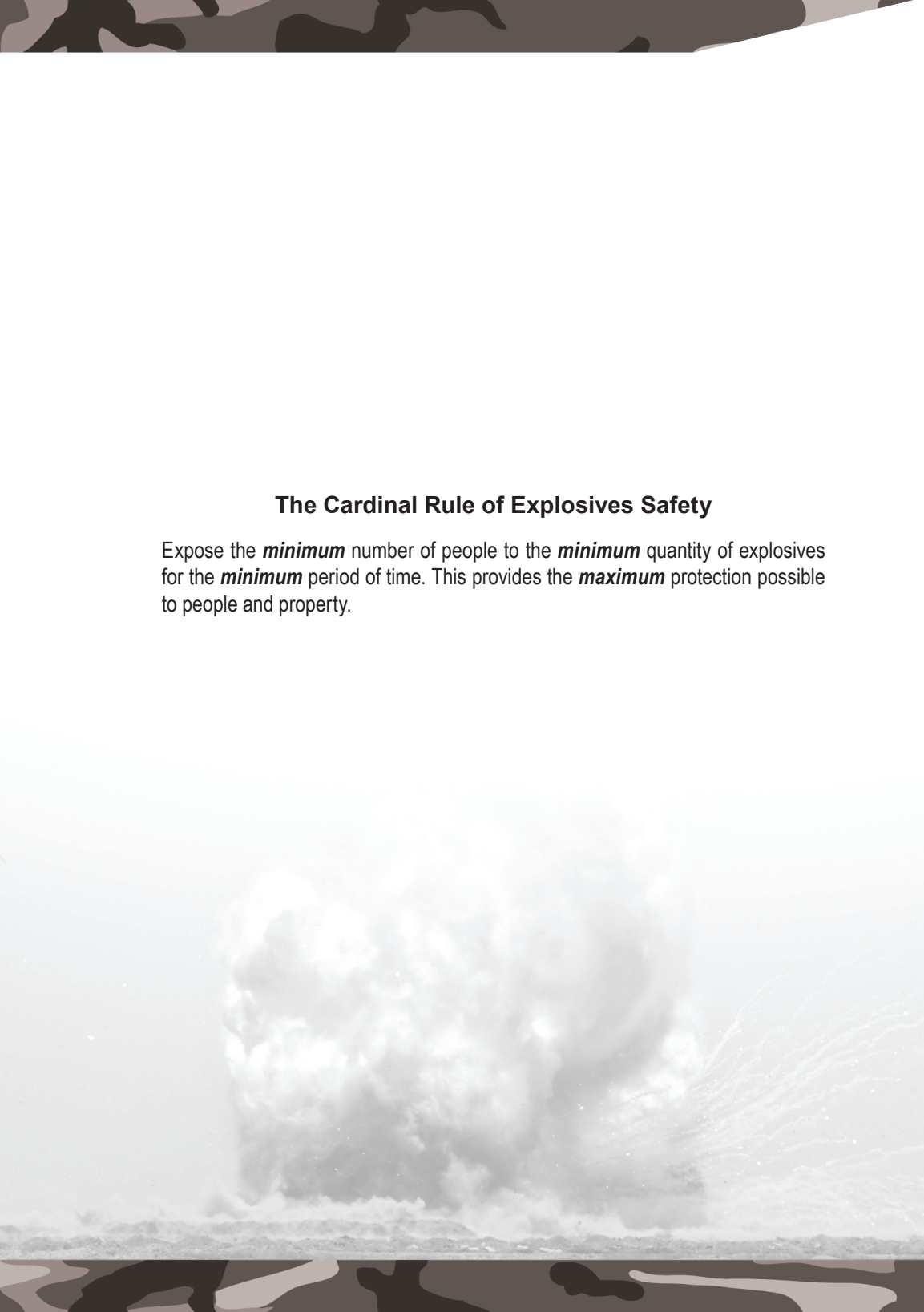
I highly encourage all Army safety professionals, and especially those with responsibilities in explosives safety, to become familiar with the Handbook and pursue explosives safety certificates at the appropriate levels commensurate with their explosives safety responsibilities. Our CP-12 safety professionals are the best in the world but on-going training is essential to keep up with changes in policy, standards, and technology and to share lessons learned.

Army safe is Army strong!

Timothy J. Edens
Brigadier General, U.S. Army
Director of Army Safety

The Cardinal Rule of Explosives Safety

Expose the ***minimum*** number of people to the ***minimum*** quantity of explosives for the ***minimum*** period of time. This provides the ***maximum*** protection possible to people and property.



Introduction

Introduction

Background

The U.S. Army has DoD's most extensive explosives safety mission; it is the single manager for conventional ammunition, the manager of DoD's largest inventory of explosives, and the principal provider of explosives training. Because of the size of its safety mission and inherent risks associated with explosives, the U.S. Army needs to provide a vigorous and effective explosives safety program to prevent accidents, incidents, and other events that could harm both the public and DoD personnel, or cause damage to property and the environment.

Through the U.S. Army's Career Program 12 (CP-12), safety and occupational health (SOH) professionals have a critical role in ensuring explosives are safely manufactured, handled, stored, transported, maintained, used, and disposed. SOH professionals are directly responsible for developing and implementing explosives safety programs and ensuring compliance with federal, DoD, and Army safety policies at the installations and activities where they are assigned. Explosives safety is just one of many areas in which SOH professionals must be proficient. Commanders in both deployed and non-deployed environments rely on them to identify and reduce a broad range of workplace hazards.

In September 2009, the U.S. Army Technical Center for Explosives Safety (USATCES) tasked LMI to assess and develop recommendations for improving the explosives safety competency level of U.S. Army SOH professionals. USATCES provides technical expertise in explosives safety across Army elements and executes the Headquarters, Department of the Army's (HQDA's) technical responsibilities in response to taskings from the Office of the Director of Army Safety (ODASAF) and the U.S. Army Defense Ammunition Center (DAC). In concert with the ODASAF, USATCES continuously assesses training requirements to ensure explosives safety expertise is provided to support the Army mission as it relates to explosives safety.

After a comprehensive assessment of explosives safety policy, doctrine, and stakeholder (including SOH personnel, Commanders, and subject matter experts) views on existing responsibilities, competencies, and training, it was determined that the Army needed a formal, visible structure for defining and assessing explosives safety competency within the CP-12 program.

A working group of subject matter experts from numerous Army commands and organizations defined and documented the competencies and training necessary to develop and maintain explosives safety proficiency of SOH personnel across career levels and functional assignments. The working group included senior safety directors and explosives safety experts from the following organizations:

- Office of the Director of Army Safety
- U.S. Army Materiel Command (AMC)
- U.S. Army Installation Management Command (IMCOM)
- U.S. Army Forces Command (FORSCOM)
- U.S. Army Training and Doctrine Command (TRADOC)
- U.S. Army Joint Munitions Command (JMC)
- U.S. Army Combat Readiness/Safety Center (CRC/SC)
- U.S. Army Defense Ammunition Center (DAC)
- U.S. Army Technical Center for Explosives Safety (USATCES).

The working group's Level 1 or core competency and training requirements became a formal requirement for all CP-12 professionals in job series 0018, 0019, 0081, 0640, 0690, 0803, 1306, 1815, and 1825 on 1 February 2012 with the memorandum signed by Brigadier General William T. Wolf, Director of Army Safety.

Purpose

Effective explosives safety depends on people having the necessary competency to properly carry out their assigned responsibilities and to support the needs of the Army. The CP-12 Explosives Safety Competency Model provides a framework for documenting expected explosives safety competencies and associated knowledge, skills, and abilities (KSAs) for SOH professionals at entry and advanced levels. This model also documents training requirements and establishes a foundation for qualification standards and for guiding career progression.





This handbook

- provides a ready-reference for explosives safety responsibilities and expected competencies for SOH professionals;
- defines explosives safety KSAs required to ensure a common skill level across the CP-12 career field;
- defines specific explosives safety KSAs required for SOH professionals working in specialized assignments at the advanced level;
- aligns competency requirements to course content and training structure;
- provides summary descriptions for aligned explosives safety courses; and
- includes sources for explosives safety training and technical support.

The handbook is divided into six sections with one appendix:

- *Explosives Safety Responsibilities (Tab A)* describes explosives safety responsibilities for SOH professionals and other personnel with direct responsibility for supporting the Army's explosives safety program.
- *Level 1 Competency Model (Tab B)* identifies entry-level training requirements and explosives safety competencies and KSAs.
- *Level 2 Competency Model (Tab C)* presents the training structure and competency requirements for SOH personnel working in specialized assignments at the advanced level.
- *Certificate Application Procedures (Tab D)* outlines the procedures for individual attainment of the Level 1 Explosives Safety Professional Certificate.
- *Course Descriptions (Tab E)* provides summary descriptions of all explosives safety courses aligned to the CP-12 Level 1 and 2 competency models.
- *Explosives Safety Support (Tab F)* provides a reference to explosives safety sources for policy, training, and technical support.
- Appendix defines the abbreviations used in this handbook.

All questions or comments regarding this handbook should be addressed to:

Office of the Director of Army Safety
200 Army Pentagon, Washington, DC 20310-0200
usarmy.pentagon.hqda-aso.mbx.army-safety-office@mail.mil

"Accidental injury and death are among the greatest threats to Army readiness. Whether on or off duty, the loss of a Soldier has lasting and profound effects for his or her battle buddies, fellow Soldiers, Family members and our nation at large. Safety is not a luxury — it is an absolute imperative to everything our Army does."

—BG Timothy J. Edens,
Director of Army Safety

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Tables

Explosives Safety Responsibilities

Tab A





The simple motto “Army Safe is Army Strong” provides the overarching principle of the Army Safety Program. It is the responsibility of Army leadership and safety personnel to ensure that safety is a principal element in all operations. Because of the inherent risks associated with explosives, the Army needs a vigorous and effective explosives safety program to prevent accidents, incidents, and other events that could harm both the public and DoD personnel, or cause damage to property and the environment.

Although safety is the responsibility of every Army leader, soldier, civilian, and contractor, the following types of Army personnel have a direct responsibility for supporting the Army’s explosives safety (ES) program:

- Civilian SOH professionals: CP-12
- Civilian Quality Assurance Specialists, Ammunition Surveillance (QASAS) and Ammunition Logistics Assistance Representatives (LARs): CP-20
- Ammunition Warrant Officers (AWOs): Military Occupational Specialty (MOS) 890/910A
- Aviation Safety Officers (ASOs): MOS 152/153/154/155 (A)B.

The purpose of this handbook is to give SOH professionals a guide that describes their explosives safety responsibilities and related competency requirements. This section provides an overview of ES areas of responsibilities for personnel who directly support the SOH professionals in meeting Army explosive safety program requirements.

SOH Responsibilities

SOH professionals at the mission, garrison, and activity and unit levels are responsible for

- developing, implementing and managing explosives safety programs;
- providing advice on arms, ammunition, and explosives (AA&E) safety and risk management;
- evaluating compliance with federal, DoD, and Army explosives safety policies;
- serving as the point of contact for all actions related to the explosives safety management program (ESMP);

- providing guidance on proper preparation, staffing, and submission of explosives safety certificates of risk acceptance (CoRAs), explosives licenses, explosives safety site plans, safety submissions, waivers, and exemptions;
- reviewing waivers and exemptions, including CoRAs and Secretarial Certificates for completeness and accuracy prior to forwarding for approval;
- maintaining a list of approved CoRAs, waivers, exemptions, and deviations, and advising incoming commanders of the list and plans for correction;

- ensuring all potential explosive sites (PESs) and exposed sites, both military and civilian, are indicated on approved explosives safety site plans and submissions;
- ensuring that plans and protective construction designs for explosive manufacture, testing, storage, surveillance, maintenance, response actions, demilitarization, and disposal facilities are reviewed for compliance with safety standards, by appropriately trained personnel;
- ensuring a safety inspection is conducted at least annually for all areas where ammunition and explosives (A&E) related activities (for example, production, handling, storage, use, maintenance, munitions response, demilitarization, and disposal) routinely occur;
- ensuring A&E uploads and other activities that involve the transportation and storage of A&E are monitored to validate that pertinent safety requirements are met;
- serving as the focal point for and coordinating ESMP requirements with all stakeholders, including mission and garrison unit commanders;
- reviewing garrison or installation master plans and quantity distance (QD) compliance for planned facilities on existing A&E sites, both before and after construction;
- reviewing policies, standard operating procedures (SOPs), and directives for compliance with explosives safety requirements;





- ensuring explosives safety site plans, submissions, and explosives licenses are updated and approved at the appropriate level when construction that is not related to A&E operations is required within ESQD;
- ensuring procedures are developed and in place for maintaining fire symbols and chemical hazard symbols current with actual A&E stored at a particular location;
- ensuring personnel responsible for managing A&E maintain current information on the type and location of A&E storage and provide this information to safety and firefighting personnel;
- ensuring personnel responsible for A&E related operations, such as operational personnel including security personnel and firefighters, are trained in fire symbols and chemical hazard symbols and in precautions and procedures for fighting fires when A&E is involved;
- ensuring adequate communications among safety, fire fighting, security, emergency response, and ammunition surveillance and storage personnel is established and tested on a regular basis;
- ensuring fire fighters are provided information for maintaining current maps, showing all explosives locations with fire and chemical hazard symbols;
- participating in the garrison or installation master planning process, conducting annual reviews of the garrison's or installation's explosives location map to monitor encroachment within ESQD, and ensuring required explosives safety site plans, submissions, and explosives licenses are accomplished or updated;
- monitoring select A&E related activities to evaluate explosives safety compliance and the integration of risk management ensuring that all participants understand and comply with applicable explosive safety standards, to include the following:
  - » A&E storage, handling, and operating sites
  - » A&E transportation activities
  - » A&E disposal and demilitarization activities
  - » Munitions response actions

  - » Weapon systems modifications, special exercises, and test programs, particularly those that involve A&E
  - » Planning for contingencies
  - » Combat load and reload operations
  - » Explosives safety training records for unit personnel
  - » Public demonstrations, including “open house,” and “4th of July” type activities;
- assisting commanders and staffs with resolving explosives safety concerns associated with real property known or suspected to contain munitions and explosives of concern (MEC);
- investigating and reporting A&E accidents, incidents, and mishaps, per Department of Defense 6055.09-M, Army Regulation (AR) 385-10, and Department of the Army Pamphlet (DA Pam) 385-40, and documenting and disseminating explosives safety lessons learned; and
- briefing their command and staff, as necessary, to keep the leadership informed of explosives safety requirements and issues and the status of the commander’s ESMP.

QASAS Responsibilities

QASAS are responsible for developing, managing, and executing munitions surveillance programs at the installation or activity where they are assigned. They inspect and determine the reliability of the Army’s munitions stockpile. They are also responsible for the quality assurance of functions that affect explosives safety during the handling, storage, transportation, maintenance, use, and disposal of A&E. Ammunition LARs are QASAS who focus on logistical issues.





In support of the Army surveillance program, QASAS

- ensure that surveillance functions are performed in accordance with the provisions of Supply Bulletin (SB) 742-1 and applicable publications including technical manuals (TMs) and SBs;
- monitor storage, handling, and maintenance operations for compliance with established quality and safety standards;
- inspect munitions and components to determine quality, safety, and serviceability, and monitor for conditions that could accelerate deterioration; and
- furnish technical advice and training to commanders and supporting units on compliance with munitions regulations and munitions safety.

QASAS also provide technical assistance to safety directors and managers in planning, administering, and enforcing the explosives safety program, and technical support in such areas as

- developing explosives safety site plans and submissions, explosives licenses, CoRA requests, and Secretarial Certificates;
- reviewing designs for explosive production, manufacture, testing, storage, surveillance, maintenance demilitarization, and disposal facilities for compliance with explosive safety standards;
- conducting safety inspections of ammunition and explosives handling, storage, use, maintenance, and disposal areas at least annually;
- reviewing SOPs and directives for compliance with explosive safety requirements;
- assisting in the master planning process and reviewing, annually, the master plan to ensure construction is not planned inside explosive safety arcs;
- monitoring operations involving ammunition and explosives to ensure that Army units understand and comply with explosive safety standards; and
- monitoring ammunition uploads and other activities that involve the transportation and storage of ammunition in other than authorized and licensed storage areas to ensure that pertinent requirements are met.

AWO Responsibilities

AWOs are soldiers responsible for receipt, storage, issue, and demilitarization of conventional ammunition and all its components. They support commanders with munitions operations and coordinate with safety managers, safety directors, and QASAS in the following:

- receiving, storing, issuing, surveillance testing, maintaining, modifying, destroying, and demilitarizing conventional ammunition, missile explosive components, and non-nuclear items;
- preparing and reviewing ammunition storage waivers;
- investigating and reporting conventional ammunition accidents, failures, or malfunctions;
- supervising and managing Standard Army Ammunition Systems (SAAS) at the unit level;
- preparing, reviewing, and implementing firefighting procedures for conventional and special ammunition; and
- planning, reviewing, and implementing policies and procedures for surveillance of conventional, chemical, biological, and nuclear material wastes.





ASO Responsibilities

ASOs provide safety oversight for munitions storage, transportation, and use in training and hostile environments, aviation life-support equipment (ALSE) shops, aviation maintenance operations, and at forward arming and refueling points (FARPs). IAW AR 385-10, AR 95-1, DA PAM 385-90, they support commanders and safety managers with

- monitoring unit A&E and weapons handling programs to ensure compliance with AR 385-10 and DA PAM 385-64;
- monitoring unit ALSE and related survival training programs, including flares and other munitions used in the ALSE program;
- ensuring explosives safety and physical security requirements for Class V items are met IAW TC 3-04.72;
- monitoring storage, operational use and handling of aircraft internal load, ejection, extraction, and emergency egress munitions (including squibs and flare systems); and
- monitoring the handling of weapons, A&E, chemicals, hazardous and toxic materials, lasers and petroleum, oil and lubricants (POL), for compliance with established safety standards.


50 CARTG .50 CAL
LINK, M9
AMMO, M8
1 TRACER, M17

Level 1 Competency Model

Tab B





Level 1 Competency Model

The purpose of the Level 1 Competency Model is to provide a framework for documenting expected explosives safety competencies and aligning KSAs for all CP-12 personnel, regardless of assignment. All CP-12 personnel should have general knowledge and understanding of explosives safety requirements in the following competency areas:

- Explosives Safety Program Management
- Explosive Materials
- Non-Standard Ammunition and Explosives
- A&E Transportation and Storage
- Electrical Safety
- A&E Accidents and Incidents
- Emergency Response
- Master Planning
- Site Planning
- Risk Management.

Competency development at Level 1 is accomplished through a series of mandatory distance learning (DL) and instructor-led (IL) courses specific to explosives safety functions as well as through general safety management courses incorporated into the intern training program (and available to all careerists). Table B-1 lists the explosives safety courses required to ensure a common skill level in explosives safety across the SOH career field. Descriptions of these courses are in Tab D.

Table B-1. Explosives Safety Level 1 Training Requirements

Course	Requirement	Mode	Duration
Ammo 45, Introduction to Ammunition	Mandatory	DL	8 hours[a]
Ammo 63, U.S. Army Explosives Safety Familiarization	Mandatory	DL	12 hours[a]
Ammo 78, Ammunition Publications	Mandatory	DL	6 hours[a]
Ammo 107, Introduction to Explosives Safety Management for Safety Professionals	Mandatory	IL or DL	32 hours 18 hours[a]
Total required hours			40–58 hours

[a] Actual time required for completion of DL courses varies based on experience level and learning style. Reported times represent average completion times generated from a random sample of participants.

Tables B-2 through B-11 define the specific explosives safety KSAs required for CP-12s at Level 1. KSAs are categorized according to identified explosives safety competency areas. The coverage area field provides the course coverage location for each identified KSA.

Table B-2. Competency Area: Explosives Safety Program Management

ID	KSA	Coverage area
1	Knowledge of general Army Explosives Safety Program (ESP) principles and responsibilities	Ammo 78, 107
2	Understand general components of the Army ESP management	Ammo 78, 107
3	Understand roles and responsibilities of organizations and personnel within the Army ESMP	Ammo 78, 107
4	Understand the Cardinal Rule of ES	Ammo 107





5	Knowledge of the health, safety, and environmental legislation, regulations, and safe working practices and procedures governing A&E, including ES standards prescribed in DA Pam 385-64	Ammo 78, 107
6	Understand ES roles and responsibilities for Army organizations and personnel including the Logistics Review and Technical Assistance Office (LRTAO), installation and garrison commanders, installation safety managers, QASAS personnel, and AWOs	Ammo 78, 107
7	Ability to establish and implement ES programs	Ammo 78, 107
8	Knowledge of ES references and resources	Ammo 78, 107
9	Understand processes and procedures for distributing ES promotional material	Ammo 107
10	Ability to advise commands on Army ES regulations and practices necessary to support their mission	Ammo 78, General Safety Management
11	Understand the process for addressing identified ES hazards	Ammo 63, 107
12	Understand the actions to be taken in an explosives incident, including accident notification, investigation, and procedures	Ammo 107
13	Ability to assist the DoD Explosives Safety Board (DDESB) and USATCES with periodic surveys and assessments of installation A&E storage facilities and operations, including explosives safety assistance visit (ESAV) requests	Ammo 107
14	Ability to conduct safety awareness meetings, training, and procedural reviews to help soldiers and Army civilians perform ES responsibilities within Occupational Safety and Health Administration (OSHA), DoD, and Army regulations	General Safety Management
15	Ability to respond to soldiers and Army civilians who identify hazards and raise safety concerns	General Safety Management
16	Ability to monitor the enforcement and effectiveness of A&E safety	General Safety Management

Table B-3. Competency Area: Explosive Materials		
ID	**KSA**	**Coverage area**
17	Knowledge of basic terminology associated with explosives, propellants, and ammunition items	Ammo 45, 107
18	General knowledge of types of A&E facilities, structures, and ports	Ammo 63, 107
19	General understanding of the nature, characteristics, hazards, and risks of explosives substances and articles	Ammo 63, 107
20	Knowledge of proper personal protective equipment	Ammo 63, 107
21	Understand the effects of energetic materials	Ammo 63, 107
22	General knowledge of hazardous materials, hazard control program, and foreign ammunition	Ammo 63, 107
23	Knowledge of the hazards associated with hazard class 1	Ammo 63, 107
24	Understand the purpose and functioning of explosives trains	Ammo 63, 107
25	Understand the hazards associated with improved conventional munitions (ICM) and depleted Uranium (DU) ammunition	Ammo 107
26	Ability to identify the different types of ammunition based on color code markings	Ammo 45, 107
27	Ability to interpret and apply fire prevention requirements to ammunition facilities	Ammo 63, 107
28	Ability to select the appropriate fire and chemical hazard symbols required to be posted on an ammunition facility	Ammo 63, 107
29	Understand storage compatibility groups	Ammo 63, 107
30	Ability to apply the mixing rules for various types of A&E	Ammo 63, 107
31	Understand processes for dealing with material potentially presenting an explosives hazard (MPPEH)	Ammo 107

Table B-4. Competency Area: Non-Standard A&E		
ID	**KSA**	**Coverage area**
32	Ability to identify non-DoD ammunition and explosives	Ammo 107
33	Awareness of DoD and non-DoD and commercial A&E safety requirements	Ammo 78, 107
34	Understand requirements for approving use of non-standard ammunition	Ammo 107
35	Knowledge of the inherent issues associated with non-DoD ammunition and explosives	Ammo 107





Table B-5. Competency Area: A&E Transportation and Storage		
ID	**KSA**	**Coverage area**
36	Knowledge of governing regulations and procedures for safety of ammunition and explosives in storage	Ammo 78, 107
37	Understand proper A&E storage practices	Ammo 45, 107
38	Knowledge of safe transportation practices for A&E	Ammo 45, 107
39	Knowledge of Department of Transportation (DOT) and DoD regulations for standard packaging, marking, labeling, and transportation requirements	Ammo 78, 107
40	Ability to ensure A&E is stored in licensed facilities and quantities do not exceed amounts authorized by the license	Ammo 45, 107
41	Ability to ensure activities involving transportation and storage of A&E are monitored for compliance with applicable ES regulations	Ammo 78, 107
42	Ability to ensure on-post transportation routes of A&E avoid areas of dense population and congestion, and are approved by the commander	Ammo 45, 107
43	Ability to ensure soldiers abide by DOT regulations concerning the transportation of A&E	Ammo 78, 107
44	Ability to inspect A&E storage sites to ensure compliance with applicable regulations	Ammo 78, 107
45	Ability to interpret and apply fire prevention requirements to ammunition facilities	Ammo 45, 107

Table B-6. Competency Area: Electrical Safety		
ID	**KSA**	**Coverage area**
46	Understand procedures for inspecting, testing, and documenting electrical safety aspects to A&E storage and operating facilities	Ammo 107
47	Ability to ensure documentation on lightning protection and ground system inspections are conducted in accordance with applicable regulations	Ammo 107
48	Understand potential interface with equipment and systems that may compromise the safety of A&E	Ammo 45, 107
49	Knowledge of potential sources of static electricity	Ammo 45, 107
50	Ability to determine appropriate control measures for static electricity	Ammo 107

51	Understand the hazards associated with electro explosive devices (EEDs)	Ammo 107
52	Understand the hazards of electromagnetic radiation on ordnance (HERO)	Ammo 107
53	General understanding of the principles of lightning generation and its effects on equipment and structures	Ammo 107
54	Knowledge of Army guidance and National Fire Protection Association standards for lightning protection	Ammo 107
55	Understand general principles of lightning conductors, bonding, and grounding systems	Ammo 107

Table B-7. Competency Area: A&E Accidents/Incidents

ID	KSA	Coverage area
56	Understand the actions to be taken in an explosives incident, including accident notification, investigation, and procedures	Ammo 107
57	Ability to ensure proper accident investigation and notification procedures are followed	Ammo 107
58	Understand the relevance of explosives-related activities and how these may affect the incident	Ammo 107
59	Knowledge of sources of information that may inform an accident and incident investigation	Ammo 107
60	Knowledge of the different classes of ammunition malfunctions	Ammo 63, 107
61	Understand the similarities and differences between an accident and a malfunction	Ammo 63, 107
62	Knowledge of the process to be followed immediately following a suspected ammunition malfunction	Ammo 63, 107
63	Understand the reporting procedures for malfunctions	Ammo 63, 107
64	Understand the consequences to the ammunition stockpile of malfunction reports	Ammo 107
65	Understand the purpose for reporting “near-miss” situations	Ammo 107
66	Ability to conduct trend analysis of accident and incident reports	Accident Investigation and Reporting





67	Ability to develop countermeasures to minimize accident risk	Accident Investigation and Reporting
68	Ability to communicate and disseminate lessons learned from accident and incident reports and analysis	Accident Investigation and Reporting

Table B-8. Competency Area: Emergency Response

ID	KSA	Coverage area
69	Understand the principles of fire protection and prevention	Ammo 63, 107
70	Understand emergency response actions and channels for communication during A&E incidents and accidents	Ammo 63, 107
71	Knowledge of fire and chemical symbols for A&E	Ammo 63, 107
72	Knowledge of emergency response criteria for A&E incidents and accidents	Ammo 63, 107
73	General understanding of emergency response criteria for chemical incidents and accidents, including Chemical Accident and Incident Response and Assistance (CAIRA) responsibilities	Ammo 63, 107
74	Knowledge of procedures for emergency shutdown and evacuation	Ammo 107
75	Understand the requirements for planning and execution of unexploded ordnance (UXO) response operations	Ammo 107

Table B-9. Competency Area: Master Planning

ID	KSA	Coverage area
76	Understand the purpose and use of master planning	Ammo 107
77	Skill necessary to ensure quantity distance arcs are annotated on installation master planning maps	Ammo 107
78	Understand the purpose and process for encroachment monitoring	Ammo 107
79	Ability to interpret location maps	Ammo 107

Table B-10. Competency Area: Site Planning		
ID	**KSA**	**Coverage area**
80	Understand the requirements for explosives safety site plans	Ammo 63, 107
81	Ability to review site plans and safety submissions for compliance with safety standards and applicable regulations, including DA Pam 385-61, DA Pam 385-64, and DA Pam 385-65	Ammo 78, 107
82	Ability to ensure licenses are properly prepared and they indicate the net explosives weight (NEW) authorized to be stored in a facility	Ammo 107
83	Ability to ensure waivers are properly prepared and they indicate the NEW authorized to be stored in a facility	Ammo 107
84	Skill in coordinating technical assistance from QASAS and ordnance engineers in siting and layout preparation of new and revised storage facilities	Ammo 63, 107
85	Skill to ensure all exposures are indicated on site plans	Ammo 63, 107
86	Ability to determine the correct separation distance and NEW for a given scenario	Ammo 63, 107
87	Understand the circumstances that require an explosives safety site plan (ESSP)	Ammo 107
88	Ability to recognize the requirement of construction considerations for explosives sites	Ammo 107
89	Ability to complete an explosives license	Ammo 107
90	Knowledge of the different types of deviation approvals	Ammo 107
91	Understand the purpose and use of an explosives site license	Ammo 107
92	Understand the minimum required levels of protection to facilities, material, and personnel	Ammo 63, 107
93	Knowledge of explosives safety siting and criteria references	Ammo 107
94	Understand the basic principles of QD	Ammo 63, 107
95	Knowledge of general QD terms and regulatory oversight	Ammo 63, 107
96	Knowledge of ES considerations in QD	Ammo 63, 107
97	Ability to explain the purpose of the four levels of protection	Ammo 63, 107
98	Ability to determine levels of protection and expected damage effects at each level	Ammo 63, 107





99	Familiarity with QD tables	Ammo 63, 107
100	Ability to determine basic QD compliance and safety distance measurement points	Ammo 63, 107
101	Application of explosives safety considerations in QD planning	Ammo 63, 107
102	Understand the QD explosives criteria and limits	Ammo 63, 107
103	Ability to determine the correct separation distance and NEW	Ammo 63, 107

Table B-11. Competency Area: Risk Management

ID	KSA	Coverage area
104	Understand the principles of ES deviation	Ammo 107
105	Ability to distinguish between the different types of deviation approvals, such as CCRs, CoRAs, and waivers	Ammo 107
106	Ability to ensure the risk assessment process is integrated into all A&E operations and reviewed at the appropriate level	Ammo 107
107	Understand the CoRA process, including approval authority, waivers, and exemptions	Ammo 107
108	Ability to complete a CoRA	Ammo 107
109	Understand the purpose and components of CCR conditions of use	Ammo 107
110	Understand the process for obtaining a CCR	Ammo 107
111	Understand the construction considerations in relation to risk management and deviation approvals	Ammo 63, 107

Tab C

Level 2 Competency Model





Level 2 competencies in explosives safety entail more advanced KSAs to perform explosives safety functions in specialized assignments including

- tactical and deployed assignments;
- base operations;
- industrial A&E activities, such as AMC depot and U.S. Army Corps of Engineers functions; and
- research, development, testing, and evaluation (RDT&E).

To support the Army's ES mission, CP-12 personnel working in these specialized functions require a more advanced knowledge and working ability in the following areas:

- Explosives Safety Program Management
- Explosive Materials
- A&E Transportation and Storage
- Demilitarization
- Electrical Safety
- A&E Accidents and Incidents
- Risk Management
- Site Planning
- Tactical and Deployed
- Industrial and RDT&E A&E.

Competency development at Level 2 is accomplished through a series of mandatory DL and IL courses specific to ES. This course scheme is designed to ensure CP-12 personnel with an ES role or responsibility have the knowledge and working ability necessary to support the Army's ES mission. Table C-1 lists the ES courses required to ensure a common skill level in specialized assignments. It is strongly recommended that these courses be completed in numerical order. Descriptions of these courses are in Tab D.

Table C-1. Explosives Safety Level 2 Training Requirements

Course	Requirement	Mode	Duration
Ammo 28-DL, Electrical Explosives Safety for Army Facilities	Mandatory	DL	8 hrs
Ammo 54-DL, Risk Management and Preparation of SOPs for Ammunition and Explosive Operations	Mandatory	DL	8 hrs
Ammo 68-DL, Military Munitions Rule	Mandatory	DL	4 hrs
Ammo 99-DL, Application of U.S. Army Explosives Safety QD Principles	Mandatory (or Ammo-82[a])	DL	24 hrs
Ammo 100-DL, U.S. Army Explosives Safety Site Planning Course	Mandatory (or Ammo-82[a])	DL	16 hrs
Ammo 101-DL, Tutorial for DDESB QD Calculator	Mandatory	DL	8 hrs
Ammo 103-DL, Explosives Safety Siting (ESS) and Army Site Submission Electronic Tool (ASSET)	Mandatory	DL	8 hrs
Ammo 110, Advanced Explosives Safety Management[b]	Mandatory	IL	32 hrs





Ammo 111, Explosives Safety in Tactical Environments[c]	Mandatory	IL	8 hrs
Ammo 112-DL, Explosives Storage Safety[d]	Mandatory	DL	20 hrs
Total required hours[e]			132 hrs

[a] Ammo 82, U.S. Army Explosives Safety Quantity Distance and Site Planning, is an optional replacement for the Ammo 99-DL and Ammo 100-DL requirement. If this classroom option is selected, required course time will increase by approximately 40 hours.

[b] Ammo 110, Advanced Explosives Safety Management, provides advanced principles and practices for personnel with roles and responsibilities in explosives safety management. This course is currently under development, with publication anticipated by Q4 FY13.

[c] Ammo 111, Explosives Safety in Tactical Environments, is required for all CP-12 personnel with an ES role or responsibility to provide requisite knowledge in the event they are deployed to provide ES support to tactical operations. This course is currently under development, with publication anticipated by 4QFY13.

[d] Ammo 112, Explosives Storage Safety, provides safety professionals with an overview of storage safety principles. This course is currently under development, with publication anticipated by 4QFY13.

[e] Total required hours is an estimate based on average student participation times and projections for courses under development. This estimate may be adjusted following new course development and pilot testing.

In addition, CP-12 personnel with ES roles and responsibilities in industrial, RDT&E, and munitions response missions and function, primarily at AMC, Army Test and Evaluation Command (ATEC), or U.S. Army Corps of Engineers (USACE), must also complete training designed to provide requisite knowledge, skills, and abilities in these areas. Table C-2 outlines additional training requirements for personnel working in these areas. It is strongly recommended that these courses be completed in numerical order.

Table C 2. Additional Requirements for CP-12 Personnel with Explosives Safety Roles and Responsibilities in Industrial, RDT&E, and Munitions Response Missions and Functions

Course	Requirement	Mode	Duration
Ammo 87, Military Munitions Response Program (MMRP)	Mandatory for CP-12s with responsibility for USACE munitions remediation	DL	4 hrs
Ammo 90, Munitions Response Site Prioritization Protocol (MRSPP)	Mandatory for CP-12s with responsibility for USACE munitions remediation	DL	4 hrs
Ammo 97, Munitions History Program (MHP)	Mandatory for CP-12s with responsibility for USACE munitions remediation	DL	4 hrs
Ammo 113, Explosives Safety in RDT&E and Industrial Environments[a]	Mandatory for CP-12s in AMC and ATEC ES positions	IL	8 hrs
Total required hours			20 hrs

[a] Ammo 113, Explosives Safety in RDT&E and Industrial Environments, is currently under development, with publication anticipated in 4QFY13.

The remainder of this section defines the specific ES KSAs required for CP-12s working in specialized assignments at the advanced level. KSAs are categorized according to identified Explosives Safety competency areas. The coverage area field identifies the course for each KSA.





Table C-3. Competency Area: Explosives Safety Program Management		
ID	**KSA**	**Coverage area**
112	Ability to measure, audit, and evaluate the effectiveness of ES accident prevention programs	Ammo 110
113	Understand the roles, responsibilities, functions, and authorities for ES and ammo personnel including QASAS, AWOs, Master Planners, Safety Personnel, Ammo Managers, LARs, and fire and environmental personnel	Ammo 110

Table C-4. Competency Area: Explosive Materials		
ID	**KSA**	**Coverage area**
114	Understand the quality assurance practices associated with conventional munitions, including condition codes, data cards, suspension, restrictions, defense source registry (DSR) cards, and defect codes	Ammo 110
115	Understand the conventional ammunition radiation hazards, including radiation aspects of conventional ammunition components and associated hardware	Ammo 110
116	Ability to employ processes for dealing with MPPEH and provide guidance on proper identification and disposition of material documented as explosives hazard (MDEH) and material documented as safe (MDAS), including identifying, marking, decontaminating, storing, and disposing of explosive and hazardous materials	Ammo 110
117	Ability to identify hazards associated with ICM and DU ammunition	Ammo 110
118	Ability to identify and communicate foreign and captured ammunition considerations	Ammo 110
119	Ability to implement the Military Munitions Rule (MMR), including procedures for compliance and managing waste munitions	Ammo 68
120	Knowledge of non-DoD A&E safety requirements	Ammo 110
121	Ability to communicate the requirements for approving use of non-standard ammunition and to provide guidance on safe practices for oversight, storage, handling, use, and destruction of non-standard ammunition (NSA), including foreign ammunition, test ammunition, altered ammunition, commercial off-the-shelf, unacceptable production, and suspended/ and restricted material	Ammo 110
122	Knowledge of inherent issues associated with non-DoD A&E	Ammo 110
123	Ability to communicate the requirements for rocket motor safety	Ammo 110

124	Ability to communicate the requirements for warhead safety	Ammo 110
125	Ability to communicate the requirements for fuse safety	Ammo 110
126	Knowledge of processes for ammunition authorizations, requests, issues, field accountability, sub-unit turn-ins, reconciliation, and the amnesty program	Ammo 110

Table C-5. Competency Area: A&E Transportation and Storage

ID	KSA	Coverage area
127	Knowledge of governing regulations for safety and security of A&E in storage	Ammo 12, 112
128	Knowledge of DOT and DoD regulations for standard packaging, marking, labeling, and transportation	Ammo 110
129	Knowledge of ammunition supply operations	Ammo 12, 112
130	Ability to conduct storage site inspection and compliance monitoring	Ammo 110
131	Knowledge of storage facility licensing requirements	Ammo 110
132	Knowledge of wholesale storage operations at the depot level	Ammo 12, 112
133	Understand the applications for A&E storage administration and documentation	Ammo 12, 112
134	Ability to read storage drawings and planographs	Ammo 12, 112
135	Ability to employ and communicate safe storage practices/procedures	Ammo 12, 112
136	Ability to communicate fire prevention requirements for A&E facilities	Ammo 12, 112
137	Understand the administrative methods for clearing ammunition lots for shipment	Ammo 12, 112
138	Knowledge of ammunition shipment suspension and restriction controls	Ammo 12, 112
139	Knowledge of inspection SOPs for outbound and incoming A&E shipments	Ammo 12, 112
140	Ability to employ and communicate safe transportation practices and procedures	Ammo 110
141	Knowledge of military preservation, packaging, and unitization procedures	Ammo 110
142	Ammo management information systems, including Total Ammunition Management Information System (TAMIS)	Ammo 110
143	Ability to communicate materials handling requirements	Ammo 110
144	Knowledge of the Ammunition Peculiar Equipment (APE) Program	Ammo 110





145	Knowledge of conditions for safe storage in tactical live training areas, forward arming and refueling points (FARPs), and uploaded vehicles	Ammo 110
146	Ability to communicate/process exemption requests for hazardous material (HAZMAT) shipments	Ammo 110

Table C-6. Competency Area: Demilitarization

ID	KSA	Coverage area
147	Knowledge of methods, procedures, and techniques for performing ammunition demilitarization	Ammo 68, 90
148	Ability to communicate operational safety for demilitarization operations	Ammo 68, 90
149	Knowledge of environmental requirements for demilitarization	Ammo 68
150	Knowledge of demilitarization technology and materials	Ammo 68
151	Knowledge of range SOPs for demilitarization	Ammo 68
152	Knowledge of certification of disposal operations (CODO)	Ammo 68
153	Knowledge of demilitarization operations, including storage and handling of MPPEH, MDEH, and MDAS	Ammo 90

Table C-7. Competency Area: Electrical Safety

ID	KSA	Coverage area
154	Ability to employ and communicate procedures for inspecting, testing, and documenting electrical safety aspects to A&E storage and operating facilities	Ammo 28
155	Ability to ensure lightning protection and ground system inspections are conducted in accordance with applicable regulations	Ammo 28
156	Knowledge of potential interface with equipment and systems that may compromise the safety of A&E	Ammo 28
157	Knowledge of potential sources of static electricity and control measures	Ammo 28
158	Ability to identify hazards associated with EEDs	Ammo 28
159	Knowledge of the principles of lightning generation and its effects on equipment and structures	Ammo 28
160	Understand Army guidance and National Fire Protection Association standards for lightning protection	Ammo 28
161	Understand the general principles of lightning conductors, bonding, and grounding systems	Ammo 28

162	Understand lightning protection principles and electrical processes and requirements	Ammo 28
163	Ability to review lightning protection designs for compliance with standards	Ammo 28
164	Ability to approve lightning protection designs	Ammo 28
165	Ability to analyze and apply HERO standards to A&E operations	Ammo 28
166	Understand grounding and bonding systems for high hazard areas	Ammo 28
167	Knowledge of grounding and bonding for test and evaluation	Ammo 28
168	Ability to advise on design of grounding, bonding, and lightning protection	Ammo 28

Table C-8. Competency Area: A&E Accidents/Incidents

ID	KSA	Coverage area
169	Knowledge of accident notification, investigation, and procedures	Ammo 110
170	Understand the classes of ammunition malfunctions and reporting processes to be followed after a suspected ammunition malfunction	Ammo 110
171	Ability to communicate requirements for planning	Ammo 110

Table C-9. Competency Area: Risk Management

ID	KSA	Coverage area
172	Understand the principles of ES deviation and the different types of deviation approvals, including CCRs, CoRAs, and waivers	Ammo 54
173	Ability to employ the CoRA process, including approval authority	Ammo 54
174	Understand the purpose and components of CCR conditions of use	Ammo 54
175	Ability to identify and communicate construction considerations in relation to RM and deviation approvals	Ammo 54
176	Ability to communicate and employ explosives quantity distance principles necessary to provide the minimum required levels of protection to facilities, material, and personnel, including levels of protection and expected damage effects at each level	Ammo 54, 99
177	Ability to measure, audit, and evaluate the effectiveness of ES accident prevention programs	Ammo 54
178	Knowledge of RM for explosive research and development	Ammo 54
179	Knowledge of RM for explosive test and evaluation	Ammo 113
180	Knowledge of risk mitigation and management for high hazard areas	Ammo 54
181	Ability to design a RM plan for RDT&E operations	Ammo 113





Table C-10. Competency Area: Site Planning		
ID	**KSA**	**Coverage area**
182	Ability to define and employ requirements for ESSPs	Ammo 99, 100, 103
183	Ability to ensure compliance with safety standards and applicable regulations	Ammo 100, 103
184	Working knowledge of license and waiver preparation and review procedures	Ammo 100, 103
185	Ability to determine separation distance and NEW	Ammo 100, 103
186	Ability to communicate requirements for construction considerations for explosives sites	Ammo 99, 100, 103
187	Knowledge of types of deviation approvals	Ammo 100, 103
188	Ability to determine and communicate minimum required levels of protection to facilities, material, and personnel	Ammo 100, 103
189	Knowledge of explosives safety siting, criteria references, and limits	Ammo 100, 103
190	Ability to employ the principles of QD	Ammo 100, 101, 103
191	Working knowledge of QD terms and regulatory oversight	Ammo 100, 101, 103
192	Knowledge of levels of protection and expected damage effects at each level	Ammo 99, 100, 101, 103
193	Ability to determine and communicate QD compliance and safety distance measurement points	Ammo 99, 100, 101, 103
194	Ability to decipher QD tables	Ammo 99, 100, 101
195	Knowledge of explosives safety considerations in QD planning	Ammo 99, 100, 101, 103
196	Working knowledge of master planning purpose and use	Ammo 100
197	Knowledge of SOPs for encroachment monitoring	Ammo 100
198	Understand DA Pam 385-63 and siting for ranges and higher hazard operations	Ammo 110
199	Ability to use the ESS Toolkit and Site Planner software and the ASSET applications to develop an ESSP package and facilitate the processing and tracking of the package as it progresses through the approval process	Ammo 100, 103

Table C-11. Competency Area: Tactical/Deployed		
ID	**KSA**	**Coverage area**
200	Ability to manage A&E accident and incident response to in-theater operations, including SOPs for notification and investigation, supporting information, ammunition malfunction classes, reporting, and trend analysis	Ammo 111
201	Knowledge of ESPM in-theatre responsibilities	Ammo 111
202	Ability to communicate and coordinate Army ES principles and procedures to multi-national personnel	Ammo 111
203	Ability to ensure compliance with ES regulations and as a means for providing soldier and civilian training in tactical environments	Ammo 111
204	Ability to communicate A&E procedures necessary to address theater-unique hazards	Ammo 111
205	Knowledge of A&E safety requirements for host nation (HN), North Atlantic Treaty Organization (NATO), Status of Forces Agreements (SOFAs), and multinational coalitions	Ammo 111
206	Ability to support establishment of A&E safety requirements in SOFAs and Host Nation Support Agreements, and to ensure compliance	Ammo 111
207	Ability to assess applicability of HN and foreign military A&E safety requirements to Army operations and ensure compliance	Ammo 111
208	Ability to communicate A&E safety requirements to commanders and staff in tactical and deployed conditions	Ammo 111
209	Ability to ensure in-theatre safety issues and concerns are addressed at all levels and based on appropriate Army regulations, DoD regulations and directives, and applicable laws	Ammo 111
210	Ability to advise ES requirements at all brigade combat team-level military decision making process (MDMP) briefings and battalion and brigade combat team-level field training events	Ammo 111
211	Ability to employ initiatives designed to enhance awareness and leader engagement on ES accident prevention and composite RM applications in-theatre	Ammo 111
212	Ability to plan, prepare, and execute ES requirements in all operations, including combat, humanitarian, contingency, and peace-keeping operations	Ammo 111
213	Ability to ensure continuity of effort within the area of operation of all ES programs	Ammo 111





214	Ability to assess subordinate programs, develop additional duty safety personnel, and provide technical consultation to ensure implementation of the command's ES program in tactical environments	Ammo 111
215	Knowledge of joint NATO and international A&E standards	Ammo 111
216	Ability to employ master planning and encroachment monitoring to in-theatre operations	Ammo 111
217	Ability to review in-theatre design and construction plans for explosive sites for proper safety controls	Ammo 111
218	Ability to review in-theatre explosives location maps to monitor encroachment within ESQD and ensure required explosives safety site plans, submissions, and explosives licenses are accomplished	Ammo 111
219	Ability to apply ESSPs, licenses, and waivers to in-theatre operations	Ammo 111
220	Ability to apply site approval processes to in-theatre operations	Ammo 111
221	Ability to review site plan submissions to ensure licensing is updated and approved at the appropriate level in-theatre operations	Ammo 111
222	Ability to coordinate and advise personnel in tactical and deployed environments on approval of A&E licenses, site plans, safety submissions, and A&E facility designs	Ammo 111
223	Ability to ensure plans and designs comply with Army and HN safety standards	Ammo 111
224	Ability to apply QD terms and categories of protection to in-theatre operations	Ammo 111
225	Ability to interpret QD tables and apply to in-theatre site planning and assessment	Ammo 111
226	Ability to determine QD compliance and safety distance measurement points to unique requirements of in-theater operations	Ammo 111
227	Ability to apply the principles of ES deviation, including RM and processes for completing a CoRA and obtaining a CCR to in-theatre operations	Ammo 111
228	Ability to review and coordinate CoRAs according to AR 385-64 in-theatre operations	Ammo 111
229	Knowledge of types of ammunition facilities, structures, and ports	Ammo 111
230	Understand the criteria for A&E transportation routes	Ammo 111
231	Understand the safe practices for packing, transportation, and storage of ammunitions in tactical environments	Ammo 111

232	Ability to communicate procedures for uploading A&E to tactical storage areas	Ammo 111
233	Understand the principles and procedures for managing basic load ammo holding areas (BLAHAs) and ammo holding areas (AHAs)	Ammo 111
234	Ability to consult on the safe movement and storage of A&E at the brigade through the Army Service Component Command (ASCC) level in deployed environments	Ammo 111
235	Ability to ensure activities involving transportation and storage of A&E are monitored for compliance with applicable ES regulations and HN agreements in tactical environments	Ammo 111
236	Knowledge of UXO hazard awareness in-theater	Ammo 111

Table C-12. Competency Area: Industrial and RDT&E A&E

ID	KSA	Coverage area
237	Knowledge of the fundamental principles of ammunition production and maintenance operations	Ammo 113
238	Understand the general ammunition production hazards and safety procedures	Ammo 113
239	Ability to develop RM plans for A&E production and maintenance safety	Ammo 113
240	Understand the safety requirements specific hazardous locations	Ammo 113
241	Ability to employ the Hazard Analysis Working Group (HAWG) methodology to A&E operations	Ammo 54
242	Knowledge of OSHA regulation and 29 Code of Federal Regulations (CFR) 1910, and the implications for explosive safety	Ammo 113
243	Understand the process safety management (PSM) competencies, including explosives and blasting agents	Ammo 113
244	Understand the role of RDT&E and its inherently higher risk than production	Ammo 113
245	Understand the specific methods of research being performed in the assigned area of responsibility; key on possible chemical and physical interactions that may result in hazardous consequence	Ammo 113
246	Ability to closely monitor and evaluate RDT&E A&E being sent to the field for evaluation and ensure all proper paperwork and waivers are obtained prior to shipment	Ammo 113





247	Understand the methods for evaluating foreign A&E with an emphasis on safety and hazard analysis associated with each method	Ammo 113
248	Understand the unique hazards of milling and chemical wash-out procedures	Ammo 113
249	Understand the procedures for safety testing of munitions	Ammo 113
250	Understand the hazardous materials testing procedures and interpretation (explosives and propellants)	Ammo 113
251	Understand the explosive hazard classification required for RDT&E testing, analysis, and documentation processes	Ammo 99
252	Understand the requirements for weapons and ammunition safety certification processes, including those of other Services weapons safety boards	Ammo 113
253	Knowledge of RDT&E processes for in-service surveillance (life testing)	Ammo 113
254	Ability to develop RM plans for RDT&E safety	Ammo 54
255	Understand the special HAZMAT storage, special packing instructions, interim hazard classification requirements, and handling for new, untested, and experimental materials and items that may not have all properties known	Ammo 113
256	Understand the Military Munitions Response Program (MMRP) for evaluating areas potentially contaminated with military munitions and prioritize remediation actions	Ammo 87, 90
257	Ability to prioritize remediation actions for sites contaminated with military munitions	Ammo 87, 90
258	Understand the Munitions Response Site Prioritization Protocol (known as the Protocol) for assigning relative priority to Munitions Response Sites (MRS)	Ammo 90
259	Ability to gather data IAW the hazard evaluation modules (Explosives hazards, Chemical Warfare Materiel hazards, and Health hazards) of the Munitions Response Site Prioritization Protocol	Ammo 90
260	Understanding of the Munitions History Program (MHP) and associated recordkeeping requirements	Ammo 97
261	Ability to navigate within the MHP website, retrieve Depot Surveillance Records (DSR), and create new inspection records and data record headers	Ammo 97

Certificate Application Procedures

Tab D





Certificate Application Procedures

This section outlines the procedures for individual attainment of the CP-12 Explosives Safety Professional Certificate–Level 1, which was accredited by the American National Standards Institute (ANSI) on 6 June 2012. The purpose of this certificate is to recognize CP-12 Safety Professionals who possess general knowledge and understanding of explosives safety requirements. ANSI accreditation of the Level 2 certificate program will be finalized pending new course development and pilot testing.

Certificate Eligibility

All CP-12 Safety and Occupational Health professionals are eligible for the CP-12 Explosives Safety Professional Certificate–Level 1. The certificate application process is also open to other personnel who meet the requirements, as described below.

The following minimum requirements must be met to earn the Level 1 certificate:

1. Completion of the CP-12 Intern Program, OR possession of the ANSI accredited CP-12 Professional Safety and Occupational Health Certificate, OR, for CP-12 Safety Professionals in the 0803 or 1306 job series, approval of the appropriate functional proponent.
2. Completion of the following courses.
    a. Ammo 45 DL, Introduction to Ammunition
    b. Ammo 63 DL, U.S. Army Explosives Safety Familiarization
    c. Ammo 78 DL, Ammunition Publications
    d. Ammo 107 (IL or DL), Introduction to Explosives Safety Management for Safety Professionals.

Application Process

Requesting Individual

The requesting individual (applicant) takes the following steps to document requirements satisfaction and to be considered for the certificate:

1. Collects all applicable documentation, including
    a. a copy of his/her certification of completion of the CP-12 Intern Program, OR ANSI-accredited CP-12 Professional Certificate, OR , for CP-12 Safety Professionals in the 0803 or 1306 job series, a copy of the approval of the appropriate Functional Proponent; and
    b. certificates of completion for Ammo 45, Ammo 63, Ammo 78, and Ammo 107 or appropriate transcripts (ALMS or CP-12 certificate or ATRRS transcript).
2. Submits a memorandum requesting the Explosives Safety Professional Certificate–Level 1 to the ACOM Army Service Component Command (ASCC), and the Direct Reporting Unit (DRU) Safety Director for endorsement and validation. The memorandum must include:
    a. applicant's name,
    b. job title,
    c. pay plan,
    d. job series and grade,
    e. current organization, and
    f. a brief description of the applicant's current position.

Safety Director

Upon receipt, the ACOM/ASCCDRU Safety Director evaluates the application package and follows the following steps:

1. If the applicant has satisfied all certificate requirements, forwards the package to the CP-12 Functional Chief Representative (FCR) at safe.cp12cert@conus.army.mil.
2. If deficiencies with the application package are identified, reviews and rectifies with the applicant before forwarding to the CP-12 FCR.

CP-12 Functional Chief Representative

Upon receipt, the FCR will hold the package for review by the CP-12 Explosives Safety Professional Certificate–Level 1 Review Panel.

The Review Panel will convene twice a year.

1. The Review Panel will assess all applications to ensure all requirements have been met.
2. The FCR will notify the requesting individual of the decision to approve or, in the case of deficiencies, will request additional documentation.
3. The FCR will notify the Functional Representative and the Senior Safety Director of all approvals.
4. The FCR will enter the date of approval and certifying official into an historical record. This record will remain the authoritative source for approval.


IS THIS SAFE?

Course Descriptions

Tab E





This section provides summary descriptions for all Explosives Safety Courses that are aligned to the CP-12 Level 1 (core) and Level 2 (advanced) competency models.

Level 1 Courses

At the core level, courses are made available through the Joint Services Safety and Occupational Health Training Program at the USACR/SC and the Defense Ammunition Center training website. Level 1 course descriptions are presented in Table E-1.

Table E-1. Explosives Safety Level 1 Course Descriptions

Course	Description	Mode
Ammo 45, Introduction to Ammunition	Provides basic training in the safety and fundamental technical aspects of ammunition and explosives including characteristics of A&E, safe handling procedures, and ES requirements for the receipt, storage, maintenance, demilitarization, and issue of ammunition at U.S. Army installations.	DL
Ammo 63, U.S. Army Explosives Safety Familiarization	Covers four major topic areas regarding explosives safety: • Characteristics of propellant and explosives • Hazard classification • Quantity distance • General safety practices including fire prevention, facilities requirements, storage principles, SOPs, and hazard analysis.	DL
Ammo 78, Ammunition Publications	Describes the various publications used by all Services within DoD; provides familiarization in the purpose, content, and format of DoD, Army, Air Force, and Navy publications.	DL
Ammo 107, Introduction to Explosives Safety Management for Safety Professionals	Prerequisite is successful completion of Ammo 45, Ammo 63, and Ammo 78; covers the broad scope of ES competency areas, including Army ESPM, explosives materials, non-standard ammunition, A&E accidents and incidents, emergency response, A&E transportation and storage, electrical safety, site planning, and licensing.	IL or DL

Level 2 Courses

At the advanced level, courses are offered through the DAC, Directorate for Training. DAC provides ES and ammunition-related training through on-site mobile training teams (MTTs), accredited off-campus instruction (AOCI) facilities, and distance learning products. Table E-2 provides course descriptions for courses required to obtain a Level 2 Explosives Safety Certificate. Table E-3 provides descriptions for additional course requirements for personnel working in industrial, RDT&E and munitions response missions.

Table E-2. Explosives Safety Level 2 Course Descriptions

Course	Description	Mode
Ammo 28, Electrical Explosives Safety for Army Facilities	Provides specialized safety training for safety inspectors, engineering personnel, technicians, and contractors involved in maintaining, testing, inspecting, documentation, and other electrical safety aspects that apply to facilities that conduct operations involving ammunition or explosives.	DL
Ammo 54, Risk Management and Preparation of SOPs for Ammunition and Explosive Operations	Provides instruction for the preparation and review of ammunition and explosives SOPs in accordance with DoD, DA, and AMC regulatory requirements; includes a broad overview of hazard analysis and RM as it relates to ammunition and explosives operations.	DL
Ammo 68, Military Munitions Rule (MMR)	Provides consistent procedures for DoD Components to comply with the MMR and manage waste military munitions; Munitions Rule defines special requirements for the management of waste military munitions that are considered hazardous waste.	DL
Ammo 99, Application of U.S. Army Explosives Safety QD Principles	Provides instruction in the application of explosives QD principles to provide the minimum required levels of protection to facilities, material, and personnel; includes discussion on the various levels of protection, expected damage effects at each level, and interpretation of textual and tabular instructions for determining minimum separation distances or explosives limits; also includes discussion on the use of protective construction.	DL
Ammo 100, U.S. Army Explosives Safety Site Planning Course	Provides instruction on the types of information and documentation needed to successfully submit preliminary and final ESSPs; includes the transmittal letter, location and site maps, ESQD considerations, coordination with all appropriate installation activities, construction requirements, PES/ES QD paired relationships with the facilities being sited, and the approval process.	DL





Ammo 101, Tutorial for DDESB QD Calculator	Provides instruction on the use of the DDESB-approved Excel spreadsheet-based Automated QD Calculator; given a potential explosion site and exposed site relationship, the calculator accurately determines either the minimum required separation distance for any net explosives weight for quantity distance purposes (NEWQD), or given a separation distance, the maximum NEWQD limit.	DL
Ammo 103, Explosives Safety Siting (ESS) and Army Site Submission Electronic Tool (ASSET)	Provides instruction for using both the ESS Toolkit and Site Planner software and ASSET, where ASSET is a web-based application designed to assist the user in developing an ESSP package and facilitate the processing and tracking of the package as it progresses through the approval process; ASSET also guides the user through the creation of a site plan by prompting the user to answer questions and upload the information necessary to produce a complete and thorough ESSP package.	DL
Ammo 110, Advanced Explosives Safety Program Management	Upon development, this course will provide advanced principles and practices for personnel with roles and responsibilities in explosives safety management; all CP-12 personnel in a position with ES responsibilities will be required to take this course."	IL
Ammo 111, Explosives Safety in Tactical Environments	Upon development, all CP-12 personnel in a position with ES responsibilities will be required to take this course to ensure requisite knowledge to provide ES support to tactical operations.	IL
Ammo 112, Explosives Storage Safety	Upon development, this course will provide safety professionals with an overview of storage facilities and operations and the information necessary to interpret explosives safety requirements and recommend appropriate actions.	DL

Table E 3. Industrial, RDT&E and Munitions Response Level 2 Course Descriptions

Course	Description	Mode
Ammo 87, Military Munitions Response Program (MMRP)	Provides an introduction to the MMRP used by USACE to evaluate areas potentially contaminated with military munitions and prioritize remediation actions.	DL
Ammo 90 Munitions Response Site Prioritization Protocol (MRSPP)	Covers the MRSPP (known as the Protocol), which is a tool developed by DoD to assign a relative priority to Munitions Response Sites (MRS) by gathering data using three hazard evaluation modules: explosives hazards, chemical warfare materiel hazards, and health hazards.	DL
Ammo 97 Munitions History Program (MHP)	Provides extensive information to successfully navigate within the MHP website, retrieve DSRs, and create new inspection records and data record headers.	DL
Ammo 113, Explosives Safety in RDT&E and Industrial Environments	Upon development, this course will provide personnel with ES roles and responsibilities in industrial, RDT&E, and munitions response missions (primarily at AMC, ATEC, or USACE) with the requisite KSAs in these areas.	IL

Explosives Safety Support

Tab F





This section gives CP-12 personnel a quick reference to help in the following explosives safety areas:

- Training
- Technical requirements
- Accident and incident support
- Communities of practice
- Mobile applications
- Key explosives safety publications.

Training

1. U.S. Army Combat Readiness/Safety Center (USACR/Safety Center) training site, including information on the Joint Services Safety and Occupational Health training program.

   https://safety.army.mil/training/

2. Army Training Requirements and Resource System (ATRRS) site, including general information, ATRRS course catalog, training registration and tracking and support.

   https://www.atrrs.army.mil/

3. Army Training and Doctrine Command (TRADOC) Army training Help Desk.

   http://www.tradoc.army.mil/athd.htm

4. Defense Ammunition Center (DAC) training site, including complete course catalog, registration, and reporting requirements.

   http://ammo.okstate.edu/

5. Defense Ammunition Center YouTube channel provides ammunition and explosives educational and demonstrational videos.

   http://www.youtube.com/user/DefenseAmmoCntr

6. U.S. Army Corps of Engineers Learning Center (ULC) manages and implements proponent-sponsored Engineer Corps job-related and technical training.

   http://virtualcampus.usace.army.mil/

Technical Requirements

1. AmmoHelp, operated by the DAC Logistics Review and Technical Assistance Office (LRTAO), is an application that allows users to ask questions on any aspect of A&E management, operations, and use. Responses are normally provided by subject matter experts within 24 hours and a final response within 5 working days. Questions may be submitted.

   Online at https://dac.jmc.army.mil/AmmoHelp

   or by e-mail to dac.ammohelp@us.army.mil

2. USACR/Safety Center CP-12 Safety and Occupational Health Site, including policy, safety professional tools, and training guidance.

   https://safety.army.mil/cp12online/WelcomeOverview/tabid/1261/Default.aspx

3. U.S. Army Technical Center for Explosives Safety (USATCES) provides ES technical support, including information on accident investigation, site planning, hazard classification, and chemical agent safety. USATCES also manages the Technical Library for Explosives Safety.

   http://cj.okstate.edu/index.php/directorates/usatces

4. The Department of Defense Explosives Safety Board (DDESB) provides safety and technical support related to the development, manufacturing, testing, handling, transportation and storage of explosives, including chemical agents.

   http://www.ddesb.pentagon.mil/index.asp

5. The Munitions History Program (MHP), operated by the JMC, is an application that hosts among other programs, the Ammunition Surveillance Information System (ASIS) that allows users to access programs including

   a. Ammunition and Missiles Information Notices

   b. Storage and Outloading Drawings

   c. Hazard Classification of United States Military Explosives and Munitions (Yellow Book)

   d. Joint Hazard Classification System (JHCS)

   e. Defense Explosives Safety Mishap Analysis Module (ESMAM)





f. Explosives Safety Information (including letters, memo's, Defense Ammunition Center information, etc).

Request for access to MHP can be found at:

https://mhp.redstone.army.mil

Accident/Incident Support

1. *Army Accident Investigators Handbook* provides a concise, standard set of instructions and procedures to assist U.S. Army Accident Investigation (CAI/IAI) Boards. It is designed to be taken to the investigation site and used as a guide and data recording tool.

   https://safety.army.mil/LinkClick.aspx?fileticket=lkU4Fq0Yjg4%3d&tabid=342

2. ReportIt Loss Reporting System is the official Army accident reporting tool.

   https://reportit.safety.army.mil/

Communities of Practice

1. Ammunition Community of Practice is designed to provide support to the ammunition community and all Service warfighters to share business artifacts, exchange tacit knowledge, provide reach-back capability, solve problems, aid decision making, and generate organizational learning.

   https://acc.dau.mil/ammo

2. Army Knowledge Online (AKO) Ammunition Knowledge Network developed to foster collaboration and information sharing among soldiers and Army civilian personnel.

   https://www.us.army.mil/suite/page/271609

3. AKO HAZMAT Transportation Community of Practice developed to foster collaboration and information sharing among soldiers, Army civilians, and authorized contractors.

   https://acc.dau.mil/ammo

Mobile Applications

1. *DAC Yellow Book* provides the user in the field with a ready consolidated reference to basic data and regulatory criteria for hazard classification, physical security, marking, transportation and storage of conventional ammunition and explosives.
2. DAC *Ammo SCG* [storage compatibly group] is a game providing practice in storing ammo using storage compatibility groups.
3. DAC *ESQD Mobile* is modeled after the Explosives Safety Quantity Distance (ESQD) Calculator Excel Spreadsheet. This application can be used to calculate the hazard class and division (HD) 1.1 net explosive weight quantity distance (NEWQD) that can be stored in a potential explosion site (PES).

Key Publications

DoD Issuances

1. The official web site for DoD Issuances. Publications include catalogs, compendiums, directories, guides, handbooks, indexes, inventories, lists, modules, pamphlets, plans, regulations, series, standards, and supplements.

   http://www.dtic.mil/whs/directives/corres/pub1.html

Army Regulations

1. AR 75-1, *Malfunctions Involving Ammunition and Explosives*. Provides guidance, instruction, and responsibilities for reporting malfunctions involving ammunition and explosives.
2. AR 75-15, *Policy for Explosive Ordnance Disposal*, 22. Prescribes DA EOD policies, responsibilities, and procedures.
3. AR 190-11, *Physical Security of Arms, Ammunition, and Explosives*. Prescribes standards and criteria for the physical security of sensitive conventional arms, ammunition, and explosives, including non-nuclear missiles and rockets. Also prescribes policy, procedures, and standards, and assigns responsibilities for the effective implementation and application of physical security of AA&E.





4. AR 385-10, *The Army Safety Program*. Addresses explosive safety, particularly in Chapter 5.
5. AR 420-1, *Army Facilities Management*. Provides policies and responsibilities for conduct and management of facilities engineering, housing, fire and emergency services, and environmental support.

Army Pamphlets

1. DA Pam 385-1, *Small Unit Safety Officer/NCO Guide*. Provides guidance in applying policies and procedures and necessary information for managing a unit safety program.
2. DA Pam 385-10, *Army Safety Program*. Establishes guidance, functions, policies, and procedures for the Army Safety Program.
3. DA Pam 385-30, *Mishap Risk Management*. Provides guidance to assist users in implementing and integrating mishap risk management into all phases of Army operations.
4. DA Pam 385-40, *Army Accident Investigations and Reporting*. Provides accident and reporting procedures for various types of incidents to include explosives.
5. DA Pam 385-61, *Toxic Chemical Agent Safety Standards*. Describes the minimum safety criteria, guidance, and procedures for use in processing, handling, storage, transportation, disposal, and decontamination of chemical agents and updates Army guidance and implementing procedures for conducting chemical agent safety program in accordance with AR 385-10.
6. DA Pam 385-63, *Range Safety*. Establishes minimum requirements for Army and Marine Corps range safety programs. Also establishes standards and procedures for safe firing of ammunition, demolitions, lasers, guided missiles, rockets, and bombs.
7. DA Pam 385-64, *Ammunition and Explosives Safety Standards*. Prescribes Army policy on ammunition and explosives (military munitions) safety standards and implements the requirements of DoD 6055.09-M.
8. DA Pam 385-65, *Explosive and Chemical Site Plan Development and Submission*. Contains Army Safety Program implementation guidance.

Army Field Manuals

1. Field Manual (FM) 4-02.285 (FM 8-285), *Multiservice Tactics, Techniques, and Procedures for Treatment of Chemical Agent Casualties and Conventional Military Chemical Injuries*. Provides multiservice tactics, techniques, and procedures (MTTP) and is designed for use as a reference for trained members of the Armed Forces Medical Services and other medically qualified personnel on the recognition and treatment of chemical agent casualties and conventional military chemical injuries.
2. FM 4-30.1, *Munitions Distribution in the Theater of Operations*. Describes how munitions units provide munitions to the user. Include guidance on safety and risk management.
3. FM 4-30.13, *Ammunition Handbook: Tactics, Techniques, and Procedures for Munitions Handlers*. Provides ready reference and guidance for units and soldiers that handle munitions.
4. FM 4-30.16, *Multi-Service Tactics, Techniques and Procedures for Explosive Ordnance Disposal*. Provides guidance and procedures for the employment of an EOD force when operating in a joint capacity throughout the range of military operations.
5. FM 4-30.51, *Unexploded Ordnance* (UXO) *Procedures*. Prescribes the doctrine for dealing with the UXO hazards on the battlefield. The information in this manual is used to teach military personnel, DoD civilians, and contractors about UXO hazards.

Army Training Circulars

1. Training Circular (TC) 25-8, *Training Ranges*. Primary guide for installation range development plan (RDP) and for developing the Army Master Range Plan (AMRP).

Army Tactics, Techniques, and Procedures

1. Army Tactics, Techniques, and Procedures (ATTPs) 4-32, *Explosive Ordnance Disposal Operations.* Provides doctrinal guidance for explosive ordnance disposal procedures.





2. ATTP 4-32.16, ***EOD*** *Multi-Service Tactics, Techniques and Procedures for EOD*. Describes why EOD forces are an important part of the combined arms team throughout all phases of full spectrum operations and prescribes responsibilities for EOD forces in support of the Army, Joint Force, and subordinate commanders.

DoD Directives

1. Department of Defense Directive (DoDD) S-3325.01, *Foreign Materiel Program* (FMP). Describes DoD policies and procedures for managing and handling foreign munitions and explosive materials.
2. DoDD 4715.1E, *Environment, Safety, and Occupational Health (ESOH).* Establishes policies on ESOH to sustain and improve the DoD mission.
3. DoDD 4715.11, *Environmental and Explosives Safety Management on Operational Ranges within the United States*. Establishes policy for use and management of operational ranges within the United Sates and describes protection of DoD personnel and the public from explosive hazards.
4. DoDD 4715.12, *Environmental and Explosives Safety Management on Operational Ranges outside the United States*. Establishes policy for use and management of operational ranges outside the United States and describes protection of DoD personnel and the public from explosive hazards.
5. DoDD 5101.13E, *DoD Executive Agent for the Unexploded Ordnance Center for Excellence*. Establishes policies and assigns responsibility for centralized coordination for unexploded ordnance.
6. DoDD 5160.62, *Single Manager for Military Explosive Ordnance Disposal Technology and Training* (EODT&T). Provides policies and responsibilities for EODT&T.
7. DoDD 5160.65, *Single Manager for Conventional Ammunition* (SMCA). Provides policies and responsibilities for the SMCA.
8. DoDD 6055.9E, *Explosives Safety Management and the DoD Explosives Safety Board*. Updates policies, authorities, and responsibilities for DoD Explosives Safety Management (ESM) and authorizes the DoD Explosives Safety Board (DDESB) as a standing joint board.

DoD Regulation

1. DoD 4500.9-R, *Defense Transportation Regulation*, Chapter 205, "Transportation Protective Services (TPS)." Provides direction and procedures for transporting conventional arms, ammunition, and explosives (AA&E). See also the *Military Freight Traffic Unified Rules Publication–1*, which provides specific rules and responsibilities for the transport of munitions.

DoD Issuances

1. Department of Defense Instruction (DoDI) 4140.62, *Material Potentially Presenting an Explosive Hazard* (MPPEH). Provides DoD instruction, policy, and responsibilities for the management and disposition of material potentially presenting an explosive hazard.
2. DoDI 4145.26, *DoD Contractor's Safety Requirements for Ammunition and Explosives*. Provides guidance for implementing safety compliance responsibilities and authority.
3. DoDI 5100.76, *Safeguarding Conventional Arms, Ammunition, and Explosives* (AA&E). Establishes policy and responsibilities for uniform, worldwide standards for security of conventional AA&E.
4. DoDI 5160.68, *Single Manager for Conventional Ammunition* (SMCA): *Responsibilities of the SMCA, the Military Services, and the United States Special Operations Command* (USSOCOM). Specifies functional responsibilities and mission functions.
5. DoDI 6055.1, *DoD Safety and Occupational Health* (SOH) *Program*. Provides policies, procedures, and responsibilities for administering a comprehensive DoD SOH program.
6. DoDI 6055.16 w/Change 1, *Explosives Safety Management Program*. Prescribes procedures for the operation of the DoD ESMP for DoD military munitions and military toxic agents.





DoD Manuals

1. DoD 4145.26-M, *DoD Contractor's Safety Manual for Ammunition and Explosives*. Contains the minimum contractual safety requirements to support DoD A&E operations and objectives.
2. DoD 4160.28-M, in three volumes, *Defense Demilitarization: Program Administration, Demilitarization Coding*, and *Procedural Guidance*.
3. DoD 5100.76-M, *Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives*. Provides physical security guidance for the protection of DoD sensitive conventional AA&E.
4. DoD 6055.09-M, *DoD Ammunition and Explosives Safety Standards*, Volumes 1 through 8. Establishes explosives safety standards for DoD.

Joint Regulations

1. Army Regulation 75-14; OPNAVINST 8027.1G; MCO 8027.1D; AFR 136-8, *Inter-Service Responsibilities for Explosive Ordnance Disposal*. Delineates the explosive ordnance disposal (EOD) responsibilities of the Army, Marine Corps, Navy, and Air Force.
2. AR 385-63/MCO 3570.1C, *Range Safety*. Provides range safety policy for the Army and Marine Corps including establishment of range safety programs, risk management principles, and deviation authorities.

Soldier's Manuals

1. STP 9-55B12-SM-TG and STP 9-55B34-SM-TG, *Soldiers Manual and Trainer's Guide, MOS 55B, Ammunition Specialist, Levels 1 through 4*.

NATO

1. *Allied Ammunition Storage and Transport Publication 1* (AASTP-1). Establishes safety principles to be used as a guide between host countries and NATO forces in the development of mutually agreeable regulations for the layout of ammunition storage depots and for the storage of conventional ammunition and explosives.

Abbreviations





Appendix Abbreviations

This appendix provides a list of the abbreviations used in the handbook.

A&E ammunition and explosives
AA&E arms, ammunition, and explosives
ACOM Army Command
AHA Ammunition Holding Area
AKO Army Knowledge Online
ALSE aviation life-support equipment
AMC U.S. Army Materiel Command
AMC-R U.S. Army Materiel Command Regulation
ANSI American National Standards Institute
AOCI accredited off-campus instruction
APE Ammunition Peculiar Equipment
AR Army Regulation
ASCC Army Service Component Command
ASSET Army Site Submission Electronic Tool
ATEC U.S. Army Test and Evaluation Command
ATRRS Army Training Requirements and Resource System
AWO ammunition warrant officer
BLAHA basic load ammunition holding area
CAI/IAI U.S. Army Centralized Accident Investigation/Installation Accident Investigation
CAIRA Chemical Accident/Incident Response and Assistance
CCR certificate of compelling reason
CODO certification of disposal operations
CoRA certificate of risk acceptance

CP-12 — Career Program 12
CFR — Code of Federal Regulations
DA — Department of Army
DAC — U.S. Army Defense Ammunition Center
DDESB — Department of Defense Explosives Safety Board
DL — distance learning
DODD — Department of Defense directive
DODI — Department of Defense instruction
DODM — Department of Defense manual
DOT — Department of Transportation
DRU — Direct Reporting Unit
DSR — depot surveillance records
DU — depleted uranium
EED — Electro-explosive device
EOD — explosives ordnance disposal
ES — explosives safety
ESAV — explosives safety assistance visit
ESM — explosives safety management
ESMP — Explosives Safety Management Program
ESP — Explosives Safety Program
ESQD — explosives safety quantity distance
ESS — Explosives Safety Siting
ESSP — explosives safety site plan
ESTWG — Explosives Safety Training Working Group
FARP — forward arming and refueling point
FM — field manual
FORSCOM — U.S. Army Forces Command





HAWG — Hazard Analysis Working Group
HAZCOM — hazardous communication
HAZMAT — hazardous materials
HAZWOPER — Hazardous Waste Operations and Emergency Response
HERO — hazards of electromagnetic radiation on ordnance
HQDA — Headquarters, Department of the Army
ICM — improved conventional munitions
IL — instructor led
IMCOM — U.S. Army Installation Management Command
JMC — U.S. Army Joint Munitions Command
KSA — knowledge, skills, and ability
LAR — logistics assistance representative
LRTAO — Logistics Review and Technical Assistance Office
MDAS — material documented as safe
MDEH — material documented as explosives hazard
MDMP — military decision making process
MEC — munitions and explosives of concern
MHP — Munitions History Program
MMR — Military Munitions Rule
MMRP — Military Munitions Response Program
MOS — military occupational specialty
MPPEH — material potentially presenting an explosives hazard
MRS — Munitions Response Site
MRSPP — Munitions Response Site Prioritization Protocol
MTT — mobile training team
MTTP — multiservice tactics, techniques, and procedures
NATO — North Atlantic Treaty Organization

NEW — net explosives weight
NEWQD — net explosives weight for quantity distance
NGB — U.S. Army National Guard Bureau
NSN — national stock number
ODASAF — Office of the Director of Army Safety
OSHA — Occupational Safety and Health Administration
PAM — pamphlet
PES — potential explosive site
PSM — process safety management
QASAS — quality assurance specialist ammunition surveillance
QD — quantity distance
RDT&E — research, development, testing, and evaluation
RM — risk management
SAAS — Standard Army Ammunition Systems
SB — supply bulletin
SOFA — Status of Forces Agreement
SOH — safety and occupational health
SOP — standing operating procedure
TAMIS — Total Ammunition Management Information System
TM — technical manual
TRADOC — U.S. Army Training and Doctrine Command
USACE — U.S. Army Corps of Engineers
USACRC/SC — U.S. Army Combat Readiness/Safety Center
USADAC — U.S. Army Defense Ammunition Center
USATCES — U.S. Army Technical Center for Explosives Safety
UXO — unexploded ordnance

Department of the Army Civilian Corps Creed

I am an Army Civilian;
A member of the Army team

I am dedicated to our Army,
our Soldiers and Civilians

I will always support the mission

I provide stability and continuity during war and peace

I support and defend the Constitution of the United States
and consider it an honor to serve our Nation and our Army

I live the Army values of Loyalty, Duty, Respect,
Selfless Service, Honor, Integrity, and Personal Courage

I am an Army Civilian


U.S.ARMY