





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







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Foreword

The catastrophic nature of explosives accidents and the need to remain vigilant makes it imperative that the Army provide a robust and effective explosives safety program. Safety is the responsibility of every leader, Soldier, civilian and contractor; however, safety professionals have a direct responsibility for supporting the Army's explosives safety program. Explosives safety professionals are an integral component of the Army Safety Program and the Army's strategy for enhanced readiness and loss prevention.

The explosives safety professional provides commanders an invaluable and indispensible asset. Safety professionals help commanders establish and maintain a positive safety culture that is all about saving lives and preventing accidents. They develop and execute programs that outline organizational relationships and responsibilities for managing explosives safety, identifying and mitigating explosives risks, and ensuring compliance with explosives safety standards — standards that all too often were written in blood. One of the most challenging duties of safety professionals is managing the safety of ammunition and explosives commodities to maximize readiness of our warfighters and their ability to deliver lethality to the enemy while minimizing inherent risks. 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.

Just as ammunition and explosives activities are integral to the Army mission, safety professionals are a vital part of the commander's explosives safety management program. Commanders should ensure their explosives safety professionals are trained and certified commensurate with their job responsibilities, as outlined in this guide, and that they provide the appropriate level of expertise and support.

JEFFREY A. FARNSWORTH Brigadier General, US Army Director of Army Safety



I. Explosives Safety and the Role of the Safety Professional



As part of the profession of arms, many Career Program-12 safety professionals provide guidance and support for ammunition and explosives functions on a daily basis. Their responsibilities include safety functions associated with ammunition and explosives use, storage, transportation, production, surveillance, maintenance, research, testing, munition responses, demilitarization and disposal. Career Program-12 professionals are critical in fulfilling their roles as the focal point for the commander's explosives safety management plan.

When Army personnel use ammunition and explosives on ranges or in the field, safety professionals assist commanders by verifying explosives safety compliance and risk management are integrated into mission planning and execution. They also monitor operations involving ammunition and explosives to ensure adequate controls are in place and assist with ammunition and explosives-related accident investigations. These functions can be complex due to the large number and technical nature of explosives safety requirements.

Explosives safety responsibilities include preparing, staffing and submitting explosives licenses, safety site plans, waivers and exemptions, and/or reviewing these documents and providing related guidance. Safety professionals also participate in master planning and

construction design reviews for ammunition and explosives facilities and other sites exposed to ammunition and explosives hazards. Additionally, they must ensure safety inspections are completed as required and monitor ammunition and explosives loading and unloading operations.

For some operations, Career Program-12 professionals must provide commanders and leaders with even higher levels of explosives safety support. Specific examples include supporting small caliber munitions production, radiographic surveillance of bombs, energetic material research, developmental testing of ammunition, cleanup of military munitions at formerly used defense sites, and demilitarization and destruction of chemical munitions. For ammunition and explosives missions like these, safety professionals perform critical reviews of risk assessments and standing operating procedures. They also closely monitor compliance with quantity distance requirements and ensure plans and protective construction designs are appropriately reviewed. Department of Defense-required safety submissions are needed for these operations, and safety personnel should be involved in their development and coordination. As with all hazardous operations, emergency preparedness is another important function in which Career Program-12 professionals have an essential role.

Explosives safety is a vital part of the Army Safety Program and a core competency of Career Program-12 safety and occupational health professionals. Across the Army, Career Program-12 professionals are responsible for providing commanders with a wide range of support in this field and are key to mission accomplishment, including deployment worldwide to assist commanders in explosives safety.



II. The Commander's Role in Explosives Safety



As the senior individual responsible for explosives safety, commanders must:

- Establish an Explosives Safety Management Program (see appendix A for requirements)
- Appoint a qualified safety manager as the point of contact for all aspects of the Explosives Safety Management Program
- Ensure personnel who initiate and review explosives safety deviations are qualified to provide the commander with information needed to make an informed decision regarding risk acceptance
- Ensure operating, training and construction plans and budgets provide adequate resources to comply with Explosives Safety Management Program requirements and mitigate hazards per Army Regulation 385-10
- Ensure civilian and military personnel (supervisory and nonsupervisory) complete explosives safety training appropriate for their activities as required by Army policy and standards, including explosives risk management training for those responsible for the development and review of deviations and risk assessments, and periodic refresher training (see table 1-1, Department of the Army Pamphlet 385-64)
- Ensure procedures are developed and in place requiring personnel responsible for managing ammunition and explosives to keep current information on type and location of storage, and provide this information to safety and firefighting personnel
- Ensure procedures are developed and in place for adequate communication between safety, firefighting, security, emergency response and ammunition surveillance and storage personnel
- Ensure procedures are developed and in place for maintenance of current maps showing all explosives locations, with fire and chemical hazard symbols, and current facility response cards and notebooks for ammunition and explosives storage by fire station communication centers
- Ensure ammunition and explosives are stored only in licensed locations and quantities do not exceed amounts authorized on license

■ Maintain cognizance of the posture of the Explosives Safety Management Program and all explosives safety deviations with medium or higher residual risk and duration greater than 60 days through periodic briefings from the safety manager

III. What Commanders Should Expect from Explosives Safety Professionals



Explosives safety responsibilities for safety and occupational health professionals include:

- Develop and manage explosives safety programs, providing advice on arms, ammunition and explosives safety and risk management
- Ensure compliance with federal, DOD and Army explosives safety policies
- Serve as the point of contact for all Explosives Safety Management Program-related actions, including coordinating requirements with tenant unit commanders
- Prepare, staff and submit explosives safety deviation requests, explosives licenses, explosives safety site plans and safety submissions; review explosives safety deviation requests for completeness and accuracy prior to forwarding for approval; maintain a list of approved explosives safety deviations and advise incoming commanders of such plans for correcting situations that necessitate deviation
- Ensure all potential explosives sites and exposed sites, both military and civilian, are indicated on approved explosives safety site plans and submissions
- Ensure plans and protective construction designs for explosives manufacture, testing, storage, surveillance, maintenance, response actions, demilitarization and disposal facilities are reviewed for compliance with safety standards by appropriately trained personnel
- Ensure a safety inspection is conducted at least annually for all areas where ammunition and explosives related activities (e.g., production, handling, storage, use, maintenance, munitions response, demilitarization and disposal) routinely occur
- Review installation master plans and quantity distance compliance for planned facilities on existing ammunition and explosives sites, both prior to and after construction
- Review policies, SOPs and directives for compliance with explosives safety requirements

- Actively participate in installation master planning processes and annually review the master plan to ensure construction is not planned inside explosives safety quantity distance arcs
- Ensure procedures are developed and in place for maintaining fire and chemical hazard symbols current with ammunition and explosives stored at particular locations
- Ensure personnel responsible for managing ammunition and explosives keep current information on the type and location of ammunition and explosives storage and provide this information to safety and firefighting personnel
- Train personnel responsible for ammunition and explosives-related operations, including operational personnel like security personnel and firefighters, in fire and chemical hazard symbols, as well as precautions and procedures for fighting fires when ammunition and explosives is involved
- Establish adequate communications with firefighting, security, emergency response and ammunition surveillance and storage personnel
- Maintain current maps showing all explosives locations with fire and chemical hazard symbols
- Annually review the installation explosives location map to monitor encroachment within explosives safety quantity-distance and ensure required explosives safety site plans, submissions and explosives licenses are accomplished
- Periodically monitor selected ammunition and explosives-related activities to evaluate explosives safety and integration of risk management
- Assist commanders and staff with resolving explosives safety concerns associated with property known or suspected to contain munitions and explosives of concern
- Investigate and report ammunition and explosives accidents, incidents and mishaps and document/disseminate explosives safety lessons learned
- Brief command and staff as necessary to keep leadership informed of explosives safety requirements and issues, along with status of the commander's Explosives Safety Management Program

Safety is the responsibility of every leader, Soldier, civilian and contractor. In addition to Career Program-12 safety and occupational

health professionals, civilian Quality Assurance Specialists (Ammunition Surveillance) and Ammunition Warrant Officers (Military Occupational Specialty 910A) have specific responsibilities for supporting the Army's explosives safety program. Quality Assurance Specialist (Ammunition Surveillance) and Ammunition Warrant Officers provide technical assistance to commanders and safety managers in planning, administering and enforcing the explosives safety program. Further information on responsibilities for Quality Assurance Specialist (Ammunition Surveillance) and Ammunition Warrant Officers is provided in DA Pam 385-64.

IV. Qualifications for Explosives Safety Professionals



Career Program-12 and the Director of Army Safety have established two levels of explosives safety competency for Army safety professionals. Training and eligibility requirements for each level are explained below.

Competency Level 1

Level 1 training is required for all Army safety specialists, managers and safety engineers regardless of assignment, and is available to other safety and non-safety job series. Level 1 training provides general knowledge and understanding of explosives safety in the following competency areas:

- Explosives Safety Management Program
- Explosives materials
- Non-standard ammunition and explosives
- Explosives Safety Management Program transportation and storage
- Electrical safety
- Ammunition and explosives accidents and incidents
- Emergency response
- Master planning
- Site planning



Risk management

Competency development at Level 1 is accomplished through successful completion of four mandatory distance learning and/ or instructor led courses specific to explosives safety functions (see table 1), as well as through general safety management courses incorporated into the intern training program (and available to all safety careerists). Level 1 courses are available through the Joint Services Safety and Occupational Health Training Program at the U.S. Army Combat Readiness/Safety Center and Defense Ammunition Center training website (see appendix C).

Table 1. Level 1 core courses

Ammo 45 DL, Introduction to Ammunition (CERT) (DL, 8 hours) New ATRRS course number 9E-F67/920-F35 (DL)

Basic training in safety and fundamental technical aspects of ammunition and explosives, including characteristics, safe handling procedures and explosives safety requirements for receipt, storage, maintenance, demilitarization and issue of ammunition and explosives

Ammo 63 DL, U.S. Army Explosives Safety Familiarization (CERT) (DL 12 hours) New ATRRS course number 4E-F44/645-F28 (DL)

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

Ammo 78 DL, Ammunition Publications (CERT) (DL 6 hours) New ATRRS course number 4E-F62/645-F46 (DL)

Describes publications used by all DOD services; provides familiarization in the purpose, content and format of DOD, Army, Air Force and Navy publications

Ammo 107 DL, Introduction to Explosives Safety Management for Safety Professionals (CERT) (IL 32 hours or DL 16 hours) New ATRRS course number 4E-F26/431-F10 (DL)

Covers broad scope of explosives safety competency areas, including explosives safety program management, explosives materials, non-standard ammunition, ammunition and explosives accidents/incidents, emergency response, ammunition and explosives transportation and storage, electrical safety, site planning and licensing (Ammo 45, Ammo 63 and Ammo 78 are pre-requisites)





Explosives Safety Certificate

In June 2012, Career Program-12 earned approval from the American National Standards Institute for an accredited Professional Certificate in Explosives Safety-Level 1. This certificate distinguishes safety and occupational health professionals possessing general knowledge and understanding of explosives safety requirements. The certificate upholds ASTM E2659-09, Standard Practice for Certificate Programs, and is recognized nationally and internationally under the ISO 9000 (Quality) Management System. This certificate is open to all Career Program-12 safety and occupational health professionals and others who meet the minimum requirements described below.

- Possession of the American National Standards Institutel-accredited Career Program-12 Professional Safety and Occupational Health Certificate OR approval of the appropriate functional proponent for CP-12 safety professionals in the 0081, 0690, 0803 or 1306 job series. (For documentation requirements for intern programs completed prior to 2009, consult the Career Program-12 Functional Chief's Representative Cell at the U.S. Army Combat Readiness/Safety Center. This documentation must reflect the completion of Level 1 skills currently required for the Career Program-12 Safety and Occupational Health Professional Certificate.)
- Completion of the following Defense Ammunition Center courses: Ammo 45 DL, Introduction to Ammunition; Ammo 63 DL, U.S. Army Explosives Safety Familiarization; Ammo 78 DL, Ammunition Publications; and Ammo 107 (IL or DL), Introduction to Explosives Safety Management for Safety Professionals.
- Submission of all applicable documents showing requirements have been satisfied via memorandum through the Army command/Army service component command/direct reporting unit safety director for endorsement.
- Verification and approval from the Career Program-12 Explosives
 Safety Professional Certificate Review Panel that all requirements have been satisfied.





Competency Level 2

Level 2 (Advanced) training is required for Career Program-12 personnel with roles or responsibilities in explosives safety. It is mandatory only for those serving in an explosives safety position or assigned explosives safety duties, such as in tactical and deployed assignments, base operations, industrial ammunition and explosives activities, munitions response, and ammunition and explosives research, development, testing, and evaluation. Level 2 training provides advanced knowledge and working ability in the following areas:

- Explosives Safety Management Program
- Explosive materials
- Ammunition and explosives transportation and storage
- Demilitarization
- Electrical safety
- Ammunition and explosives accidents and incidents
- Risk management
- Site planning
- Tactical and deployed
- Industrial and RDT&E A&E
- Munitions response

Competency development at Level 2 is accomplished through a series of mandatory DL and IL courses (see table 2). This course structure is designed to ensure Career Program-12 personnel with an explosives safety role or responsibility have the knowledge and working ability necessary to support the Army's explosives safety mission. Level 2 courses are offered through the Defense Ammunition Center's Directorate for Training. Defense Ammunition Center provides explosives safety and ammunition-related training through onsite mobile training teams, accredited off-campus instruction facilities and DL products.



Table 2. Level 2 advance courses

Ammo 28-DL, Army Electrical Explosives Safety (CERT) (DL 8 hours) New ATRRS course number 4E-F33/645-F17

Instruction on the interpretation of guidance regulating the inspection, testing, documentation and management of Army electrical explosives safety applicable to explosives operating and handling facilities and storage areas. Course topics include identification of lightning protection system components, design criteria, and requirements for grounding, bonding, control of static electricity, and electrical equipment in hazardous (classified) locations; includes an overview of the hazards of electromagnetic radiation to ordnance

Ammo 54-DL, Risk Management and Preparation of SOPs for Ammunition and Explosives Operations (CERT) (DL 8 hours) New ATRRS course number 9E-F68/920-F36 (DL)

Instruction in preparation and review of ammunition and explosives SOPs in accordance with DOD, Department of the Army and Army Materiel Command regulatory requirements; includes a broad overview of hazard analysis and risk management as it relates to ammunition and explosives operations

Ammo 68-DL, Military Munitions Rule (MMR) (CERT) (DL 4 hours) New ATRRS course number 4E-F46/645-F30 (DL)

Provides procedures for DOD components to comply with the MMR and manage waste military munitions

Ammo 99-DL, Application of U.S. Army Explosives Safety Quantity-Distance (ESQD) Principles (CERT) (DL 24 hours) New ATRRS course number 4E-E65/645-F49 (DL)

Application of explosives QD principles to provide minimum required levels of protection; includes discussion on various levels of protection, expected damage effects at each level, interpretation of textual/tabular instructions for determining minimum separation distances or explosives limits, and use of protective construction

Ammo 100-DL, Army Explosives Safety Site Planning (ESSP) Course (DL 16 hours) New ATRRS course number 4E-F25/431-F9 (DL)

Instruction on types of information and documentation needed to successfully submit preliminary and final ESSPs.

Ammo 110 (TBD), Advanced Explosives Safety Management (IL 32 hours) Workshop

Advanced principles and practices for personnel with roles and responsibilities in explosives safety management

Ammo 112-DL, Explosives Storage Safety (CERT) (DL 8–10 hours) New ATRRS course number 4E-F28/645-F12 (DL)

Overview of storage facilities and operations and information necessary to interpret explosives safety requirements and recommend appropriate actions

Career Program-12 personnel working in tactical environments, whether deployed or in training, must complete Ammo 111, Explosives Safety in Tactical Environments (IL, 8 hours). Ammo 111 is a workshop and provides training to enable explosives safety professionals to support tactical operations.

In addition, Career Program-12 personnel with explosives safety roles and responsibilities in industrial, RDT&E, and munitions response missions and functions (typically at Army Materiel Command, Army Test and Evaluation Command or U.S. Army Corps of Engineers) must also complete training designed to provide requisite knowledge, skills and abilities in these areas. Table 3 outlines additional training requirements for these personnel.



Table 3. Additional requirements for Career Program-12 personnel with explosives safety roles and responsibilities in industrial, RDT&E, and munitions response missions and functions

Ammo 87, Military Munitions Response Program (MMRP) (DL 4 hours—mandatory for Career Program-12 personnel with responsibility for US Army Corps of Engineers munitions remediation)

Provides an introduction to the MMRP used by US Army Corps of Engineers to evaluate areas potentially contaminated with military munitions and prioritize remediation actions

Ammo 90, Munitions Response Site Prioritization Protocol (MRSPP) (DL 4 hours—mandatory for Career Program-12 personnel with responsibility for US Army Corps of Engineers munitions remediation)

Covers the MRSPP (known as the protocol), a tool developed by DOD to assign a relative priority to munitions response sites by gathering data using three hazard evaluation modules: explosives hazards, chemical warfare materiel hazards and health hazards

Ammo 97, Munitions History Program (MHP) (DL 4 hours—mandatory for Career Program-12 personnel with responsibility for US Army Corps of Engineers munitions remediation)

Provides extensive information to successfully navigate within the MHP website, retrieve depot surveillance records, and create new inspection records and data record headers

Ammo 113 (TBD), Explosives Safety in RDT&E and Industrial Environments (IL 8 hours—mandatory for Career Program-12 personnel in Army Materiel Command and Army Test and Evaluation Command explosives safety positions) Workshop

Provides personnel with explosives safety roles and responsibilities in industrial, RDT&E and munitions response missions (primarily at Army Materiel, Army Test and Evaluation Command or US Army Corps of Engineers) with the requisite knowledge, skills and abilities in these areas



Explosives Safety Certificate

Career Program-12 has identified advanced-level competency and training requirements for Safety and Occupational Health professionals working in specialized functional assignments with explosives safety responsibilities. To ensure personnel in these specialized functions have the knowledge and abilities they need to support and execute the Army's explosives safety program, Career Program-12 is developing a Level 2 Professional Certificate in Explosives Safety. Upon accreditation by American National Standards Institute, this certificate will distinguish and recognize Safety and Occupational Health professionals with advanced knowledge, skills and abilities in explosives safety.

The Level 2 certificate program will include a series of mandatory IL and DL courses in specialized explosives safety subject matter. Career Program-12 policy outlines requirements for issuance, retention and invalidation of the Level 2 Professional Certificate in Explosives Safety.

V. Keys to a Successful Explosives Safety Program



Commanders must provide leadership, focus and resources while ensuring safety professionals are actively participating in all facets of the explosives safety program. This section provides questions commanders should ask and identifies help available in assessing explosives safety programs.

Leadership

To ensure a successful explosives safety program, commanders should:

- Rely on the safety expertise of safety professionals in support of informed decision making
- Ensure safety professionals are involved in all planning and/or coordination of training events and/or contingency operations
- Support the Explosives Safety Management Program through funding, personnel and time
- Maintain open lines of communication with safety professionals through direct and unfiltered access by ensuring they are members of the commander's special staff
- Establish the organization's safety culture through personal example and decisive engagement

- Hold safety professionals accountable for performance of duties listed in position descriptions
- Expect safety professionals to identify and assess hazards and provide mitigation options for the commander's decision making process

The explosives safety professional

To ensure a successful explosives safety program, safety professionals should:

- Exploit explosives safety principles, methods and techniques in identifying and evaluating ammunition and explosives hazards, assessing risk and establishing mitigation strategies
- Apply knowledge of the principles, standards and techniques of safety and occupational health in managing, administering and operating an Explosives Safety Management Program and in the performance of administrative work concerned with explosives safety activities, including the development, implementation and evaluation of related program functions
- Maintain focus on supporting the customer and Army mission
- Ensure explosives safety assessments and recommendations are based on safety and occupational health principles and practices and appropriate Army regulations, DOD regulations and directives, Occupational Safety and Health Administration standards, and applicable federal law
- Use time with leadership effectively and keep leaders informed
- Resolve issues at the lowest level and prioritize those that need elevation
- Interface effectively with fellow staff members for day-to-day operations and be a team player
- Be visible
- Use pertinent elements of explosives safety techniques and analyses and staff assistance visits as tools for evaluating compliance with safety codes and regulations
- Be proactive, not reactive
- Participate in in-progress reviews and provide safety oversight

- Participate in decision making process briefings
- Pursue continuing education, obtain certifications appropriate for duties and responsibilities, and maintain required continuing education units (training and eligibility requirements for the Explosives Safety Certificate are listed in appendix C)
- Hold themselves accountable for performance of duties listed in the position description
- Participate in and observe exercises, operations and demonstrations to maintain familiarity with explosives safety hazards and risks
- Maintain professionalism



VI. Questions Commanders Should Ask



Commanders, especially new commanders, should ask the following questions concerning their explosives safety program.

- 1. Who on my staff is responsible for our Explosives Safety Management Program? What resources do they have to execute the Explosives Safety Management Program at all echelons, and are they empowered to manage those resources? What local governing document(s) guide our Explosives Safety Management Program, and from what regulations are they derived? Chapter 5 of AR 385-10, The Army Safety Program, discusses requirements for a commander's explosives safety program. Chapter 1 of DA Pam 385-64, Ammunition and Explosives Safety Standards, identifies requirements for an explosives safety program. The Explosives Safety Management Plan Development Guide aids commanders in developing written explosives safety management plans according to the Army Safety Program.
- 2. What policies/procedures/programs do we have to ensure all ammunition personnel are adequately trained and possess current qualifications? What process is in place to develop, write and review SOPs for explosives operations (i.e., who, what, when, where and why)?

Chapter 10 of AR 385-10 discusses safety training requirements. Table 1-1, DA Pam 385-64, lists specific required explosives safety courses. Forces Command Regulation 350-10, Training and Certification Program for Personnel Working in Ammunition Operations and Army Materiel Command AMC-R 350-4, Training and Certification Program for Personnel Working in Ammunition Operations, provide examples of training and certification programs.

(See the Defense Ammunition Center training website at http://ammo/okstate.edu/ for information on training courses.) DA Pam 385-64, paragraph 2-4 covers requirements for ammunition operation SOPs. AMC-R 700-107, Preparation of Standing Operating Procedures for Ammunition Operations, provides additional information.

3. Which of our facilities have an ammunition and explosives mission? What is the status of those facilities with regard to approved explosives site plans? Are they licensed? When were licenses reviewed, and what is the status of our installation/base map depicting ammunition and explosives locations withassociated QD arcs? Where is my copy?

AR 385-10, Chapter 5 covers requirements for site plans, Certificate

of Compelling Reason, etc. DA Pam 385-64, Paragraph 1-11 identifies requirements for installation maps and information required to be on them. DA Pam 385-64, Chapter 4 covers site plans. DA Pam 385-64, Chapter 5 covers explosives licenses. DA Pam 385-64, Chapter 8 explains QD arcs. DA Pam 385-65, Explosive and Chemical Site Plan Development and Submission, provides further information on properly developing site plans.

4. Of those facilities that deviate from explosives safety standards, what is the status of a deviation approval and risk acceptance document? Who has accepted the risk, is it the right level, and, in the case of new construction, who has approved a Certificate of Compelling Reason?

AR 385-10, Chapter 5 covers requirements for site plans, Certificates of Compelling Reason, etc. DA Pam 385-30, Mishap Risk Management, covers deviations and Certificates of Compelling Reason. Although it has been stated this piece of paper doesn't make you any "safer," it does provide the appropriate level of command the awareness of potential risks they are accepting. By knowing the risks, commanders have the opportunity to reduce, mitigate or emove potential threats to their personnel.

- 5. What planned/ongoing/new construction or modifications do we have that impact or are impacted by explosives safety considerations? AR 385-10, Chapter 5 covers requirements for site plans, Certificates
 - AR 385-10, Chapter 5 covers requirements for site plans, Certificates of Compelling Reason, etc. DA Pam 385-64, Chapter 8 covers QD arcs. DA Pam 385-64, Chapter 16 covers construction.
- 6. When was the last DA (or other Army headquarters) explosives safety review? What were the results (any pending actions)? What is our ammunition and explosives facility inspection program? What Army deficiencies affect explosives safety and how are they tracked/prioritized?
 AR 385-10, Paragraph 5-8 discusses DA explosives safety reviews.
- 7. What local governing document guides execution of our amnesty program (i.e., where are our collection points, who checks them, and how often are they checked)?

 DA Pam 710-2-1, Paragraph 11-19 covers amnesty program setup and execuation. DA Pam 385-64, Paragraph 2-18 addresses Army Ammunition and Explosives Amnesty Program requirements.
- 8. If we were to have an ammunition and explosives mishap, what plan do we execute (i.e., notification checklist, evacuation procedures, recall procedures, unexploded ordnance/explosive ordnance disposal support)? How does our community relations program interface beyond the installation boundary? Which facilities are governed by 40 Code of Federal Regulations/

Resource Conservation and Recovery Act/Waste Munitions Program? What is the status of Environmental Protection Agency licenses for storage and treatment of waste munitions? AR 385-10, Chapter 3 provides accident investigation and reporting. AR 420-1, Army Facilities Management, Section IX identifies requirements for emergency response plans to ammunition and explosives incidents. AR 420-1, Appendix S gives examples of MOAs with local firefighters. DA Pam 385-40, Army Accident Investigations and Reporting, outlines ammunition and explosives accident/incident reporting. DA Pam 385-64 is populated with ammunition and explosives mishap response requirements and presents requirements for emergency planning and the Waste Munitions Program. DA Pam 385-64, 6-20 discusses requirements for emergency planning, DA Pam 385-64, Chapter 18 discusses the Waste Munitions Program. Defense Environmental Network and Information Exchange is another useful resource.

9. What keeps me out of the media spotlight (for explosives safety and liability for items addressed above)? Implement the required safety controls. Listen to advice given to you by your ammunition professionals (safety, surveillance, managers, logistics assistance representatives and ammunition technician warrants). These civilian/military subject matter experts are trained and tasked by DOD and Army regulations to preserve assets that enable mission accomplishment, specifically personnel and facilities under your watch.

Help available to commanders

Help is available to commanders in assessing their explosives safety program. The Explosives Safety Assistance Visit Program is a joint initiative between the Defense Ammunition Center and Office of the Director of Army Safety. An Explosives Safety Assistance Visit is an evaluation of required explosives safety program elements to ascertain the effectiveness of an installation's Explosives Safety Management Program. Observations and/or recommendations are noted in a report solely provided to the installation as a tool to assess and improve the overall program. Installations are not required to respond to recommendations from an Explosives Safety Assistance Visit observations/recommendations are for the installation's use for continuous improvement.

If your organization has any questions regarding ammunition or explosives safety, Defense Ammunition Center will make every effort to assist in their resolution. Examples of assistance include site plan requirement determinations, site plan development, explosives operation evaluations, QD evaluation, lightning protection system adequacy, etc. An Explosives Safety Assistance Visit can also help prepare your organization for the safety portion of an HQDA logistics

review and Technical Assistance Office review. If you need an Explosives Safety Assistance Visit to assess or enhance your explosives safety program, contact Defense Ammunition Center at (918) 420-8745 or DSN 956-8745.

Help is also available to commanders in developing and assessing the adequacy of their Explosives Safety Management Program. The Explosives Safety Management Plan Development Guide, which aids commanders in developing written Explosives Safety Management Programs according to the Army Safety Program, is available on the Army Explosives Safety Knowledge Network under "Helpful Resources-Guides/Handbooks."

Additional sources for Explosives Safety support are in Appendix C.



Appendix A. Explosives Safety Management Programs

As the senior individual responsible for explosives safety, commanders are required to establish an Explosives Safety Management Program that:

- Prescribes requirements, responsibilities and procedures for complying with AR 385-10, DA Pam 385-30, DA Pam 385-64 and DA Pam 385-65, and specifically addresses organization and staffing, site planning, facilities conformance, emergency response, tenants, master planning, ranges, contractors, accident prevention program, facility maintenance, demilitarization/destruction, risk management, explosives safety issuances, records management, inspections/evaluations/audits, and training
- Addresses appointment of a qualified safety manager as the point of contact for management of the Explosives Safety Management Program
- Identifies safety responsibilities of all organizations (including tenants, covered by MOA) with ammunition and explosives missions and functions, and details requirements for creating an MOA or policy that outlines Explosives Safety Management Program requirements and responsibilities of both garrison and installation commanders and tenants
- Defines safety office direct access to the commander and lines of communication and reporting between the safety office and other organizations with an Explosives Safety function
- Prescribes responsibilities and procedures for knowledgeable and qualified personnel to develop, coordinate, review and approve site plans, safety submissions and facility designs
- Prescribes responsibilities, requirements and procedures that ensure qualified personnel develop, coordinate, review and approve explosives safety deviation requests as delineated in DA Pam 385-30 and provide the commander with essential risk data regarding deficient situations
- Charters and prescribes responsibilities, composition and procedures for local Explosives Safety council
- Prescribes processes for operational continuity
- Prescribes responsibilities, requirements and procedures for conducting audits/surveys to assess Explosives Safety Management Program compliance with AR 385-10 and assess compliance of

ammunition and explosives activities with DA Pam 385-64

 Prescribes responsibilities, requirements and procedures for investigation, reporting and analysis of ammunition and explosives mishaps

Appendix B. Deployment Considerations for Explosives Safety Professionals

Authority to deploy

Department of Defense Directive 1404.10 provides for involuntary assignment of civilian employees to emergency-essential positions as necessary to meet exigencies of the circumstances and when unforeseen contingencies prevent prior identification of those positions as emergency-essential. Army policy dictates that civilians will be used to support the military in carrying out their missions. Installations and activities will develop and implement plans required to support military contingency operations and all other levels of mobilization.

The Civilian Readiness Program ensures qualified civilian employees are available in adequate numbers and with adequate skills to meet worldwide mission requirements during periods of national emergency, mobilization, war, military crisis or other contingencies. An emergency-essential employee is an incumbent of an overseas position or an individual who would be sent overseas during a crisis situation. The position ensures success of combat operations or supports essential combat systems after mobilization, evacuation order or other military crisis.

Deployed safety professionals are emergency-essential employees. As such, deployed safety professionals must sign DD Form 2365, DOD Civilian Employee Overseas Emergency-Essential Position Agreement. Other requirements include an approved deployment common access card, approved SF-78, Certification of Medical Examination, and deployment-related medical and dental examinations and immunizations. Medical treatment is authorized while deployed. Commanders must integrate and document use of the civilian workforce in all types of operations and contingency plans and ensure civilian issues are addressed during execution. Positions classified as emergency-essential should be pre-identified prior to filling, with the position description/vacancy announcement annotated and conditions of employment clearly defined.

Safety professionals must meet the following criteria prior to deployment:

- Security clearance verification
- Passport (government and civilian)/visa/country clearance valid through deployment dates
- Current DOD civilian identification card reflecting Geneva
 Convention status with dates covering the entire deployment period
- Appropriate travel orders (Temporary Duty, Temporary Change of Station, North Atlantic Treaty Organization, etc.)
- DD Form 93, Record of Emergency Data
- Validated deployment criteria checklists
- Deployment packet as directed by Civilian Personnel Advisory Center
- Deployment training requirements for the particular theater
- Physical and medical standards per Army directives

Arrangements should be made to have the safety professional receive preventive dental treatment prior to deployment. Safety professionals should in/out process with their organization.

Duty hours

Authority for establishing and changing tours of duty is delegated to the commander of the organization employing civilian personnel and in accordance with theater-directed civilian work schedules. Although the normal workweek is 40 hours, safety professionals in support of or in deployment status may be assigned to different work hours. Notice must be given when employees are to be assigned to a different tour of duty or work week. Commanders must refer to Office of Personnel Management and Army guidelines for appropriate compensation.

Budget

Areas to consider when making budget decisions include:

- Designate salary for a 40-hour workweek, to include benefits and locality pay for region where the safety professional is normally employed
- Comply with regulations when requesting overtime (approval and funding); deployed budgets should include 196 hours of overtime as well as danger and hazardous duty pay; the theater may have a work schedule dictating normal workweek with overtime included, but the final decision for overtime rests with the immediate supervisor; danger

pay and hazardous duty pay (entitlements) may be paid, but are determined by the State Department and reviewed annually

- Temporary duty for training, continuing education and conferences
- Uniform purchase and appropriate patches; wearing of uniforms by civilians will be determined by the theater commander and provided free of charge, if required; per the director of contracting, government purchase cards may not be used to procure military uniforms for civilians
- Vehicles required to support the unit's missions
- Printing for publications and informational materials
- Professional items
- Safety education enhances Army operations and improves safety awareness through recognition and promotion of individual and organizational accident prevention measures; promotional materials such as posters, films and videos, technical publications, pamphlets, incentive items and related materials are proven, cost-effective safety awareness tools and, therefore, should be budgeted for and used at all levels to promote safety

Reporting responsibilities

The safety manager and/or safety officer are members of the commander's special staff. They report directly to the commander and manage the commander's safety program.

Clothing and equipment

The primary duty uniform for the safety professional in field, support and deployed environments will be the same as the organization, unless otherwise directed. When wearing a military uniform, compliance with AR 670-1, Wear and Appearance of Army Uniforms and Insignia, is required. The primary duty uniform in garrison is appropriate attire that supports the organization.

Recommended equipment

- Accident investigation kit
- Digital camera
- Video camera
- Global Positioning System



- Optic range finder
- Compass
- 100/25 foot measuring tape
- Pocket/universal toolkit with case
- Flashlight(s)
- Binoculars
- Night vision goggles
- General purpose tool bag
- Laptop computer(s), both Secure Internet Protocol Router and Non-Secure Internet Protocol Router
- Printer/scanner
- BlackBerry in garrison and cell phone while deployed
- Vehicle, tactical/General Services Administration
- Other uniform/equipment unique to the organization/ operation (Table of Allowances 50, Nomex, etc.)
- Transport cases, such as Pelican cases
- Safety Vest
- Appropriate office supplies
- Steel-toed safety footwear for use in garrison
- Appropriate transportation for conditions in the operating environment
- Hardhat
- Oxygen analyzer meter
- Other personal protective equipment, as required (respirator, clothing, etc.)
- Ballistic eye protection
- Sunglasses







Entitlements

Deployed safety professionals are entitled to the following while in support of overseas contingency operations:

- Government-provided legal assistance (limited to matters related to deployment, such as preparation of wills and powers of attorney and basic income tax assistance)
- Family care plan preparation assistance (installation provides legal and other assistance as needed)
- Base exchange and commissary privileges in theater
- Use of Family, Morale, Welfare and Recreation facilities and activities
- Inclusion in the unit's Family Readiness Group to ensure spouse/ family support while deployed
- Additional training to meet deployment requirements
- Eligible for and issued rapid fielding initiative equipment
- Medical/dental treatment as provided to military members, including free care for illness, disease or injury suffered during deployment

Civilians are provided compensation for deployments (foreign post differential pay and possibly eminent danger pay). Percentages are based upon the region they support, and all income is taxable.

Awards

Several options are available to recognize the accomplishments of safety professionals. This recognition may be honorary, such as an achievement medal, or monetary, such as a step increase. Information on these awards can be found in AR 672-20. Of special note are the following:

- The Global War on Terrorism Civilian Service Medal recognizes the contributions of civil service personnel in a foreign country designated by the military's Global War on Terrorism Expeditionary Medal criteria.
- The Office of the Secretary of Defense Medal for Valor recognizes acts of heroism or sacrifice with voluntary risk of personal safety in the face of danger on or off the job.
- The Secretary of Defense Medal for the Defense of Freedom recognizes the sacrifices of those injured or killed due to hostile action against the United States or while rescuing or attempting to rescue

any other employee or individual subjected to injuries suffered under such conditions.





Appendix C. Sources for Explosives Safety Support

Training

- USACRC training website, including information on the Joint Services Safety and Occupational Health training program https://safety.army.mil/training/
- Army Training Requirements and Resource System site, including general information, ATRRS course catalog, training registration and tracking and support https://www.atrrs.army.mil/
- Army Training and Doctrine Command (TRADOC) Army training Help Desk http://www.tradoc.army.mil/athd.htm
- Defense Ammunition Center training site, including complete course catalog, registration and reporting requirements http://ammo.okstate. edu/
- Defense Ammunition Center YouTube channel, which provides ammunition and explosives educational and demonstrational videos http://www.youtube.com/user/DefenseAmmoCntr
- US Army Corps of Engineers Learning Center manages and implements proponent-sponsored job-related and technical training. http://virtualcampus.usace.army.mil/

Technical requirements

- AmmoHelp, operated by Defense Ammunition Center is an application that allows users to ask questions on any aspect of ammunition and explosives management, operations and use. Responses are generally provided by subject matter experts within 24 hours, and a final response within five working days. Questions may be submitted online at https://mhp.redstone.army.mil/ or by email to usarmy.mcalester.usamc.list.dac-ammohelp@mail.mil
- USACR/Safety Center Career Program-12 (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
- The U.S. Army Technical Center for Explosives Safety provides explosives safety technical support, including information on accident investigation, site planning, hazard classification and chemical agent safety (USATCES also manages the Technical Library for Explosives Safety).

https://www3.dac.army.mil/es/usatces/

■ The Department of Defense Explosives Safety Board provides safety and technical support related to the development, manufacturing, testing, handling, transportation and storage of explosives, including chemical agents. https://www.ddesb.pentagon.mil/

Accident/Incident Support

- The USACR/Safety Center website provides users all necessary information and guidance for the expeditious and accurate reporting of Army accidents. https://safety.army.mil/accidentreporting/
- ReportIt Loss Reporting System is the official Army accident reporting tool. https://reportit.safety.army.mil/

Knowledge networks and communities of practice

■ Army Explosives Safety Knowledge Network provides a "one stop shop" for Soldiers and civilians. It supports the entire explosives safety community with information, resources and links to other needed sites.

https://www.us.army.mil/suite/page/683804

- Ammunition Community of Practice provides support to the ammunition community and all service warfighters by allowing them to share business artifacts, exchange tacit knowledge, provide reachback capability, solve problems, aid decision making, and generate organizational learning. https://acc.dau.mil/ammo
- Army Knowledge Online Ammunition Knowledge Network was developed to foster collaboration and information sharing among Soldiers and civilian personnel. https://www.us.army.mil/suite/page/271609
- AKO Hazardous Materials Transportation Community of Practice was developed to foster collaboration and information sharing among Soldiers, civilians and authorized contractors. https://acc.dau.mil/ammo

Mobile applications

http://itunes.apple.com https://play.google.com/store/



- Defense Ammunition Center Yellow Book provides a ready consolidated reference to basic data and regulatory criteria for hazard classification, physical security, marking, transportation, and storage of conventional ammunition and explosives.
- Defense Ammunition Center Ammo storage compatibility groups is a game providing practice in storing ammo using storage compatibility groups.
- Defense Ammunition Center explosives safety quantity-distance Mobile is modeled after the Explosives Safety Quantity Distance Calculator Excel Spreadsheet. This application can be used to calculate hazard class and division 1.1 net explosive weight quantity distance that can be stored in a potential explosives site.

Key publications

- AR 75-1, Malfunctions Involving Ammunition and Explosives. Provides guidance, instruction and responsibilities for reporting malfunctions involving ammunition and explosives.
- AR 75-14; Office of the Chief of Naval Operations Instruction 8027.1G;
 MCO 8027.1D; Air Force Regulation 136-8, Inter-Service Responsibilities for Explosive Ordnance Disposal. Delineates EOD responsibilities of the Army, Marine Corps, Navy and Air Force.
- AR 75-15, Policy for Explosive Ordnance Disposal, 22. Prescribes DA EOD policies, responsibilities and procedures.
- 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 arms, ammunition and explosives.
- AR 385-10, The Army Safety Program. Addresses explosives safety, primarily in chapter 5.
- AR 385-63/Marine Corps Order 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. Used in conjunction with DA Pam 385–63.
- 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.
- AR 600-20, Army Command Policy. Addresses Army-wide command

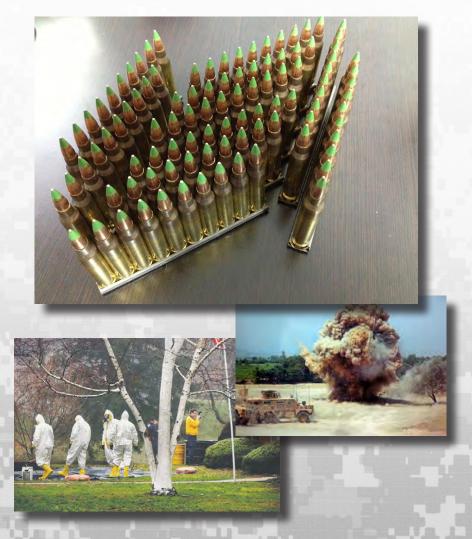
- AR 700-13, Worldwide Ammunition Logistics/Explosives Safety Review and Technical Assistance Program. Addresses policy and procedures for the Worldwide Ammunition Logistics/Explosives Safety Reviews and Technical Assistance Program.
- DA Pam 385-1, Small Unit Safety Officer/Non-Commissioned Officer Guide. Provides guidance in applying policies, procedures and necessary information for managing a unit safety program.
- DA Pam 385-10, Army Safety Program. Establishes guidance, functions, policies and procedures for the Army Safety Program.
- DA Pam 385-30, Risk Management. Provides guidance to assist users in implementing and integrating risk management into all phases of Army operations.
- DA Pam 385-40, Army Accident Investigations and Reporting. Provides accident and reporting procedures for various types of incidents, to include explosives.
- DA Pam 385-61, Toxic Army Chemical Agent Safety Standards. Describes minimum safety criteria, guidance and procedures for use in processing, handling, storage, transportation, disposal and decontamination of chemical agents and updates Army guidance and implementation procedures for conducting chemical agent safety programs in accordance with AR 385-10.
- 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.
- DA Pam 385-64, Ammunition and Explosives Safety Standards.
 Prescribes Army policy on ammunition and explosives safety standards and implements requirements of DOD 6055.09-M.
- DA Pam 385-65, Explosive and Chemical Site Plan Development and Submission. Contains Army Safety Program implementation guidance.
- ATP 4-30, Munitions Distribution in the Theater of Operations. Describes how munitions units provide munitions to the user; includes guidance on safety and risk management.
- ATP 4-30.1, Ammunition Handbook: Tactics, Techniques, and Procedures for Munitions Handlers. Provides ready reference and guidance for units and soldiers that handle munitions.
- Army Tactics, Techniques, and Procedures 4-32, Explosive Ordnance Disposal Operations. Provides doctrinal guidance for EOD procedures.

- 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 Army, Joint Force and subordinate commanders.
- Training Circular 25-8, Training Ranges. Primary guide for installation range development plan and for developing the Army Master Range Plan.
- Department of Defense Directive S-3325.01, Foreign Materiel Program. Describes DOD policies and procedures for managing and handling foreign munitions and explosives materials.
- DoDD 4715.1E, Environment, Safety, and Occupational Health. Establishes policies on Safety and Occupational Health to sustain and improve the DOD mission.
- 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 explosives hazards.
- 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 explosives hazards.
- DoDD 5101.13E, DOD Executive Agent for the Unexploded Ordnance Center for Excellence. Establishes policies and assigns responsibility for centralized coordination for unexploded ordnance.
- DoDD 5160.62, Single Manager for Military Explosive Ordnance Disposal Technology and Training. Provides policies and responsibilities for EOD technology and training.
- DoDD 5160.65, Single Manager for Conventional Ammunition.
 Provides policies and responsibilities for the Single Manager for Conventional Ammunition.
- DoDD 6055.9E, Explosives Safety Management and the DOD Explosives Safety Board. Updates policies, authorities, and responsibilities for DOD explosives safety management and authorizes DDESB as a standing joint board.
- DTR 4500.9-R, Defense Transportation Regulation, Chapter 205, Transportation Protective Services. Provides direction and procedures

for transporting conventional ammunition and explosives. See also the Military Freight Traffic Unified Rules Publication-1, which provides specific rules and responsibilities for the transport of munitions.

- DoDI 4140.62, Material Potentially Presenting an Explosive Hazard. Provides DOD instruction, policy and responsibilities for the management and disposition of material potentially presenting an explosive hazard.
- DoDI 4145.26, DOD Contractor's Safety Requirements for Ammunition and Explosives. Provides guidance for implementing safety compliance responsibilities and authority.
- DoDI 5100.76, Safeguarding Conventional Arms, Ammunition and Explosives. Establishes policy and responsibilities for uniform worldwide standards for security of conventional ammunition and explosives.
- DoDI 5160.68, Single Manager for Conventional Ammunition: Responsibilities of the SMCA, the Military Services, and the United States Special Operations Command. Specifies functional responsibilities and mission functions.
- DoDI 6055.1, DOD Safety and Occupational Health Program. Provides policies, procedures and responsibilities for administering a comprehensive DOD safety and occupational health program.
- DoDI 6055.16 w/Change 1, Explosives Safety Management Program.
 Prescribes procedures for operation of the DOD Explosives Safety
 Management Program for military munitions and toxic agents.
- DOD 4145.26-M, DOD Contractor's Safety Manual for Ammunition and Explosives. Contains minimum contractual safety requirements to support DOD ammunition and explosives operations and objectives.
- DOD 4160.28-M, in three volumes, Defense Demilitarization; Program Administration, Demilitarization Coding, and Procedural Guidance.
- DOD 5100.76-M, Physical Security of Sensitive Conventional Arms,
 Ammunition, and Explosives. Provides physical security guidance for protection of DOD sensitive conventional ammunition and explosives
- DOD 6055.09-M, DOD Ammunition and Explosives Safety Standards, volumes 1 through 8. Establishes DOD explosives safety standards.
- Soldier's Training Publication 9-55B12-Soldier's Manual-Trainers Guide and STP 9-55B34-SM-TG, Soldiers Manual and Trainer's Guide, MOS 55B, Ammunition Specialist, Levels 1 through 4.

- Allied Ammunition Storage and Transport Publication 1. Establishes safety principles to be used as a guide between host countries and NATO forces in the development of mutually agreeable regulations for layout of ammunition storage depots and storage of conventional ammunition and explosives.
- Army Safety Career Program-12 Explosives Handbook, September 2012.
- DA Safety and Occupational Health Career Field ANSI Accredited Career Program 12 Explosives Safety Professional Certificate-Level 1 Application Procedures.



GS 0018 Explosives Safety Career Path



Army Headquarters
TCES/DAC/JMC
HQDA

GS-15

Army Headquarters
RDTE/AMC Activity
TCES/DAC/JMC
HQDA
Division Corps
GS-14



RDTE/AMC Activity
USACE Dist/Div/Ctrs
TCES/DAC/JMC
Division Corps
Garrison, Other

GS-13

RDTE/AMC Activity
USACE Dist/Div/Ctrs
TCES/DAC/JMC

Org below Div/Corps in direct spt of BCT Garrison, Other

GS-11/12

Intern GS-07/09/11

0019 Tech/Veterans/Colleges/ University/PIP Feeder to Entry 0018 Outside Hire – GS-11/12/13/14/15 Outside Hire

(Requires FCR Approval)

As a Condition of employment, within 12 months of hire, must complete the CP-12 Careerist Resident Training (Level 1 Skills) conducted at Fort Rucker, Alabama OR fulfill all Pre-Regs and Level 1 CP-12 skills outlined in the 0018 Master Training

Plan. Extensions require FCR approval.

Explosives Safety Certificate Program Training Requirements

ES Certificate Program	Course Title	DAC Course Number	New Course Number (ATRRS)
LEVEL 1, CORE	INTRODUCTION TO AMMUNITION (CERT)	AMMO-45-DL	9E-F67/920-F35 (DL)
	U.S. ARMY EXPL SAFETY FAMILIARIZATION (CERT)	AMMO-63-DL	4E-F44/645-F28 (DL)
	AMMUNITION PUBLICATIONS (CERT)	AMMO-78-DL	4E-F62/645-F46 (DL)
	INTRO TO EXPL SFTY MGMT FOR SFTY PROS (CERT) OR INTRO TO EXPL SFTY MGMT FOR SFTY PROS (CERT)	AMMO-107-DL OR AMMO-107	4E-F26/431-F10 (DL) 4E-F30/645-F14
LEVEL 2, ADVANCED	ARMY ELECTRICAL EXPLOSIVE SAFETY (CERT)	AMMO-28-DL	4E-F33/645-F17
	RISK MGMT & PREP OF SOP FOR AMMO & EXP (CERT) OR RISK MGMT & PREP OF SOP FOR AMMO & EXP (CERT)	AMMO-54 OR AMMO-54-DL	9E-F60/950-F39 9E-F68/920-F36 (DL)
	MILITARY MUNITIONS RULE (CERT)	AMMO-68-DL	4E-F46/645-F30 (DL)
	APPLICATION OF US ARMY ESQD PRINCIPLES (CERT)	AMMO-99-DL	4E-F65/645-F49 (DL)
	ARMY EXPLOSIVE SAFETY SITE PLANNING	AMMO-100-DL	4E-F25/431-F9 (DL)
	ADVANCED EXPLOSIVES SAFETY MANAGEMENT	AMMO-110 (TBD)	N/A, Workshop
	AMMUNITION & EXPLOSIVES STORAGE SAFETY (CERT)	AMMO-112-DL	4E-F28/645-F12 (DL)
SPECIALIZED TACTICAL	EXPLOSIVES SAFETY IN TACTICAL ENVIRONMENTS	AMMO-111 (TBD)	N/A, Workshop
SPECIALIZED, RDT&E AND INDUSTRIAL	EXPLOSIVES SAFETY IN RDT&E AND INDUSTRIAL ENVIRONMENTS	AMMO-113 (TBD)	N/A, Workshop





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