



EXPLOSIVES SAFETY MANAGEMENT PROGRAM DEVELOPMENT GUIDE

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U.S. Army Defense Ammunition Center
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PREFACE

This guide is provided to aid Army commanders in developing written explosives safety management plans according to the Army Safety Program. This document is not intended to supersede, contravene, replace, or modify the publications referenced herein or any other Department of Defense (DoD), Department of the Army (DA), Army Command (ACOM), Army Service Component Command (ASCC) or Direct Reporting Unit (DRU) criteria. Those publications take precedence in the event of any conflict with this guide. Information contained in this guide was current at the time of publication.

Chapter 1. General

1-1. Purpose

This guide attempts to assist safety managers in establishing effective explosives safety management programs. The guide contains chapters focusing on each functional area listed in AR 385-10, paragraph 5-3. The guide also has a chapter dedicated to installation command relationships and the role of the garrison in support of the installation commander according to AR 600-20.

1-2. References

AR 190-11, Physical Security of Arms, Ammunition, and Explosives
AR 210-20, Real Property Master Planning for Army Installations
AR 350-19, The Army Sustainable Range Program
AR 385-10, The Army Safety Program
AR 385-63, Range Safety
AR 420-1, Army Facilities Management
AR 600-20, Army Command Policy
AR 700-13, Worldwide Ammunition Logistics/Explosives Safety Review and Technical Assistance Program
AR 740-1, Storage and Supply Activity Operations
DA Pam 385-10, The Army Safety Program
DA Pam 385-30, Mishap Risk Management
DA Pam 385-61, Toxic Chemical Agent Safety Standards
DA Pam 385-63, Range Safety
DA Pam 385-64, Ammunition and Explosives Safety Standards
DA Pam 385-65, Explosive and Chemical Site Plan Development and Submission
DoD 6055.09-M, DoD Ammunition and Explosives Safety Standards
TM 5-1300, Structures to Resist the Effects of Accidental Explosions
TM 38-410, Storage and Handling of Hazardous Material
Technical Paper 15 (TP-15), Approved Protective Construction.

Chapter 2. Command Policy

2-1. Command of installations, activities, and units

The following information is taken from chapter 2 of AR 600-20, Army Command Policy. Only the pertinent information related to explosives safety management is included here. See the publication for complete information. This chapter attempts to explain the relationship between the senior commander and garrison commander or manager on Army installations and how those relationships dictate the roles and responsibilities for an Explosives Safety Management Program (ESMP).

a. Command of installations

(1) Command of Army installations is exercised by a senior commander (SC). The SC is designated by senior Army leadership. The SC's command authority over the installation derives from the Chief of Staff, Army (CSA) and Secretary of the Army's (SA) authority over installations. This is a direct delegation of command authority for the installation to the SC. The SC's command authority includes all authorities inherent in command including the authority to ensure the maintenance of good order and discipline for the installation.

(2) Army installations are identified in one of two categories as follows:

(a) Installations managed by Installation Management Command (IMCOM). Installations that are managed by IMCOM are discussed in paragraph 2b(4), below.

(b) Installations not managed by IMCOM. Installations that are not managed by IMCOM are discussed in paragraph 2b(5), below.

(3) Joint bases. Army installations designated for management under Department of Defense (DoD) Joint Basing Guidance shall be operated in full compliance with DoD requirements.

b. Roles and Responsibilities

(1) *Senior commander.* The SC is normally the senior general officer at the installation. The SC's mission is the care of Soldiers, Families, and Civilians, and to enable unit readiness. While the delegation of senior command authority is direct from HQDA, the SC will routinely resolve installation issues with IMCOM and, as needed, the associated ACOM, Army service component command (ASCC), or direct reporting unit (DRU). The SC uses the garrison as the primary organization to provide services and resources to customers in support of accomplishing this mission. All applicable commands support the SC in the execution of SC responsibilities; therefore, the SC is the supported commander by the IMCOM region director (RD), the garrison and tenants. The SC-

(a) Can in rare cases be an HQDA-appointed civilian versus a uniformed SC, who will assume the SC roles and responsibilities with the exception of UCMJ and command authority. In these instances, the individual will be referred to as the senior manager. Prior to the appointment of the senior manager, command and UCMJ authorities for the installation will be specified.

(b) Is responsible for synchronizing and integrating Army priorities and initiatives at the installation. On IMCOM managed installations there is a requirement for a strong collaborative relationship between the SC and the IMCOM RD. The SC commands the installation but funding of almost all installation activities flows through the RD.

(c) Assumes the duties and responsibilities of the installation commander where that title is mentioned in U.S. Code or DoD or Army policies and regulations.

(d) Assumes the duties and responsibilities of the senior mission commander where that title is mentioned in Army regulations except for regulations involving operational duties and responsibilities. Mission commanders will retain operational duties and responsibilities.

(e) Unless prohibited by law or regulation, the SC may delegate, as necessary, assigned duties and responsibilities to the garrison commander (GC). Such delegation shall be made in writing and specifically state the duties and responsibilities so delegated and the termination date of the delegation. (*Commanders who assign responsibility and authority to their subordinates still retain the overall responsibility for the actions of their commands.*)

(f) Establishes installation priorities among all resident and supported units.

(g) Prioritizes base operations support consistent with HQDA priorities and approved common levels of support (CLS) bands.

(h) Oversees the CLS services and capabilities provided to customers. Ensuring that those services are provided within the HQDA guidance, designated priorities, and approved CLS bands and coordinates with the IMCOM RD to change HQDA approved CLS from green, amber, or red.

(i) Approves and submits the installation master plan consistent with HQDA long-range plans and goals through the ACOMS, ASCCs or DRUs, and IMCOM. For IMCOM installations the SC collaborates with the IMCOM RD before the SC submits the installation master plan.

(j) Approves the military construction, Army (MCA) and military construction, Army Reserve (MCAR) project priority list at the installation level. For IMCOM installations the SC collaborates with the IMCOM RD before the SC approves the MCA and MCAR project priority list for the installation. The U.S. Army Corps of Engineers executes MCA/MCAR projects for the Army.

(2) *Garrison commander.* The GC is a military officer, lieutenant colonel or colonel, selected by HQDA. The GC commands the garrison, is the SC's senior executive for installation activities, is rated by the IMCOM RD, and is senior rated by the SC. The GC is responsible for day-to-day operation and management of installations and base support services. The GC ensures that installation services and capabilities are provided in accordance with HQDA directed programs, SC guidance, CLS, and IMCOM guidance. The GC provides additional service support in accordance with HQDA directives and provides reimbursable services in accordance with memorandum of understanding or agreement (MOU/MOA). The GC is responsible to deliver Family and installation programs, coordinates and integrates the delivery of support from other service providers, and obtains SC approval of the installation master plan. In some cases, the senior official on an installation may be the garrison manager. A garrison manager (the civilian equivalent of a GC has the same responsibility and authority as the military counterpart with the exception of UCMJ and command authority. Prior to the appointment of the garrison manager, command and UCMJ authorities for the garrison will be specified. The GC responsibilities are-

(a) Represents the Army and the installation in the surrounding community as directed by the SC.

(b) Approves and issues garrison policies in accordance with respective Army regulations, or installation level policies involving tenant units as directed by the SC.

(c) Approves and issues policies for IMCOM civilian workforce.

(d) Develops and implements the Force Protection Program.

(3) *The ACOM, ASCC, or DRU on IMCOM managed installations.*

(a) Provide to IMCOM a prioritized list of MCA/MCAR projects and requirements that

impact subordinate units to support the development of the military construction (MILCON) program and the program objective memorandum.

(b) Provide IMCOM with subordinate mission priority requirements for MILCON and base operations.

(c) Identify to IMCOM, through the CLS process and other requirements development processes, the required levels of garrison support needed to meet mission requirements. Also, identify to IMCOM any support requirements not included in CLS services. Collaborate with IMCOM in developing garrison support requirements that are applicable to all garrisons.

(d) Evaluate the effectiveness of installation services and support and participate in the prioritization of these services and support.

(4) *Installation Management Command.* IMCOM is a DRU reporting to the ACSIM as described in AR 10-87. IMCOM manages Army installations assigned to it. IMCOM executes installation readiness missions, provides equitable services and facilities, optimizes resources, sustains the environment, and enhances the well-being of the military community. IMCOM is accountable for the efficient delivery of installation services and support. The IMCOM is responsive to ACOMs, ASCCs, and DRUs through a supporting to supported relationship.

(a) IMCOM commands the garrisons assigned to it.

(b) IMCOM and its subordinate organizations are supporting commands to the SC on IMCOM installations. There is a requirement for a strong collaborative relationship between the SC and the IMCOM RD. The SC commands the installation but funding of almost all installation activities flows through the RD.

(c) The relationship between IMCOM and the commands of tenant organizations is analogous to the "supporting to supported" command relationship described in Joint Doctrine.

(d) IMCOM ensures compliance with HQDA directed programs and CLS bands. IMCOM staffs and coordinates with HQDA funding requests for garrison support requirements identified by ACOM, ASCC, or DRUs that are not included in CLS services.

(5) *Non-IMCOM Installations.* The SC is designated in accordance with AR 600-20 paragraph 2-5b(4)(g). The SC roles and responsibilities are the same as for all other Army installations.

(a) Army National Guard (ARNG) installations are managed in compliance with National Guard Bureau (NGB) requirements by individual U.S. Property and Fiscal Officers.

(b) U.S. Army Materiel Command (AMC) installations are managed in compliance with AR 700-90 and other appropriate industrial base authorities.

(c) U.S. Army Medical Command (MEDCOM) installations are managed in compliance with AR 40-4.

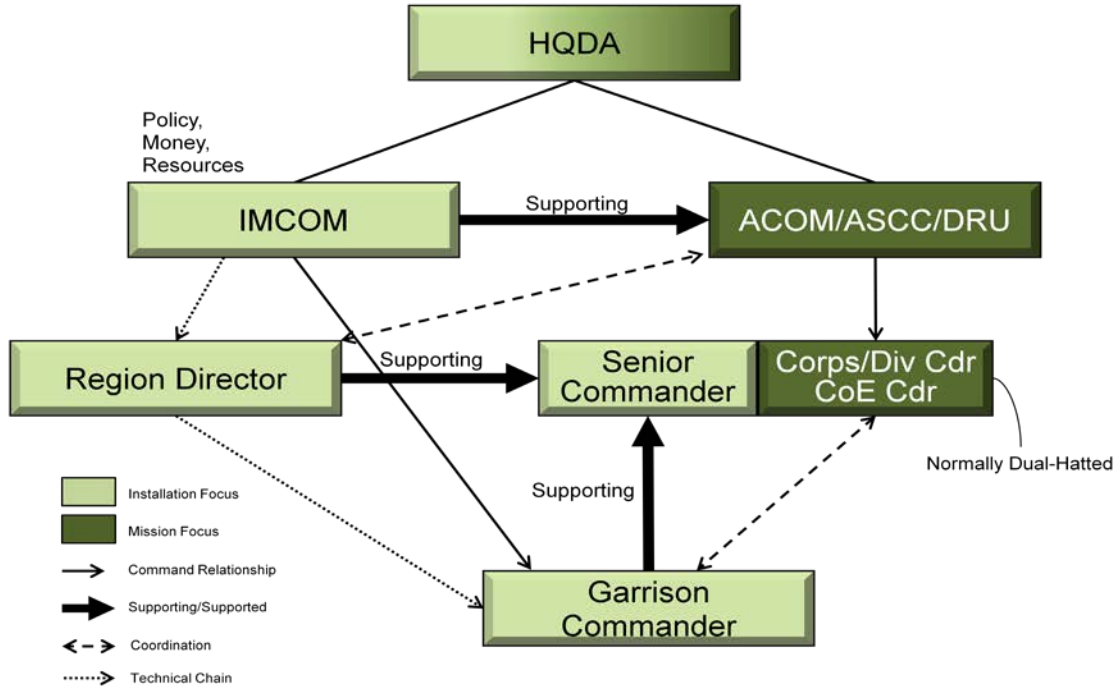
(d) Military Surface Deployment and Distribution Command performs terminal management services as a subordinate of USTRANSCOM under the authority of DODD 5158.04 and other appropriate authorities.

(e) U.S. Army Space and Missile Defense Command/Army Strategic Command installations are managed in compliance with AR 700-90 and other appropriate industrial base documents.

(f) The TRADOC ROTC detachments and recruiting sites do not provide garrison support functions and do not have garrison activities.

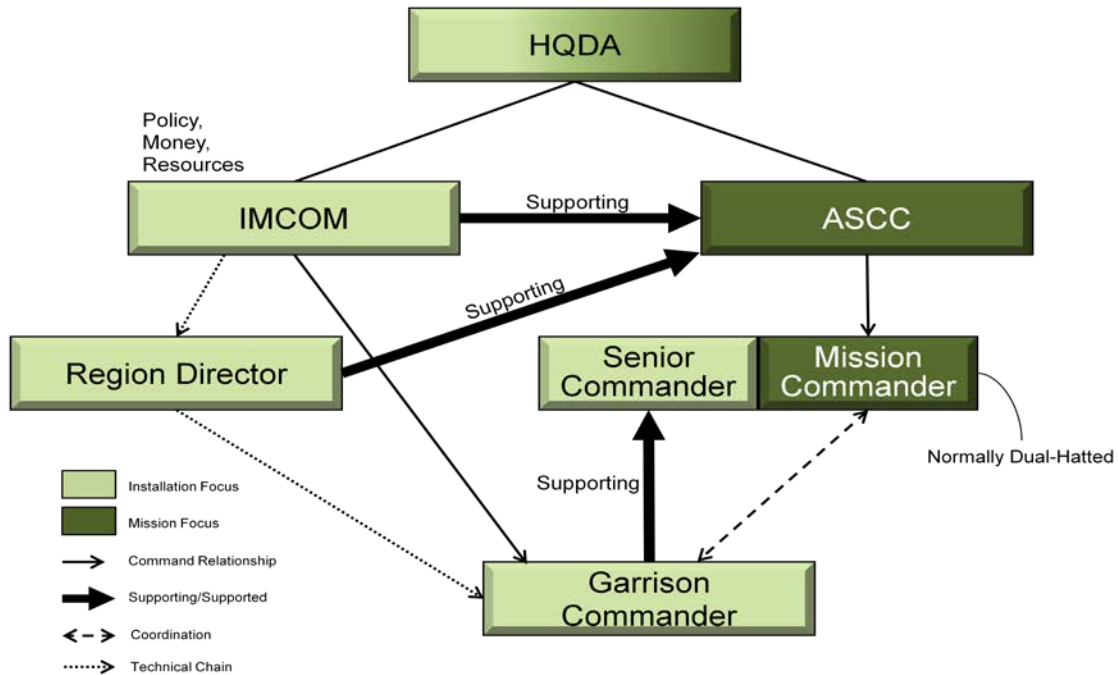
(g) U.S. Army Corps of Engineers' funded installations and separate facilities not on IMCOM installations are managed in accordance with Federal law, AR 420-1, and other appropriate regulations.

Command Relationships at CONUS IMCOM Managed Installations



AR 385-10 ASSIGNS RESPONSIBILITY FOR ESMP TO SENIOR COMMANDER

Command Relationships at OCONUS IMCOM Managed Installations



AR 385-10 ASSIGNS RESPONSIBILITY FOR ESMP TO SENIOR COMMANDER

2-2. Terms

Command levels of support

Command levels of support are the HQDA determined levels for the common services that are provided by a garrison. Command levels of support refers to the method by which IMCOM directs all garrisons to deliver specific elements of installation support services (Service Support Programs (SSPs)) at a HQDA approved pre-determined level of service. This strategy is aimed at achieving standardization of installation services across the Army through equitable distribution of resources and garrison accountability for service delivery performance.

Garrison

An IMCOM unit that provides appropriate and equitable services in accordance with HQDA directed CLS to all tenants, Soldiers, other Service Members, Families, and Civilians in the garrison area of responsibility (AOR).

Installation

An aggregation of contiguous or near contiguous, real property holding commanded by a centrally selected commander. Installations represent management organizations. An installation may be made of one or more sites.

Supported commander

In the context of the support command relationship, the commander who receives assistance from another commander's force or capabilities, and who is responsible for ensuring that the supporting commander understands the assistance required.

Supporting commander

In the context of a support command relationship, the commander who aids, protects, complements, or sustains another commander's force, and who is responsible for providing the assistance required by the supported commander.

Chapter 3. Explosives safety management programs

3-1. Policy

AR 385-10 states that commanders with ammunition or explosives related mission will develop an ESMP. An explosives mission may be as large as an ammunition depot, plant or arsenal or as small as a security guard force. No matter what the size of the explosives mission, an ESMP is required. According to AR 600-20, senior commanders are appointed as installation commanders and as such are responsible for the installation ESMP and its management. This is a responsibility of the SC even if his mission does not include ammunition & explosives (A&E) activities. The SC can delegate this duty through letters of agreement/MOUs/MOAs or appointment letters. Any such document must define who is responsible for what aspect of the program per AR 385-10, reporting requirements, and any required support needed. Safety directors must identify any problems in the ESMP and advise commanders of issues affecting the program.

3-2. Written requirements

The installation ESMP is the SCs policy that outlines the responsibilities of all organizations, including installation and tenant activities, with ammunition and explosives mission. The ESMP may be a standalone document or a section in the organization's overall safety policy. The ESMP must address the 16 elements listed in paragraph 3-2a below. This guide attempts to explain each element and provide guidance as to how to address the element in an ESMP. The other requirements in paragraphs 3-2b through 3-2i could be addressed in a general section of an ESMP.

a. Address 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. (AR 385-10, paragraph 5-3a)

b. Identify the safety responsibilities of all organizations (including the garrison and tenants that will be covered by a MOA) with A&E missions and functions (for example, research, testing, manufacturing, transportation, storage, and demilitarization). (AR 385-10, paragraph 5-3b)

c. Define safety office direct access to commander and lines of communication and reporting between the safety office and other organizations with an explosives safety function. (AR 358-10, paragraph 5-3c)

d. Prescribe responsibilities and procedures for knowledgeable and qualified personnel to develop, coordinate, review, and approve site plans, safety submissions, and facility designs. (AR 358-10, paragraph 5-3d)

e. Prescribe responsibilities, requirements, and procedures that ensure qualified personnel develop, coordinate, review, and approve explosives safety waiver and exemption requests for facilities and equipment, as delineated in DA Pam 385-30, and provide the commander with essential risk data regarding the deficient situation. (AR 358-10, paragraph 5-3e)

f. Charter and prescribe responsibilities, composition, and procedures for a local explosives safety council. (AR 358-10, paragraph 5-3f)

g. Prescribe processes for operational continuity (for example, SOPs and routine facility maintenance). (AR 358-10, paragraph 5-3g)

h. Prescribe responsibilities, requirements, and procedures for conducting audits/surveys to assess ESMP compliance with AR 385-10 and to assess compliance of A&E activities with DA Pam 385-64, including tracking and follow-up of required corrective actions. (AR 358-10, paragraph 5-3h)

i. Prescribe responsibilities, requirements, and procedures for the investigation, reporting, and analysis of A&E mishaps. (AR 358-10, paragraph 5-3i)

3-3. Commander's actions

The following paragraphs come from AR 385-10 and DA Pam 385-64. These actions are requirements of a commander and the safety director must develop a procedure for the commander to follow to ensure compliance.

a. Appointment of an occupational safety and health manager per AR 385-10, qualified under the Office of Personnel Management standards, as the point of contact for all aspects of the Army Safety Program, including management of the ESMP. (DA Pam 385-64, paragraph 1-5b(1))

b. Ensure compliance with DoDD 6055.9E, DoDI 6055.16, DoDM 6055.09-M, AR 385-10, and DA Pam 385-64. (DA Pam 385-64, paragraph 1-5b(2))

c. Assure that subordinate organizations maintain an effective ESMP. (DA Pam 385-64, paragraph 1-5b(3))

d. Designation, in writing, of subordinate officials authorized to exercise deviation approval authority per AR 385-10 and DA Pam 385-30. (DA Pam 385-64, paragraph 1-5b(4))

e. Review of and concurrence on MOAs concerning the storage or disposal of non-DoD hazardous materials on Army real estate, consistent with the requirements of Section 2692, Title 10, United States Code (10 USC 2692) and with any delegation of authority necessary under 10 USC 2692. (DA Pam 385-64, paragraph 1-5b(5))

f. Ensure integration of explosives safety into policy, procedures, and activities. (DA Pam 385-64, paragraph 1-5b(6))

g. Notification, as required by applicable laws, regulations or international agreements to which the United States is party, of affected local U.S. and host nation government officials to ensure communication of the risk of operations involving A&E. Communications with host nation government officials shall be made in coordination with the U.S. Embassy. (DA Pam 385-64, paragraph 1-5b(7))

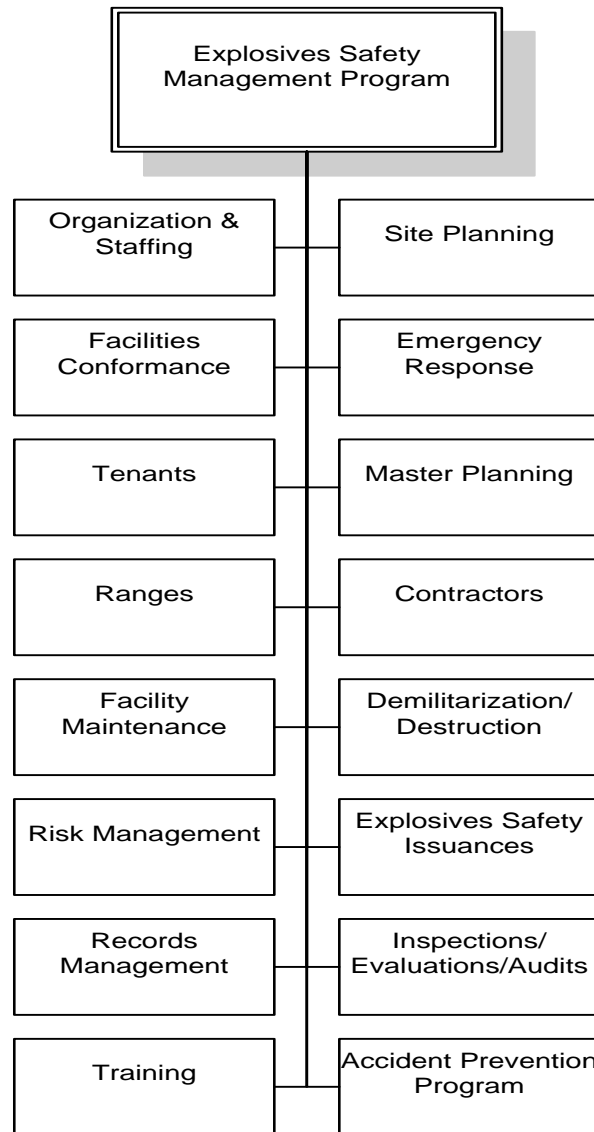
h. Ensure civilian and military personnel receive explosives safety training as required by Army policy and standards. Explosives safety training will include explosives risk management training for those responsible for the development and review of deviations and associated risk assessments. Ensure that A&E contracts include appropriate explosives safety training requirements. (AR 385-10, paragraph 1-4ii(2))

i. Conduct periodic reviews of deviations to explosives safety standards to ensure assessments are current and that all exposures, risks, and mitigating actions are identified and provide a copy of the review through their chain of command to the USATCES for centralized

management and oversight. (AR 385-10, paragraph 1-4ii(3))

j. Conduct periodic inspections and/or audits of A&E activities to ensure compliance with the installation/activity ESMP, AR 385-10, and DA Pam 385-64, including compliance with the Hazards of Electromagnetic Radiation to Ordnance (HERO) program requirements. (AR 385-10, paragraph 1-4ii(4))

3-4. ESMP elements



Chapter 4. Organization and Staffing

4-1. Organization

a. The safety office will be structured and staffed to administer an OSH program through the chain of command based upon the organization's mission, goals, and objectives as well as statutory requirements. (AR 385-10, paragraph 2-6a)

b. Army safety offices and organizations will be established in accordance with the uniform criteria of AR 385-10 and DA Pam 385-10 to ensure that each office or organization has trained and experienced personnel of sufficient grade and rank to accomplish the safety mission of each command, installation, organization or activity. (AR 385-10, paragraph 2-6b)

c. The safety office will be funded and fully resourced to execute all responsibilities and functions designated in AR 385-10 to assure safety program effectiveness. (AR 385-10, paragraph 2-6c)

4-2. Staffing

a. The designated safety professional/director will exercise staff supervision over an organization's safety program, risk management, and accident prevention activities. Duties performed by the safety director will include the full range of program management responsibilities. The safety director is a member of the commander's special staff and reports directly to the commander. The safety director will meet Office of Personnel Management (OPM) standards for the positions of Occupational Safety and Health, GS-0018/0803. (AR 385-10, paragraph 2-7e)

b. Senior commanders will appoint an occupational safety and health manager per AR 385-10, qualified under the Office of Personnel Management standards, as the point of contact for all aspects of the Army Safety Program, including management of the ESMP. (DA Pam 385-64, paragraph 1-5b(1))

c. The safety staff/safety organization will be staffed with professional safety personnel meeting the requirements for these positions established by the OPM and the Army personnel office. (AR 385-10, paragraph 2-7f)

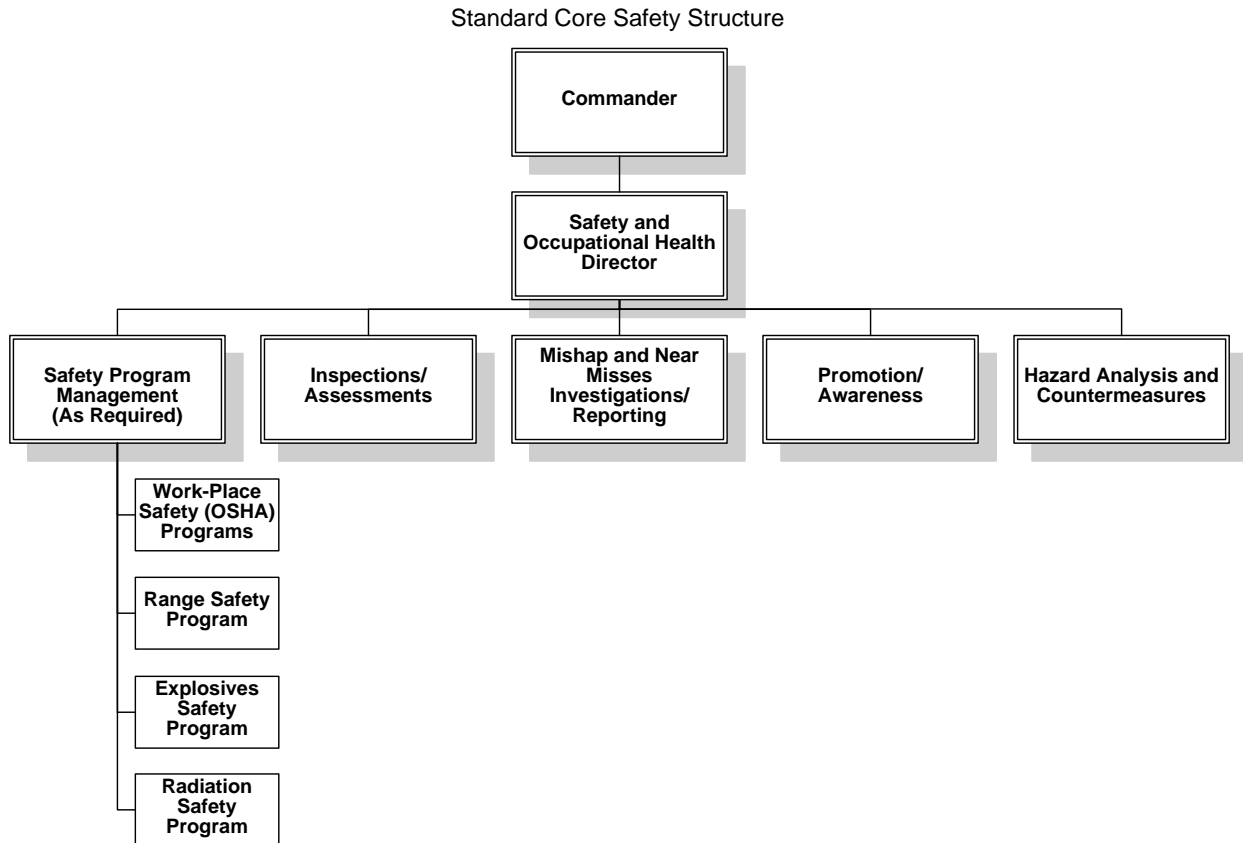
4-3. How it is done

a. Each Army activity is organized and staffed differently. The SC and staff must evaluate the size of their explosives safety mission. Some organizations may only have security guard force ammunition storage which would require oversight by a single safety specialist. Other installations or activities may have large ammunition storage areas, active Research, Development, Test and Evaluation (RDT&E) ranges, and multiple tenants performing a multitude of A&E missions. These types of commands may need several safety professionals assigned to explosives safety. The explosives safety mission may be distributed across several organizations such as mission elements, garrison and tenants.

b. The ESMP will need to state how the explosives safety mission is organized and distributed; who has the lead for explosives safety by appointment memorandum; how other organizations on the installation support the lead explosives safety office. The SC may determine that a tenant safety office is better fit to be the lead for explosives safety other than the

SCs safety office. The ESMP needs to show that the explosives safety organizational structure and staffing is adequate to support the organization's mission.

c. See DA Pam 385-10, chapter 3 for more information on safety organization and staffing. The chart below is an example safety organization structure. This chart comes from DA Pam 385-10, chapter 3.



This table shows the elements of the Army Safety Program. Commanders and directors of ACOMs, ASCCs, DRUs, FOAs, and the Director, ARNG will administer a safety program consisting of the specific safety program elements listed in this table as core requirements, and those listed as mission dictated, as required. (AR 385-10, paragraph 1-4y(9))

Army Safety Program Elements		
Chapter		
Part 1 - Army Safety Program Management Elements		
1	Required	General Safety Requirements
2	Required	Strategic Planning, Army Safety Program Structure, Safety Program Evaluation, Councils, and Committees
3	Required	Accident Investigation and Reporting
4	Required	Contracting Safety
5	Mission Dictated	Explosives Safety Management
6	Required	Public, Family, CYS Services, and Off-Duty Recreation and Seasonal Safety
7	Mission Dictated	Radiation Safety Management

8	Required	Safety Awards Program
9	Mission Dictated	System Safety Management
10	Required	Training Requirements
11	Required	Motor Vehicle Accident Prevention
Part 2 - Supporting the Force		
12	Mission Dictated	Force Mobilization
13	Mission Dictated	Tactical Safety
14	Required	Safe Cargo Operations
15	Mission Dictated	Aviation Safety Management
Part 3 - Supporting the Garrison and Industrial Base		
16	Required	Occupational Safety and Health Program (Workplace Safety)
17	Required	Workplace Inspection
18	Required	Industrial Operational Safety
19	Required	Emergency Planning and Response
20	Mission Dictated	IAT Safety
21	Mission Dictated	Chemical Agent Safety Management
22	Mission Dictated	Marine Activities
23	Mission Dictated	Medical Safety
24	Required	Facility Reuse and Closure
25	Required	Electrical Safety
AR 385-63	Mission Dictated	Range Safety

Required: Instituted by all ACOMs.

Mission Dictated: As determined by the senior commander.

4-4. What to look for

- a.* Is the explosives safety organizational structure and staffing adequate to support the organization's mission?
- b.* Are there clear, documented organizational responsibilities? Does the mission statement include explosives and explosive safety responsibility?
- c.* Is there an organizational line to the Commander?
- d.* Is there an assigned Explosives Safety Office/Officer or functional equivalent?
- e.* Is the explosives safety organizational staffing adequate to support mission. Are safety personnel on permanent assignment or collateral duty? Have personnel completed by formal training or OJT?

Chapter 5. Tenants

5-1. Agreements

a. Senior commanders are responsible for safety of people, the environment, and the public on their installation. Formal agreements will be developed between host and tenant organizations to ensure necessary safety and occupational health responsibilities are addressed. (AR 385-10, paragraph 2-5e)

b. As part of the installation ESMP, an MOA or policy that outlines the ESMP requirements and responsibilities of both the garrison or installation commander and tenants will be created. (DA Pam 385-64, paragraph 1-5c(1))

5-2. Safety managers

Serve as the focal point for and coordinate ESMP requirements with tenant unit commanders; and provide concurrence on tenant unit ESMPs. (DA Pam 385-64, paragraph 1-6b(7))

5-3. Public demonstrations, exhibitions, and celebrations

Should demonstrations, exhibitions, or celebrations that involve Army personnel, activities, equipment, or materials be conducted on an installation, the participating tenant organizations will submit a request through safety channels for its ACOM, ASCC, or DRU commander's approval and then submit the request through the host installation's safety channels for approval by the host installation's ACOM, ASCC, or DRU commander. (DA Pam 385-64, paragraph 2-12c(1))

5-4. Commercial explosives

Using commercial explosives other than for production and Research, Development, Test, & Evaluation (RDTE), is prohibited unless commercial explosives are mission essential and specifically authorized by the installation's ACOM, ASCC or DRU commander. Approval request to store or handle commercial explosives will be sent through command channels to the installation's ACOM, ASCC or DRU approving authority. When the requesting unit is a tenant activity, the request will be sent through the unit's command channels and the host installation's ACOM, ASCC or DRU approving authority must concur with the approval. (DA Pam 385-64, paragraph 21-2 & 3)

5-5. Explosives safety site plans

While the installation/garrison safety office is generally responsible for site plan development and coordination, in some circumstances a tenant or other organization may assume those responsibilities. Local agreements can dictate deviations in site plan responsibilities as long as all affected organizations are consulted and agree. (AR 385-10, paragraph 5-6c(4))

5-6. What to look for

a. Are A&E operations monitored, controlled and managed to ensure their explosives safety posture meets, or is compatible with, the Army and mission requirements of the organization?

b. Are A&E operations identified? Are all tenant missions identified? Are tenant personnel identified and controlled?

- c.* Are tenant functions monitored: explosives operations approved or permitted, site access, inspection or review of tenant explosives activities?
- d.* Are tenant commands reporting ES posture to SC? Is tenant explosives safety program reviewed by command?
- e.* Are MOUs, MOAs or other agreements in place for explosives safety responsibilities?

Chapter 6. Contractors

6-1. Army policy

a. Contract activities will be conducted in a safe and healthful manner that minimizes accidents as well as impacts on Army operations and members of the public. Contractors must comply with applicable Federal, State, and local codes and standards, including safety and occupational health requirements, as well as any additional specific requirements invoked by the contract. (AR 385-10, paragraph 4-2a)

b. In accordance with DODI 6055.1, Army safety and health responsibilities in contractor plants and contractor operations on Army property are generally limited to helping to ensure the safety of government-owned equipment, protection of the production base, protection of government property and on-site Army personnel from accidental losses, and the protection of the public. Contractors are responsible for the safety and health of their employees and protection of the public at contractor plants and work sites. (AR 385-10, paragraph 4-2d)

6-2. Responsibilities of the contracting official

a. Clauses outlining contractor safety requirements and responsibilities will be included in solicitations and contracts as prescribed by the FAR, the Defense Federal Acquisition Regulation Supplement (DFARS), and the Engineer Federal Acquisition Regulation Supplement (EFARS). See DA Pam 385-10, chapter 4. (AR 385-10, paragraph 4-2e)

b. In addition to clauses as required by FAR, DFARS, and EFARS, activities will develop performance work statements and contract instructions and conditions that outline contractor safety requirements and responsibilities based on a risk assessment of the work to be performed and activity/command unique requirements. Contracting officer representatives (CORs), requiring activity, or Defense Contract Management Agency, in consultation with local safety and occupational health SMEs, will develop additional and necessary clauses to mitigate risk. Note that the only means for imposing safety and occupational health requirements on a contractor or subcontractor is by incorporating the requirement as a contractual requirement (for example, a contract clause, special clause, statement of work, guide specification, or contract modification). (AR 385-10, paragraph 4-2f)

c. Contracting officials must review contracts to ensure proper clauses are in place to meet Army, DoD, applicable local, state, and Federal regulations regarding safety and occupational health. (AR 385-10, paragraph 1-4gg(1))

6-3. DFARS 223.370

Subpart 223.370 of the DFARS requires contracting officers to incorporate DoD 4145.26-M in all A&E procurement actions. The purchasing activity may include additional A&E or related safety requirements that are not inconsistent with DoD 4145.26-M as it deems necessary. DoD 4145.26-M should be incorporated into A&E procurement actions in order to legally bind the contractor to follow the provisions contained therein.

a. Requirements

(1) DoD policy is to ensure that its contractors take reasonable precautions in handling ammunition and explosives so as to minimize the potential for mishaps.

(2) This policy is implemented by DoD 4145.26-M, DoD Contractors' Safety Manual for

Ammunition and Explosives, which is incorporated into contracts under which ammunition and explosives are handled. The manual contains mandatory safety requirements for contractors. When work is to be performed on a Government-owned installation, the contracting officer may use the ammunition and explosives regulation of the DoD component or installation as a substitute for, or supplement to, DoD 4145.26-M, as long as the contract cites these regulations.

b. Contracting officials must prepare written procedures for reviewing contractor capability to comply with and administer safety aspects of the contract requirements. (AR 385-10, paragraph 1-4gg(2))

c. Contracting officials ensure that periodic inspections are conducted by qualified safety professionals at contractor worksites to assess compliance with AR 385-10, according to the contract. (AR 385-10, paragraph 1-4gg(3))

6-4. Army oversight of contractor operations.

Army oversight of contractor operations is restricted to the following instances (AR 385-10, paragraph 4-3a):

a. Where Army has statutory authority for oversight, such as the manufacture of ammunition.

b. Where it is in the best interest of the Army. Army oversight has historically contributed to lower accident rates among certain contractor employees, on-time delivery of products and services (increased readiness), and ultimate savings to the Government.

6-5. Contracts for RDT&E

The following subparagraphs apply to contracts for RDT&E A&E work that is conducted on government property. They do not apply to personal service contracts for which a government employee directly controls the activities of contractor employees.

a. The requiring activity will conduct a risk assessment for each RDT&E operation to determine the appropriate level of government oversight and safety requirements necessary for the contract, in order to mitigate risk to government employees, equipment, and facilities. The risk assessment will be conducted by a multidisciplinary team with knowledge of the technical aspects of the operation and the hazards involved.

b. The requiring activity will ensure that risk to the government from contracted operations is formally accepted by responsible commanders, in coordination with the installation, prior to the start of the operation. The requiring activity will assist CORs with monitoring project safety risk levels, in accordance with contract requirements.

c. The contracting officer will ensure that the cognizant federal authority makes a determination whether the government will indemnify the contractor.

6-6. Safety director responsibilities

a. Commanders are to ensure that A&E contracts include appropriate explosives safety training requirements.

b. Ensure contractor explosives safety requirements and oversight per their contract according to DFARS 223.370.

c. Preaward phase. Before either omitting the clause at DFARS 252.223-7002, Safety Precautions for Ammunition and Explosives, from solicitations and contracts or waiving the mandatory requirements of the manual, obtain the concurrence of

- (1) The requiring activity and the safety personnel responsible for A&E safety.
- (2) The head of the contracting activity.

d. Postaward phase. DoD 4145.26-M requires the contractor to submit to the administrative contracting officer (ACO) any postaward requests for a waiver of the contract safety standards, a site plan modification, or a construction review. The ACO shall review any request and make recommendations to the contracting officer. The contracting officer shall make a decision after considering recommendations of the ACO and safety personnel responsible for ammunition and explosive safety.

e. Monitor selected A&E operations conducted on Army installations to ensure all DoD, Federal, State, local, and contractor participants understand and comply with applicable explosives safety standards per the contract.

6-7. What to look for

a. Are contractors monitored, controlled and managed to ensure their explosives safety posture meets, or is compatible with, the Army and mission requirements of the organization?

b. Are contractors identified and controlled?

c. Are contracts written to contain provisions requiring compliance with DoD explosives safety standards?

d. Do contractors work to explosives safety levels no less stringent than DoD requirements?

e. Do contractors report accidents and near-misses IAW DoD standard or contractor safety manual as appropriate?

Chapter 7. Master Planning

7-1. Real property master planning process

a. Real Property master planning is a continual, collaborative, and integrated process, primarily performed at the installation level, reflective of mission requirements, yet strongly influenced by the plans, guidance, and initiatives of higher headquarters. An installation real property master plan (RPMP) is, therefore, the principal real property management tool in support of overall installation real property operation, management, development, privatization, realignment, cleanup, and disposal. (AR 210-20, paragraph 2-4a)

(1) The process involves collecting, mapping, and evaluating planning information; integrating mission requirements; performing a set of analyses; and conducting extensive coordination, staff reviews, and deliberations. (AR 210-20, paragraph 2-4a(1))

(2) The process culminates with approval by the designated IMCOM staff, or IMCOM RD for facilities, as recommended by the installation real property planning board (RPPB) and endorsed by the senior mission commanders. The execution of this process will be recorded and illustrated in an installation RPMP. (AR 210-20, paragraph 2-4a(2))

(3) The process provides a means for effective and orderly sustainable facility design and installation development that support the mission, real property management, local community/installation land use zoning, privatization, base realignment, and cleanup and disposal of Army installation land and real property facilities. (AR 210-20, paragraph 2-4a(3))

7-2. The Real Property Master Plan (RPMP)

a. An RPMP portrays a garrison commander's plan for orderly management and development of installation real property assets, including land, facilities, and infrastructure, and documents the real property master planning process. An RPMP integrates all plans affecting or using real property into a comprehensive guidance document. It incorporates concepts and information from many programs and sources to ensure that adequate real property support is provided to meet all assigned or projected missions for the installation. It includes the mission requirements of other garrison activities and tenants. The garrison commander's real property master planning staff must assertively seek and maintain coordination with, and obtain contributory information or plans from, garrison activities and tenants to ensure that real property needs are met. (AR 210-20, paragraph 3-1)

b. An RPMP is organized into five components: the real property master plan digest (RPMPD), long-range component (LRC), installation design guide (IDG), capital investment strategy (CIS), and short-range component (SRC). (AR 210-20, paragraph 3-2)

c. *LRC.* The LRC will establish the environmental baseline, basic framework, and specific options for developing and managing real property on the installation. (AR 210-20, paragraph 3-2b)

d. The environmental overlay is a part of the LRC. Environmental overlays will cover the installation and surrounding areas. Portrayed data will not be effective unless a regional perspective is portrayed. The environmental overlays will graphically demarcate and denote all areas in which development should be limited or should not occur at all. (AR 210-20, paragraph 3-5b)

e. Typical environmental overlay data layers contain;

- (1) Surface and subsurface hazardous material storage or contaminated areas.
- (2) Former firing ranges and impact areas.
- (3) Ammunition and chemical storage areas.
- (4) Safety buffers.
- (5) Quantity safety distances for storage of explosives.

7-3. Project siting

a. Site location. AR 415-15 specifies that all facility acquisition or construction projects will be located (sited) in accordance with an approved RPMP. The proper siting of individual projects has a direct bearing on cost, sustainability, maintainability, force protection and safety, environmental impacts, operational efficiency, and constructability of projects. An approved RPMP siting means that the initiative meets all siting and development requirements and IDG criteria. (AR 210-20, paragraph 3-8a)

b. Projects requiring site approval. All proposed projects, as categorized below, must be sited in the approved installation RPMP regardless of the type of funding or project size. (AR 210-20, paragraph 3-8c)

c. Technical review requirements. Project sitings for certain types of projects, such as those involving ammunition, explosives, ranges and training land, environmental cleanup, antiterrorism and force protection, high security facilities and systems, communication facilities, and aviation facilities require authorization by special approving authorities prior to project submittal. The installation RPMP will note the special approving agency and date of their site approval. AR 415-15 will be consulted for detailed descriptions of these types of projects. (AR 210-20, paragraph 3-8d)

d. Site approval request procedures. For projects that are not identified on the installation RPMP and that require site approval, a site approval request will be sent by the garrison commander through the senior mission commander, to the designated IMCOM staff for approval. (AR 210-20, paragraph 3-8e)

7-4. The Real Property Planning Board (RPPB)

a. The garrison commander, in consultation with IMA regional directors, will establish, convene, and maintain records of the installation RPPB in accordance with AR 25-400-2. The installation RPPB will assist the garrison commander in managing, developing, and in some cases realigning, cleaning up, and closing the installation or area facilities and real estate. (AR 210-20, paragraph 4-1)

b. The RPPB will-

(1) Act as the installation "city planning council" to ensure the orderly development and management of installation real property in support of missions, management processes, and achieving community objectives. (AR 210-20, paragraph 4-2a)

(2) Guide the development and maintenance of all components of the installation RPMP. (AR 210-20, paragraph 4-2b)

7-5. Functions of safety managers

a. Actively participate in the garrison or installation master planning process (RPPB) and annually review the installation master plan to ensure construction is not planned inside ESQD

arcs. When construction that is not related to A&E operations is required within ESQD, ensure ESSPs, submissions and explosives licenses are updated and approved at the appropriate level. (DA Pam 385-64, paragraph 1-6a(12))

b. Review the garrison or installation master plan and ESQD compliance for planned facilities on existing A&E sites both prior to and after construction. (DA Pam 385-64, paragraph 1-6a(8))

c. Annually review (and document the review) the garrison's or installation's explosives location map to monitor encroachment within ESQD and ensure required explosives safety site plans, submissions and explosives licenses are accomplished. Each garrison or installation shall maintain a map showing locations of A&E. These maps shall be developed jointly by Garrison or Installation facility engineering or public works, plans and operations, safety, and logistics elements. The Garrison or Installation Real Property Utilization Board will use this map when proposing new uses or changes in use of garrison or installation real estate. (DA Pam 385-64, paragraph 1-6a(14) & 1-11)

7-6. Real property known or suspected to contain Munitions and Explosives of Concern (MEC), Unexploded Ordinance (UXO), or Chemical Warfare Materiel (CWM)

a. This section establishes criteria designed to protect human health and the environment from real property that could be known or suspected to contain MEC, UXO, or CWM. Installation activities, real property usage, and even mission may change over periods of time. What was a former tank or artillery range several years ago may be scheduled for reuse as barracks, Post Exchange, or even a child development center today or tomorrow. No one wants to hear in the news media that a commander has to explain to congress why he/she allowed a multimillion dollar facility to be built in an area; only to find out that facility cannot be used because it was built on an old contaminated impact range. Even worse would be a commander facing a negligent homicide court marshal because some child found a 40mm grenade on the new park playground that detonated. It is part of the explosives safety program that any planned construction on a military installation is reviewed and the former use of the real property must be researched to establish a risk assessment to evaluate the potential hazards of known or suspected MEC, UXO, or CWM presence or contamination.

b. Real property known or suspected to contain MEC, UXO, or CWM could consists of land (and water bodies thereon); and buildings, to include installed equipment (such as, process piping, ventilation ducting, drain piping). Real property may contain MEC, UXO, or CWM as the result of munitions-related activities. Such activities include but may not be limited to livefire training and testing, munitions production, renovation or demilitarization, including open burning and open detonation (OB/OD), and disposal activities (such as, land burial, sea disposal). Other property (such as, property adjacent to active installations), with the exception of operational ranges (see below), that may contain MEC, UXO, or CWM as a result of activities conducted on the installation.

c. To identify present and future areas that may contain MEC, UXO, or CWM Army installations will maintain permanent records of:

(1) Locations of real property and facilities known or suspected to contain MEC, Material Presenting a Potential Explosive Hazard (MPPEH), and areas where a munitions response

(cleanup) has been completed, but residual hazards are known or suspected to be present the map must contain the date the map was last validated.

(2) All property (for example, operational ranges, former ranges) known or suspected to contain MEC on installation master plans and maps. Records for these areas will identify the category of MEC; for example, UXO, Discarded Military Munitions (DMM), munitions constituents (MC), CWM in sufficient concentrations to pose an explosive or chemical hazard, the types of munitions known or most likely present and, if known, the quantity, nomenclature and any known or suspected locations.

(3) Range firing records.

(4) Explosives or munitions emergency responses conducted at the site.

(5) Archival Search Reports (ASR).

(6) Any munitions response actions previously conducted at the site. Munitions response actions, include, but may not be limited to—

(a) Time critical removal actions (TCRA).

(b) Non-time critical removal actions (NTCRA).

(c) Remedial actions;

(d) Closure actions, if applicable, required for RCRA-permitted facilities (such as OB/OD sites, A&E manufacturing facilities).

d. Before construction it is necessary to ensure the real property has been evaluated to determine the probability of encountering MEC, UXO, or CWM items that may have been part of past land use. Historical records search and/or on-site investigation data may indicate that, given the military or munitions-related activities that occurred at the site, the likelihood of encountering MEC, UXO, or CWM may be determined. It may be determined from records that the probability of encountering MEC, UXO, or CWM items or scrap associated with these items:

(1) is considered not possible and not probable. This means there are no records to indicate the real property was ever used for live-fire training, for maneuver training, to include maneuver training involving the use of smokes, pyrotechnics and simulators; as firing points; for munitions inspection, handling, storage or transfers, to include residue points and inert storage yards; for air defense; or as munitions operating facilities in which the processes used did not result in the generation of concentrations of munitions constituents high enough to present an explosive hazard.

(2) determined that the probability of encountering MEC is low if it is considered possible, but not probable if the area was ever used for live-fire training, for maneuver training, to include maneuver training involving the use of smokes, pyrotechnics and simulators; as firing points; for munitions inspection, handling, storage or transfers, to include residue points and inert storage yards; for air defense; or as munitions operating facilities in which the processes used did not result in the generation of concentrations of munitions constituents high enough to present an explosive hazard.

(3) is “moderate to high” determination may be assigned to those areas for which a search of available historical records and/or on-site investigation data indicates that, given the military or munitions-related activities that occurred at the site, there is more than a low probability that MEC is present. Munitions-related activities that may merit a “moderate to high” determination include, but are not limited to the use of an area for live-fire training, other than exclusively with SAA; as a range impact area; for OB or OD of excess, obsolete, or unserviceable munitions; as munitions operating facilities where processes used might have resulted in the generation of concentrations of munitions constituents high enough to present an explosive hazard; or for

munitions burial.

e. Any work, such as preliminary assessments, site visits, surveying, marking search lanes, geophysical investigation that does not involve ground disturbing or other intrusive activities, intentional contact with MEC, UXO, or CWM or placement of explosives on the site does not require an explosives safety submission. However, any real property that has a greater than low probability of encountering MEC, UXO, or CWM should contact the Corps of Engineers Center of Expertise in Huntsville, Alabama for assistance.

f. When areas that are known or suspected to contain UXO are present on Army installations, including installations affected by BRAC or formerly used defense sites (FUDS), the installation, garrison or district commander will—

(1) Provide UXO safety education training or information, such as brochures, to people living on the installation or FUDS or that work on or use the property. Such training will be based on and incorporate the Army's 3Rs (Recognize, Retreat, Report) message and safety education material (available at <https://www.denix.osd.mil/uxosafety>). Such training will also be offered to schools on or in close proximity to the installation or FUDS on a periodic basis.

(2) The command will determine how this training will be provided. The U.S. Army provides UXO safety training and safety education that can be accessed at the Defense Environmental Network and Information Exchange Web site at <https://www.denix.osd.mil>. The installation, garrison or district safety office will ensure that coordination with Public Affairs and the appropriate support personnel is accomplished. EOD and other personnel with technical knowledge of UXO hazards may provide assistance.

(3) Any construction on any military installation or former installation should have a program to educate contractors about the Army's 3Rs and have as part of the contract that if any MEC, UXO, or CWM items are encountered or suspected to be encountered all work stops until it is determined by EOD or other qualified individual appointed by the commander and by virtue of training found in TP 18 to identify MEC, UXO, or CWM that the item is not MEC, UXO, or CWM.

7-7. What to look for

a. Is there a documented and adequately managed master planning process responsive to explosives safety requirements and restrictions?

b. Is a master planner or equivalent assigned and responsible for maintaining planning documents?

c. Is the master planning review process incorporated into site planning, has chain of command involvement, and manages encroachment?

d. Are explosives storage and operating areas accurately depicted on master planning documents?

e. Are master planning documents maintained and updated to reflect changes to facilities and operations? Is a process in place for review and update of explosives safety installation maps?

Chapter 8. Site Planning

Explosives safety site plans accurately reflect Army and DoD ammunition and explosives (A&E) operations, facilities, and safety requirements. A well-prepared explosives safety site plan (ESSP) allows for an effective and efficient review process and prevents delays in project construction or start-up due to the review and approval challenges.

8-1. Background

The DoD 6055.09-M requires the military services to submit required explosives safety submissions (RESSs) to the DDESB for review and approval. Additionally, it requires installations to maintain current installation maps showing approved explosives safety quantity distance (ESQD) arcs for approved explosives safety site plans (ESSPs) or risk-based evaluation distances and proposed ESSPs that are reconciled with the installation's master plan. Army guidance for ESSPs are found in AR 385-10, DA Pam 385-64, and DA Pam 385-65.

8-2. Policy

a. The ESMP must establish and define the roles and responsibilities for the ESSP process for the organization.

b. Coordination for ESSPs should include the following organizations: safety, explosives safety, master planning, operators/operating units, others involved with A&E operations, facility engineering, public works, logistics, environmental and health, security, and fire department.

c. When tenant (including other Military Services, other governmental agencies or non-government organizations) or joint base potential explosion sites (PESs) or exposed sites (ESs) are involved, policies must be established in the ESMP that outline the coordination process for explosives safety submissions.

(1) A tenant unit should coordinate its ESSP submission requirements for PESs and/or ESs with the host installation as well as the tenant's chain-of-command.

(2) When a PES exposes another activity on the installation, the activity owning the PES will coordinate with the exposed activity and obtain written acknowledgment of the exposure and potential risk, and its acceptance of the risk prior to addressing the exposure in an ESSP.

(3) During the coordination process, the tenant should inform its chain-of-command of the exposure and associated risk.

8-3. ESSP process

a. ESSP approval shall be obtained:

(1) Prior to starting new construction for a potential explosion site (PES) or an exposed site (ES) within ESQD arcs of a PES or otherwise covered by explosives safety criteria.

(2) Prior to starting construction to modify existing facilities within ESQD arcs or otherwise covered by explosive safety criteria.

(3) Prior to starting new explosives operations not previously sited.

(4) Prior to modifying existing explosives operations where there will be an increased risk, such as increasing the sited explosives limits or changing the hazard division (HD).

b. Limited exceptions to these requirements for explosive safety site approval are provided

in DA Pam 385-64.

- c. The ESMP must designate a point of contact for coordinating the processing of explosives safety site plans (ESSPs).
- d. Activities will submit ESSPs electronically in portable document format (PDF) through their chain-of-command to USATCES per requirements of AR 385-10. The use of Explosives Safety Siting (ESS) software is the preferred method of creating site plans.
- e. ESSPs that include protective construction designs to reduce QD requirements or for personnel protection will be coordinated with the U.S. Army Engineering and Support Center, Huntsville, AL or the Naval Facilities Engineering Command / Engineering Service Center (NAVFAC ESC), Port Hueneme, CA prior to submission to USATCES.
- f. Submit to USATCES any plans, changes, or corrections that result in modifications to ESQDs, increased ES risk, or that require protective design construction features be incorporated into facilities.
- g. The organization having the A&E mission is responsible for retaining official documentation of the approved site plan. The garrison will maintain a copy of the approved site plan for master planning purposes.
- h. Appendix B provides a comprehensive written process flow for ESSPs.

8-4. RDT&E ranges, test areas and support facilities

An explosives safety site plan is required for all explosives operations and testing. An exception to this requirement is authorized where the explosives operation/testing is conducted in accordance with established danger zones of Range Safety regulations. When utilizing range safety danger zone criteria for an RDT&E explosives operation/test, deviations from range standards or procedures contained in AR 385-63 or DA Pam 385-63 are not authorized and the operation/test must have an explosives safety site plan.

8-5. What to look for

- a. Is there a documented and adequately managed site planning process, responsive to explosives safety requirements, and meeting Army and DoD requirements.
- b. Is a site planning process in place? Is an automated site planning tool being used? Is an explosives site review process incorporated into master planning and chain of command involvement? Is an explosives safety council or equivalent in place for explosives safety reviews?
- c. Are leases for commercial use of government or military property and/or facilities permitted and approved?
- d. Are all explosive and exposed sites formally sited? Are "grandfathered" facilities in use and documented?
- e. Are site plans available, maintained and updated to reflect existing facilities and operations? Do Army approved explosives facilities have appropriate approvals?

8-6. ESSP approval flowchart

The flowchart on the next page is a suggested ESSP approval process.

Notes:

1. When a site plan is not required, the organization having the A&E mission will need to comply with their ESMP for all of the other explosives safety requirements contained in DA Pam 385-64, e.g. storage licensing, fire protection, etc.
2. The garrison safety office will staff the ESSP through the respective garrison offices, such as master planning, fire and emergency services, other affected organizations, etc., as directed in the installation ESMP.
3. When a site plan is returned to the organization having the A&E mission for rework, they may rectify the issues and return the site plan directly to the issue originator.
4. Any questions that arise during review/approval at the Army/DoD level will be coordinated by USATCES. Army organizations are not to contact the DDESB directly.

Chapter 9. Facilities Conformance

9-1. Facilities conformance

a. Explosives storage and operations facilities (known as PESs), as well as facilities exposed (known as ESs) to them, must conform to the DA and DoD ESSP documentation. In addition, facilities must meet construction requirements as detailed in approved drawings including fire suppression and electrical standards, lightning protection and electrical dissipation systems, and consideration of glass hazards. Barricades and substantial dividing walls need to be considered in the conformance evaluation. In some cases, these facilities may be addressed on a Certificate of Risk Acceptance (CoRA), waiver, exemption, or a Secretarial Certification (also known as a Certificate of Compelling Reason (CCR).

b. The categories of facilities to be evaluated are dependent on the type of mission and whether they are DoD or non-DoD facilities. See paragraph 6-5 for a partial list. It is imperative that the facilities of all tenants be evaluated for conformance.

9-2. Terms

a. PES - the location of a quantity of explosives that will create blast, fragment, thermal, or debris hazard in the event of an accidental explosion of its contents.

b. ES (ES) - a location exposed to the potential hazardous effects (blast, fragments, debris and heat flux) from an explosion at a PES.

9-3. How to do it

a. Identify the appropriate organizations with the responsibility and expertise to execute the below tasks. Identify and implement the appropriate processes to ensure the smooth flow of information, reviews, and decision-making goes to/through the correct organizations. This includes DoD and non-DoD organizations.

b. A review of the construction drawings and supporting documentation is the primary method to determine if a facility meets explosive safety standards. This is primarily accomplished during the site planning process.

c. Performing periodic inspections of the actual facilities is also used to determine if they are in compliance with the site plan. Conduct an area inspection of the area encumbered by the explosive arcs and review the installation master map. During these inspections it is important to ensure that there has been no undocumented/unapproved encroachment (such as new construction or operational changes) upon the explosive safety arcs. In addition, ensure that there are no unapproved modifications to the facilities.

d. Review previous inspection reports to ensure that defects have been documented and that corrective action has been planned.

9-4. What to look for

Do explosives storage and exposed facilities conform to Army and DoD site plan documentation, description and location? (Categories of facilities to be evaluated are dependent on the type of installation and Service). Facilities lacking site plan documentation or approval are addressed in the "Site Planning" evaluation area.

9-5. Facilities to be evaluated.

a. Flight related facilities - Runways, taxiways, combat aircraft parking areas (CAPA), arming and de-arming, hot cargo pad, survival systems, aviation and life support equipment storage (ALSE), safety of flight shops, silos, joint use flight operations, launch and flight test facilities, thrust and test stands, and hangars.

b. Ground and weapon related facilities - Ammunition holding areas (AHA), forward arming and refueling points (FARP), static missile sites, basic load ammunition holding area (BLAHA), earth-covered magazines (ECM), aboveground magazines (AGM), storage pads, rail sidings, munitions build-up, munitions assembly/disassembly, chemical ammunition and agent storage, chemical ammunition and agent destruction, military operations other than war (MOOTW) facilities or operations, manufacturing areas, training and test ranges, and operations buildings.

c. Common explosives facilities - General vehicle parking areas, uploaded vehicle parking, suspect cargo, rail facilities, holding pads, stuffing and unstuffing facilities, explosives routes, security facilities, reduced quantity-distance (QD) containers, laboratories, arms rooms, barricades, non-DoD operations, explosive ordnance disposal (EOD) operations, destruction and disposal operations, emergency response facilities, base realignment and closure (BRAC), and remediation sites.

d. Vessel related facilities - Piers, anchorages, wharfs, scuttling sites, and associated facilities and operations.

Chapter 10. Facility Maintenance

10-1. Facility maintenance

a. Facility maintenance is an all-inclusive process to ensure explosives facilities are maintained in accordance with Army and DoD requirements. It is imperative to maintain explosives facilities, and the supporting facilities such as barricades, to the highest standard to ensure safe operations and the continuance of the mission.

b. These facilities include, but are not limited to, all storage locations (aboveground magazines, earth-covered magazines, open pads, warehouses), barricades, lightning protection systems to include centenary and integral, operating buildings, arms rooms, security systems used to protect ammunition and explosives facilities, piers, wharfs, laboratories, test facilities, explosive-laden truck holding areas, just to name a few. See paragraph 6-5 for more facilities.

10-2. How to do it

a. Identify the appropriate organizations with the responsibility and expertise to execute the below tasks. Identify and implement the appropriate processes to ensure the smooth flow of information, reviews, and decision-making goes to/through the correct organizations. This includes DoD and non-DoD organizations.

b. Ensure facility maintenance plans and schedules are in place for explosives related and supporting structures.

c. Ensure action plans are in place for identifying, funding, and correcting facility deficiencies (repair, replacement, modification).

d. Ensure periodic inspection and trend analysis are conducted on lightning protection systems. See DA Pam 385-64 for guidance.

e. Ensure specialized training and certification provided (if required) to maintain explosives facilities.

Chapter 11. Ranges

11-1. Ranges and explosives safety

a. Ranges and their management are a required component of the safety ESMP in accordance with AR 385-10.

b. The official definition of ranges is - when used in a geographic sense - a designated land or water area that is set aside, managed, and used for range activities of the DoD. Ranges include the following:

(1) Firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, electronic scoring sites, buffer zones with restricted access, and exclusionary areas.

(2) Airspace areas designated for military use in accordance with regulations and procedures prescribed by the Administrator of the Federal Aviation Administration (FAA).

c. Other common terms used in conjunction with ranges which must be given explosive safety consideration are: EOD ranges, indoor firing ranges, outdoor ranges with surface danger zones (SDZ), underwater ranges, research and development test ranges, shoot houses, breaching facilities, munitions disposal (treatment), and burning grounds.

d. Certain support facilities located on ranges must have a DDESB approved ESSP. For a thorough explanation, see DA Pam 385-65. These facilities include:

(1) Range support facilities (for example, ammunition holding areas, storage pads, resupply points, ammunition transfer points (ATP), loading docks, burn pans, and handling areas) that are designed, constructed and used for recurring ammunition operations and that are located on or near ranges. Range support facilities that are only used to store and handle hazard class / division 1.4 ammunition do not require ESSPs.

(2) Areas used repeatedly for tactical field training in ammunition support operations (for example, a grid square within a range used for training units in the establishment of field ammunition supply points (ASP) or ATPs). See DA Pam 385-65 for further discussion.

(3) Locations that are used for training EOD personnel, combat engineers, and other ammunition technicians in the destruction or treatment of ammunition and explosives (for example, open burn or open detonation). See DA Pam 385-65 for further discussion.

(4) Locations that are or will be permitted by Federal or State environmental protection agencies for treatment of explosives, regardless of other uses. See DA Pam 385-64 for further discussion.

e. Forward Arming / Refueling Points (FARP) used by aviation units will have a DDESB approved ESSP. See DA Pam 385-64 for further discussion.

f. For use of non-DoD property and areas outside of the United States as ranges, see AR 385-63, Range Safety.

g. Range cleanup on operational and closed ranges must be addressed within the ESMP.

11-2. Range safety training and certification

a. The Senior Commander will:

(1) Ensure essential personnel involved with live-fire training receive appropriate range safety training such as the Army/Marine Corps Interservice Range Safety Course (Intermediate),

which provides policies and techniques necessary for safe and efficient range operations. (AR 385-63, paragraph 1-9a(3))

(2) Implement a certification program for installation range officer in charge (OIC)/range safety officers (RSOs). (AR 385-63, paragraph 1-9a(4))

11-3. RDT&E operations

a. RDT&E operations present unique challenges to explosive safety in regard to explosive safety site planning and range operations. Safety directors of organizations with a RDT&E mission will utilize and document application of appropriate explosive safety considerations per DA Pam 385-64 and DA Pam 385-65 for all explosives operations. However, when a test to be conducted is a better fit to a surface danger zone (SDZ) than the methodologies of the SDZ process, with appropriate safety factors, can be used to manage safety associated with this test.

b. RDT&E explosive operations that are conducted on an approved range with established surface danger zones (SDZ) and/or weapon danger zones (WDZ) IAW DA Pam 385-63 and the effects from blast, fragmentation, firebrand, ricochets, and munition debris is contained within the SDZ/WDZ, an explosives safety site plan is not required. When a munition and/or weapon system does not have an approved SDZ/WDZ, an engineering analysis based upon the methodology within DA Pam 385-63 will be completed. A risk acceptance must be completed to document the process.

11-4. How to do it.

a. Responsibilities of leaders at all levels are spelled out within the publications listed in paragraph 10-3. The positions of responsibility, as well as the organizations, must be addressed within the ESMP.

b. AR 350-19, The Army Sustainable Range Program, provides requirements for range operations that must be included in range regulations and standard operation procedures. These items are an integral part of an ESMP.

c. Ensure the following are addressed;

(1) Range operations are formally controlled (normally through a centralized Range Control organization).

(2) Range SOP according to AR 385-63.

(3) Range hazard zones are established and monitored.

(4) Required training and certification is provided to operators and users.

(5) Munitions and explosives controls are in place.

(6) Explosives safety arcs are included on the Installation Master Planning map.

11-5. What to look for

a. Are explosives safety provisions enforced during range operations? Are DoD regulations being applied: DoD 4715.15 Operational Range Assessments; DoD 4140.62 Material Potentially Presenting and Explosives Hazard; DoD 3200.16 Operations Range Clearance, DoD 4515.11 Environment and Explosives Safety Management on Operational Ranges within the United States; DoD 4715.12 Environment and Explosives Safety Management on Operational Ranges outside the United States? Is AR 385-63 requirements being applied?

b. Are range operations formally controlled? Are range hazard zones established and

monitored? Is training provided operators and users? Are munitions and explosives controls in place?

c. Is the scope of range operations addressed: EOD ranges, indoor firing ranges, outdoor training ranges (w/SDZ), underwater ranges, R&D test ranges, shoot houses, breaching facilities, munitions disposal, burning grounds?

d. Is range cleanup on operational ranges being performed? Range cleanup on closed ranges being performed?

e. Are explosives safety distances and risk management applied during use of operational, test, disposal and training ranges?

Chapter 12. Demilitarization/Destruction

12-1. Demilitarization/destruction methods

Disposition of ammunition, explosives, and propellants will be accomplished by reclamation, open detonation (OD), open burning (OB), incineration, or other approved methods. Unless emergency disposition is required, resource recovery and recycling efforts will be the primary means of disposing of unwanted ammunition and explosive materials. The burying or dumping of ammunition, explosives, or propellants is not an approved method of disposal. (DA Pam 385-64, paragraph 15-2)

12-2. Safety and occupational health

Managers of ammunition demilitarization or destruction programs shall achieve a safe working environment by providing effective management and supervision, by developing work practices that contribute to risk reduction, by selecting equipment with inherently safe design, by providing appropriate training, and by making available effective personal protective equipment (PPE). Given the wide range of possible demilitarization/destruction technical solutions, it is not possible to provide a precise and complete set of specifications that apply to all situations. Thus ammunition demilitarization/destruction organizations should develop and maintain management procedures and processes that will enable safety and occupational health risks to be identified, evaluated and reduced in a systematic and timely manner for each demilitarization or destruction task and for each demilitarization or destruction worksite.

12-3. Explosive safety procedures

The need for effective and safe operational procedures is essential. Standing operating procedures (SOPs) should be prepared for all operational procedures, practices and drills. SOPs are instructions that define the preferred method of conducting an operational task or activity. Their purpose is to establish recognizable and measurable degrees of uniformity, consistency and commonality within an organization with the aim of improving operational effectiveness and safety. SOPs should reflect local requirements and circumstances but shall remain flexible and responsive to new concepts and technologies.

12-4. Policy

Prohibit the disposal (for example, burying and dumping) of DoD military munitions on land or in water except when specifically authorized by the SA or his or her designee. This prohibition does not preclude covering munitions with earth to control fragments and noise during authorized testing or destruction by detonation, or the use of in-situ capping, when implemented as an engineered remedy under an authorized munitions response action.

12-5. Functions of safety managers

- a.* Ensure that plans and protective construction designs for demilitarization, and disposal facilities are reviewed for compliance with safety standards, by appropriately trained personnel.
- b.* Monitor, on a periodic basis, A&E disposal and demilitarization activities to evaluate explosives safety and the integration of risk management.
- c.* Ensure that all Demilitarization/Destruction operations have current SOPs in place.

12-6. What to look for

- a.* Are demilitarization and destruction operations conducted in accordance with Army and DoD requirements?
- b.* Are net explosive weights (NEW) and hazard division (HD) limits and controls established for demilitarization and destruction operations?
- c.* Are dedicated or special use facilities being utilized (i.e., chemical facilities, furnace, burn pans, robotic, mechanical disassembly areas, destruction chambers)?
- d.* Is recycling of explosive and non-explosive materials controlled, certified and managed?
- e.* Are certified personnel required to operate equipment or facilities?

Chapter 13. Risk Management

13-1. Process

a. Explosive safety site planning is the risk management process associated with explosives/toxic chemical activities to ensure the minimum risk to personnel, equipment, and assets, while meeting mission requirements. This management process also ensures that risks above those normally accepted for ammunition and explosives activities are identified and approved at the proper management level.

b. The current DA policy is to use a Certificate of Risk Acceptance (CoRA) (DA Form 7632) to document and accept a risk associated with a deviation from DoD and Army explosives safety or chemical agent safety standards at the appropriate level of command. See DA Pam 385-30 for guidance.

c. A Secretarial Certification (also known as a Certificate for Compelling Reason (CCR) is granted by the Assistant Secretary of the Army (Installation, Energy & Environment) to build or perform a major modification on a structure that violates or will violate the provisions of the DA regulations and pamphlets. There is currently no standard form for a CCR. Needs for CCRs should be rare. See DA Pam 385-30 for guidance.

d. Organizations with an A&E mission must have a well-defined process to prepare, submit, review, and approve CoRAs. A suggested process is shown in the flowchart below.

13-2. How to do it

a. Identify the appropriate organizations with the responsibility and expertise to execute the tasks. Identify and implement the appropriate processes to ensure the smooth flow of information, reviews, and decision-making goes to/through the correct organizations. This includes DoD and non-DoD organizations.

b. Safety organizations are well-versed in the risk management process and should be a key player.

c. Ensure that other service DoD (Air Force, Navy, Marines, etc) and non-DoD organizations are part of the process. In some situations their operations may present a hazard to Army personnel and assets, and in other situations the Army might hazard their personnel and assets. All parties must work together to concur, or mitigate, the various risks.

13-3. What to look for

a. Is there a risk management process that ensures the responsible use of resources in identifying, evaluating, managing (i.e., preventing, controlling, mitigating) the potential explosives and chemical agent safety risks?

b. Are CoRAs or CCRs in place to address deviations from Army and DoD standards?

c. Are hazards tracked, monitored, evaluated, and management controls adjusted as necessary?

d. Is hazard control information transmitted to personnel (i.e., personnel are aware of explosives hazards, signage, farmers, grass cutters, hunters, fishing, etc.)?

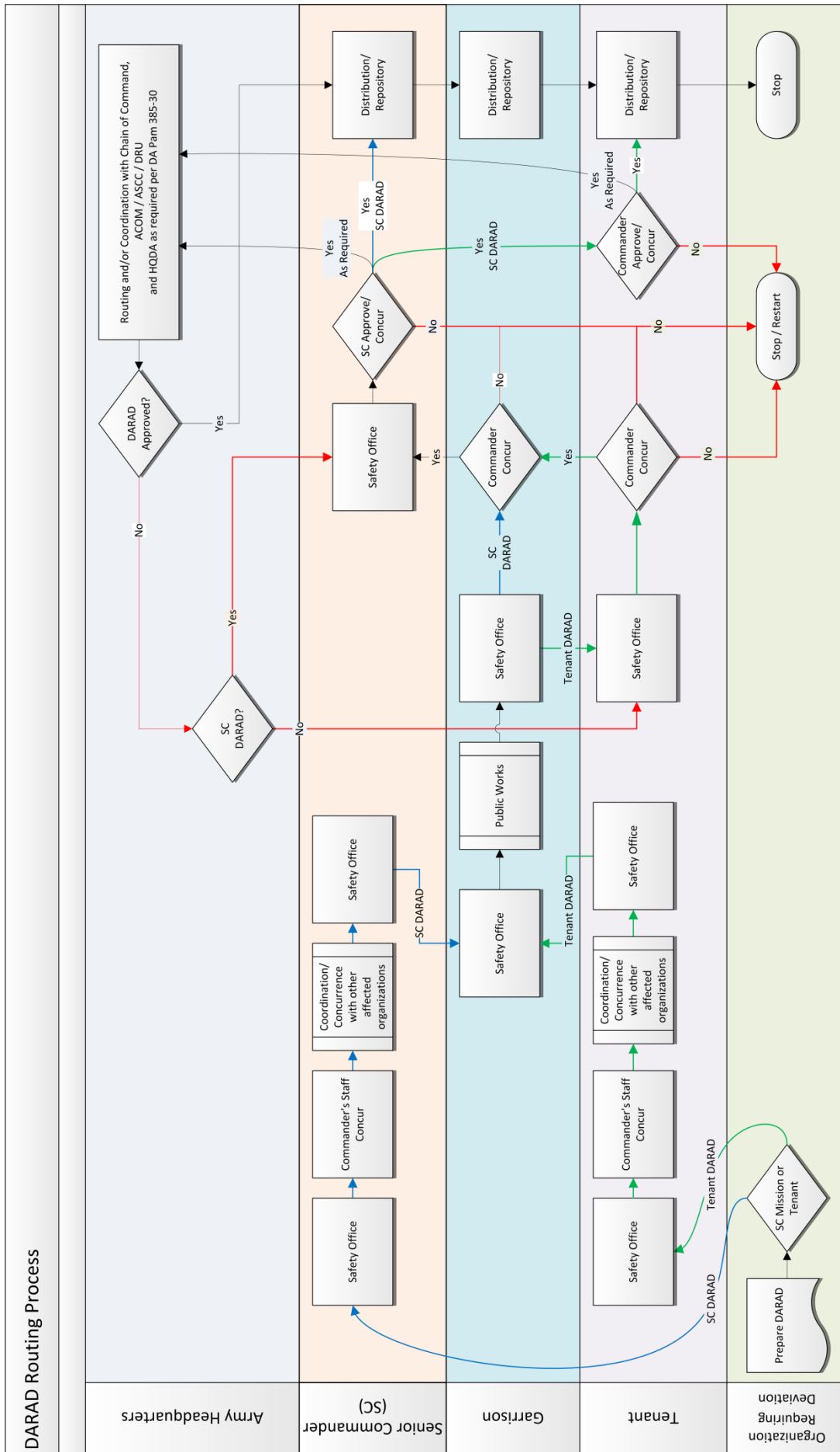
e. Are risk decisions made and accepted at levels per DA Pam 385-30??

13-4. CoRA approval flowchart

The flowchart on the next page is a suggested approval process for a risk acceptance. DA Pam 385-30, Risk Management is under revision. The new revision will replace the term CoRA with DARAD, Deviation Approval and Risk Acceptance Document.

Notes:

1. See DA Pam 385-30, paragraph 4-9f for standards determining risk ownership and DARAD routing.
2. Risk acceptance may occur at various stages of this process, depending on the risk level.
3. The SC lane and the term "SC DARAD" encompasses DARADs initiated by any local activity falling under the SC's command, including both garrison and mission organizations.
4. The "Safety Office" in the SC lane refers to the senior commander's designated safety office.
5. Routing/coordination with HQDA may include USATCES, ODASAF and/or ASA(IEE). See DA Pam 385-30, paragraph 4-10.



Chapter 14. Accident Prevention Program

14-1. Purpose

- a.* Accident prevention programs are designed to mitigate and eliminate explosive accidents and incidents before they occur.
- b.* Ensure that lessons learned from mishap are being disseminated and, as appropriate, incorporate in training programs, policies, and operating procedures.
- c.* Evaluate all accidents/near misses to determine root cause and identification of preventable measures. Report and document findings for command review.

14-2. Promote a culture of safety

- a.* Empowering personnel to stop operations that are unsafe
- b.* Emphasize safe operation over scheduling
- c.* Develop posters, fliers, slogans
- d.* Provide daily, weekly safety meetings
- e.* Reward safe working habits and ideas
- f.* Establish ownership/accountability

14-3. What to look for

- a.* Is there an accident prevention program managed to mitigate or eliminate explosives accidents and incidents?
- b.* Are lessons learned from mishaps (incidents) being disseminated and, as appropriate, incorporated in training programs and operating procedures?
- c.* Are explosives accidents evaluated to determine root cause and identification of preventative measures?
- d.* Are accidents reported and documented for Army review?
- e.* Does the organization promote a culture of safety (i.e., empowering personnel to stop operations that are unsafe, emphasize safe operations over scheduling, etc.)?

Chapter 15. Emergency Response

15-1. Emergency planning

Emergency Planning establishes the procedures and processes that an organization will follow when responding to an emergency. The goal of emergency planning is to protect life, health, property, and to restore normal operations as soon as possible. The emergency planning process is documented in the emergency plan. The emergency plan should address immediate response actions to protect life and property and longer-term actions to manage full recovery operations, whether the incident has only local effects or has impact on a broader, regional, or even national basis. The goal is to provide short-term relief immediately while putting into place the necessary actions to maintain or restore full operational capability. DA Pam 385-10, chapter 10 provides general principles that should be followed when developing an emergency plan, as required in AR 385-10, chapter 19. Conventional munitions and explosives are a challenge to those charged with responding to emergencies that involve these items. DA Pam 385-10, chapter 11 outlines the process for preparing the Army response to this type of emergency.

a. Installations, garrisons or responsible activities will develop Standing Operating Procedures (SOPs) or plans designed to provide safety, security, and environmental protection. Plans will be coordinated with the appropriate Federal, state, and local emergency response authorities (such as law enforcement, fire departments, and hospitals) and any established Local Emergency Planning Committees (LEPCs). At a minimum, these SOPs or plans shall include-

(1) Specific sections and guidance that address emergency preparedness, contingency planning, and security. With respect to security, these SOPs or plans will include provisions that limit access to trained and authorized personnel. (DA Pam 385-64 paragraph 6-20a)

(2) Procedures that minimize the possibility of an unpermitted or uncontrolled detonation, release, discharge, or migration of military munitions or explosives out of any storage unit when such release, discharge, or migration may endanger human health or the environment. (DA Pam 385-64 paragraph 6-20b)

(3) Provisions for prompt notification to emergency response and environmental agencies and the potentially affected public in the event of an actual or potential detonation or uncontrolled release, discharge, or migration that may endanger human health or the environment. (DA Pam 385-64 paragraph 6-20c)

(4) Provisions for complying with the Emergency Planning Community Right-To-Know Act (EPCRA), Section 302-312 and DoD or DA implementing policies. (DA Pam 385-64 paragraph 6-20d)

15-2. Functions of safety managers

a. Safety Directors shall ensure procedures are developed and in place for:

(1) Maintaining fire symbols and chemical hazard symbols current with actual Ammunition and Explosives (A&E) stored at a particular location. (DA Pam 385-64 paragraph 1-6a)

(2) Ensuring that personnel responsible for managing A&E keep current information on the type and location of A&E storage and provide this information to safety and firefighting personnel. (DA Pam 385-64 paragraph 1-6b)

(3) Training of personnel responsible for A&E-related operations, operational personnel including security personnel, and firefighters in fire symbols and chemical hazard symbols and in

precautions and procedures for fighting fires when A&E is involved. (DA Pam 385-64 paragraph 1-6c)

(4) Existence of adequate communications between safety, firefighting, security, emergency response, and ammunition surveillance and storage personnel. (DA Pam 385-64 paragraph 1-6d)

(5) Maintenance of current maps, showing all explosives locations with fire and chemical hazard symbols, and current facility response cards and notebooks for A&E storage by fire station communication centers. (DA Pam 385-64 paragraph 1-6e)

15-3. IATG 06.50 - Specific safety precautions (storage and operations)

The following is an excerpt from the International Ammunition Technical Guideline 06.50 produced by the United Nations. The latest version of the guideline, together with information on the work of the technical review panel, can be found at www.un.org/disarmament/convarms/Ammunition.

a. The heads of the establishment at any facility or location where explosives are processed, handled or stored shall ensure that adequate emergency arrangements are in place. Such contingencies include accidents resulting in property damage, fire, explosion, injury and fatality. Identification of contingencies will be aided by a comprehensive site-wide risk assessment. Incidents for which emergency plans shall be required are major incidents with effects throughout the site, external to the site, or relatively minor local incidents.

b. In addition to specifying emergency actions for the building where the primary incident occurs, emergency plans should specify actions for personnel in adjacent buildings. For example, it may be safer for personnel to remain where they are. Personnel shall be made familiar with the actions to be taken in emergency. Notices giving information regarding emergency action in the event of fire, evacuation and first aid shall be displayed at suitable locations throughout the site, and these are to include all process buildings. Emergency instructions shall include details on how to shut processes down safely, how to move to a safe place, and arrangements for re-entering the explosives area after an emergency incident.

c. Arrangements shall be made to ensure that any particularly vulnerable persons such as visitors or any disabled people are conducted to safety in an emergency. Fire and evacuation drills shall be carried out for process buildings at least every six months. All available exits shall be used during the evacuation drill. Records of the exercises shall be maintained and where appropriate post exercise reports prepared.

d. A part of the emergency planning process is the consideration of the provision of external fire fighting force and medical assistance. The latter may encompass first aid parties, nursing staff, qualified medical practitioners, ambulances, medical supplies and facilities. Because of the particular nature of injuries that result from accidents involving explosives, these arrangements should normally include the provision of medical personnel who are adequately trained to deal with such injuries. At small sites where less hazardous classes or small quantities of explosives are involved, specially trained first aiders may suffice. Special consideration shall be given to those working with explosives in remote locations, and plans shall be made to provide medical assistance and evacuation to a hospital as quickly as possible. A part of the emergency planning process for sites with the potential for major explosives accidents will include the designation of buildings for use as temporary casualty clearing stations.

15-4. What to look for

- a.* Are adequate emergency response facilities, documentation, and training in place to support the explosives safety mission?
- b.* Are fire department and cooperative agreements (if required) in place, and emergency response planning being conducted?
- c.* Do firefighters have a thorough knowledge of the hazards associated with ammunition and explosives fires, expected reactions, and signage?
- d.* Is appropriate equipment for responders in place and exercised?

Chapter 16. Inspections/Evaluations/Audits

16-1. Commanders

Conduct periodic inspections and/or audits of A&E activities to ensure compliance with the installation/activity ESMP, AR 385-10, and DA Pam 385-64, including compliance with the Hazards of Electromagnetic Radiation to Ordnance program requirements.

16-2. Safety managers

Ensure a safety inspection is conducted at least annually for all areas where A&E-related activities (for example, production, handling, storage, use, maintenance, munition response, demilitarization, and disposal) routinely occur. Maintain a list of all such areas and records of inspections. (DA Pam 385-64, paragraph 1-6b(5))

16-3. Explosives safety inspections

Periodic (at least annual) inspections shall be conducted to evaluate the safety of explosives storage, packing, handling, surveillance, maintenance, demilitarization, and disposal activities. Inspections should use a team approach and include those elements with ESMP-related responsibilities in explosives safety (for example, safety, QASAS, logistics, and public works subject matter experts). Findings shall be documented and followed-up to ensure implementation and effectiveness of corrective measures. DA Pam 385-64, paragraph 1-9 provides minimum inspection elements.

16-4. Ammunition and explosives transportation surveys

Garrisons, installations, and units shall conduct periodic surveys of sample A&E transportation activities to evaluate implementation of A&E transportation safety requirements. As above, such surveys should use a team approach. DA Pam 385-64, paragraph 1-10 provides minimum inspection elements.

16-5. Range inspections

The garrison safety manager will participate in final range acceptance inspections following construction, renovation, or modification of facilities prior to any firing on the range. (AR 385-63, paragraph 1-9b(10))

16-6. What to look for

- a.* Are results of other inspections, evaluations, audits and surveillance efforts incorporated into action plans and lessons learned?
- b.* Are results of higher headquarters, IG, DDESB evaluations/inspections being reviewed?
- c.* Are action plans developed, assigned and tracked to remediate inspection deficiencies?
- d.* Are lessons learned from inspections incorporated to prevent re-occurrence or improve performance?
- e.* Is an appropriate inspection frequency in place to identify and track deficiencies?

Chapter 17. Explosives Safety Issuances

17-1. General

a. Explosives safety issuances consist of, but may not be limited to, local policies (e.g., SOPs), Army regulations, pamphlets, and other publications.

b. Periodically, clarifications and amendments to policy are disseminated by various A&E proponent agencies. These can take the form of interim guidance in memo format from the proponent, rapid action revisions which do not change the promulgation date, and other sources such as the USATCES Explosives Safety Bulletin.

c. Installation or activity policies should comply with Army and DoD requirements and should be reviewed by explosives safety personnel prior to approval. Some compensatory measures to manage risk may be required. These measures may be the closing of certain roads during operations or not conducting an operation while another is operational. These types of measures should be documented and controls in place to ensure compliance.

d. Every Army facility must be aware of and take precautions with any Hazards of Electromagnetic Radiation to Ordnance (HERO) unsafe munitions on their installation. If a HERO unsafe munition is located on an Army installation or if a munition will be rendered HERO unsafe, the installation commander will be notified. Operations that may render munitions HERO unsafe include, but are not limited to, demilitarization, research and development, maintenance operations and disassembly operations.

17-2. What to look for

a. Are explosives safety procedures and documents developed, updated, maintained, issued and enforced in accordance with Army, DoD and local requirements?

b. Are compensatory explosives safety measures identified and enforced?

c. Do local instructions, policies, and operating procedures include explosives safety review and approval?

d. Are electromagnetic radiation hazards documented and exposures controlled?

Chapter 18. Records Management

18-1. Managing and maintaining records

- a.* Examples of documentation:
 - (1) Explosives Safety Site Plans (ESSP)
 - (2) Certificate of Risk Acceptance (CoRA)
 - (3) Certificate of Compelling Reasons (CCR)
 - (4) Explosive licenses for A&E facilities
 - (5) Range deviations and approvals
 - (6) Installation Master Plan containing Explosive arcs for A&E areas, updated
 - (7) Approved Ammunition and Explosive Standing Operating Procedures (SOP) repository
 - (8) Training documentation
 - (9) Fire and Emergency Response Plans associated with A&E operations
 - (10) Training Ranges, Impact Areas, and UXO restricted area documentation
 - (11) Lightning Protection Systems (LPS) testing/inspection documentation
 - (12) Real property inventory listing for A&E storage structures, operating lines, and ranges
 - (13) POC's for Occupational Safety, Industrial Hygiene, EOD, QASAS ect.
 - (14) Previous Army/DoD review/survey findings and corrective actions documentation.
 - (15) Lesson learned from explosive accidents and investigation paperwork trail.
 - (16) Amnesty Program
 - (17) Continuity Book - A&E documentation and procedures from unit to unit transitions
 - (18) Contractor Explosive Safety oversight of contract requirements

18-2. Goals of records management program

- a.* Creation of records that adequately document the organization's functions, policies, and procedures.
- b.* Maintain and periodic review of an explosives records database
- c.* Records maintained at each specific A&E mission location
- d.* Inventory records managed at a central controlled point (Safety Office) to comply with ESSP and explosives storage license requirements
- e.* Records management principles and automated records management systems aid in the capture, classification, and ongoing management of records throughout their lifecycle. Such a system may be paper based, or may be a computer system, such as an electronic records management application.

18-3. What to look for

- a.* Are explosives safety records managed and maintained in accordance with Army and DoD requirements?
- b.* Is continuity documentation maintained and available?
- c.* Are inventory records managed to control NEW, HD, and compatibility requirements per site plans and licensing?
- d.* Electronic site (GIS) data is consistent with installation documentation and records?

Chapter 19. Training

19-1. Command responsibility

Commanders are to ensure civilian and military personnel receive explosives safety training as required by Army policy and standards, including risk management training for those responsible for the development and review of deviations and risk assessments. (AR 385-10, paragraph 1-4ii(2))

19-2. Safety manager responsibility

Safety managers ensure explosives safety training requirements are properly identified, resourced, and complied with. (AR 385-10, paragraph 5-4b(6))

19-3. Personnel requirements

a. All personnel, supervisory and non-supervisory, who conduct A&E-related activities, have completed safety training appropriate for their activities including periodic refresher training. Training has been accomplished as required in table 1-1 of DA Pam 385-64. (DA Pam 385-64, paragraph 1-8a)

b. Personnel working with A&E are trained in the tasks they are to perform and understand the risks, standards, procedures, and precautions that apply to their tasks. (DA Pam 385-64, paragraph 2-3)

c. Personnel directing, supervising, planning, or performing A&E-related functions are certified under the ACOM/ASCC/DRU explosives safety certification program. (DA Pam 385-64, paragraph 2-3)

d. Personnel with responsibilities for using fire extinguishers receive training on general principles of fire extinguisher use and the hazards involved with incipient stage fire fighting upon initial assignment and at least annually thereafter. (DA Pam 385-64, paragraph 6-10b)

e. All personnel involved with the classification, preparation of items and/or bills of lading, inspection of vehicles and/or shipments, loading or unloading of carriers, driving, or other duties that directly involve the transportation of A&E complete training and certification IAW DTR 4500.9-R and DOT regulations. (DA Pam 385-64, paragraph 20-2)

f. When areas known or suspected to contain UXO exist on an installation the commander ensures UXO safety education training/information is provided to people living on the installation/FUDES or that work on or use the property. Training is based on and incorporates the 3Rs (Recognize, Retreat, Report) message. Safety education material is offered to schools on or in close proximity to the installation/FUDES on a periodic basis. (DA Pam 385-64, paragraph 2-16)

19-4. What to look for

a. Does the organization require and provide available adequate resources for explosives safety training?

b. Is a training program formally established, funded and tracked? Are training requirements established and in place? (NOTE: Mandatory for Risk Management)

c. Is specialized and appropriate training being provided (i.e., chemical agents, lightning

protection systems, explosives safety material handling, accident investigation, emergency responders, site planners, etc)? (NOTE: Mandatory for lightning protection systems)

d. Is electronic site data consistent with installation documentation and records?

Appendix A Explosives Safety Management Program Self Assessment

Section 1	Command Policy	
Section 2	Explosives safety management programs	
Section 2.1	Commanders Responsibility	
2.1.1	Has the commander established an ESMP in compliance with AR 385-10 and DA Pam 385-64?	AR 385-10 para 1-4ii(1)
2.1.2	Has the commander appointed a safety manager per AR 385-10 who is qualified under OPM standards as the point of contact for all aspects of the ESMP? Safety managers serve as primary point of contact for all ESMP-related actions, coordinating with tenant unit commanders and other agencies and providing concurrence on tenant ESMPs.	AR 385-10 para 5-4b(2) and DA Pam 385-64 para 1-5c(2) and 1-6b(1) and (7)
2.1.3	Does the Commander ensure competent and qualified personnel initiate and review site plans, safety submissions, and facility designs and that installation master plans consider A&E safety requirements?	DA Pam 385-64, para 1-5.c.(3)
2.1.4	Does the Commander ensure competent and qualified personnel initiate and review explosive safety Certificates of Risk Acceptance and provide the Commander guidance on risk assessment/acceptance?	DA Pam 385-64, para 1-5.c.(4)
2.1.5	Does the ESMP charter and prescribe responsibilities, composition, and procedures for a local explosives safety council.	AR 385-10 para 5-3(f)
2.1.6	When an existing facility or activity violates the provisions of AR 385-10 or DA Pam 385-64, are CoRAs (waivers and exemptions) executed and the risk accepted at the appropriate level of command (DA Pam 385-30 Table 4-2) in accordance with DA Pam 385-30?	AR 385-10, para 5-5.b; DA Pam 385-30, para 4-11.c
Section 2.2	Command Interest	
2.2.1	Does the Commander ensure that operating, training, and construction plans and budgets provide resources adequate to comply with explosives safety requirements and to abate explosives safety hazards?	DA Pam 385-64, para 1-5.c.(5)
2.2.2	Does the Command Group show an interest in the explosives safety program?	
2.2.3	Do member(s) of the Command Group attend the in-briefings with external explosives safety review teams?	
2.2.4	Do member(s) of the Command Group attend the out-briefings with external explosives safety review teams?	
2.2.5	Is the Command Group actively involved with the tracking and resolution of explosives safety deficiencies and concerns?	
Section 2.3	Safety Office Responsibility	
2.3.1	Does the safety manager brief command and staff as necessary to keep leadership informed of explosives safety requirements and issues and the status of the commander's ESMP?	AR 385-10 para 5-4b(3) and DA Pam 385-64 para 1-6b(19)

2.3.2	Does the Safety Manager annually review (and document) the installation A&E location map to monitor encroachment within explosives safety arcs and ensure required licensing and site planning is accomplished?	DA Pam 385-64, para 1-6.b. (14)
2.3.3	Does the Safety Manager ensure all PES and ES, both military and civilian, are indicated on approved explosives safety site plans/submissions?	DA Pam 385-64, para 1-6.b. (3)
2.3.4	When building or performing a major modification on a structure (greater than 15 percent of current value) that violates or will violate the provisions of AR 385-10 or DA Pam 385-64, does the commander certify such projects as essential due to operational necessity or other compelling reasons and obtain written authority by a CCR from the appropriate level of command (DA Pam 385-30 Table 4-2)?	AR 385-10, para 5-5.b; DA Pam 385-30, para 4-11.c
2.3.5	Does the Safety Manager ensure plans and designs for A&E manufacture, testing, storage, surveillance, maintenance, demilitarization, and disposal facilities are reviewed, by appropriately trained personnel, for compliance with safety standards?	DA Pam 385-64, para 1-6.b. (4)
2.3.6	When construction not related to A&E operations is required within explosive safety arcs, does the Safety Manager ensure explosive safety site plans and explosive licenses are updated and approved at the appropriate level?	DA Pam 385-64, para 1-6.b. (12)
2.3.8	Does the safety manager ensure procedures are developed and in place for the maintenance of current maps, showing all A&E locations with fire/chemical hazard symbols, and current facility response cards/notebooks for A&E storage in fire station communication centers?	DA Pam 385-64, para 1-6.b.(13)(e)
Section 3	Organization and Staffing	
Section 3.1	Technical Competency	
3.1.1	Is the safety office organized and staffed with a safety and occupational health professional qualified (trained) in explosives safety, including:	DA Pam 385-10, para 3-3.c-d and Table J-2
3.1.1.1	(a) executing Army weapons/Ammunition Malfunction Investigation Program;	
3.1.1.2	(b) establish/implementing an explosive safety program;	
3.1.1.3	(c) serving as POC for A&E safety actions;	
3.1.1.4	(d) advising on safe handling/storage/use of A&E;	
3.1.1.5	(e) reviewing site plans, safety submissions, and facility designs;	
3.1.1.6	(f) reviewing waivers and exemptions requests for facilities and equipment and provide the commander with essential risk data regarding the deficient situation;	
3.1.1.7	(g) reviewing MOAs with non-DoD organizations for the installation storage of non-DoD A&E?	
3.1.2	Are the members of the safety staff technically competent?	AR 385-10, para 2-6.b

3.1.3	Have the employees listed in DA Pam 385-64, Table 1-1 completed the training listed in Table 1-1?	DA Pam 385-64, para 1-8
Section 3.2	Staffing Adequacy	
3.2.1	Have safety professionals (Career Program 12 careerists) completed professional training courses as prescribed in ACTEDS?	AR 385-10 para 7-2.
3.2.2	Are initial and refresher courses completed?	DA Pam 385-64, Table 1-1
3.2.3	Is the safety office adequately staffed with trained and experienced personnel to support the explosives safety mission?	AR 385-10, para 2-6 and 2-7
	Note: Staffing could include other installation personnel who augment the Safety Office such as QASAS.	
Section 4	Site Planning	
Section 4.1	Explosives Safety Site Plans Availability and Currency	
4.1.1	Does the installation have A&E locations/facilities that do not have approved site plans?	DA Pam 385-64, para 4-1.a.(5); DA Pam 385-65, para 2-8.a
4.1.2	Are approved ESSPs available for range support facilities (i.e. AHAs, storage pads, resupply points, ATPs, loading docks, burn pads, and handling areas) that are designed, constructed, and used for recurring ammunition operations that are located on/near ranges?	DA Pam 385-65, para 2-8.a (8); DA Pam 385-64, para 4-1.a.(10)
4.1.3	Has the installation “grandfathered” any facilities?	AR 385-10, para 5-6.e; DA Pam 385-64, para 4-1.b.(7)
4.1.4	Do the installation safety office and the using organization maintain approved ESSPs, including the approval correspondence from DDESB and USATCES?	DA Pam 385-65, para 2-16 and 2-17
4.1.5	(a) Is the safety office the central/official repository for all site plans?	DA Pam 385-65, para 2-17
4.1.6	(b) Is each site plan complete to include all chain of command endorsements?	DA Pam 385-65, para 5-2.c.(4)
Section 4.2	Explosives Licenses on File	
4.2.1	Does the safety office have a complete file of all explosives licenses for installation A&E facilities?	DA Pam 385-64, para 5-2.g.
4.2.2	Has the safety office completed an annual review of all explosives licenses within the past 12 months?	DA Pam 385-64, para 5-1
4.2.3	Are the license limits IAW the DDESB approved limits in the site plan?	DA Pam 385-64, para 5-2.a.
Section 4.3	Explosives Storage Licenses	
4.3.1	Does the Safety Manager initiate development of explosives licenses, explosives safety site plans, and explosives safety waivers, exemptions and certificates of compelling reasons and coordinate these with appropriate staff elements (e.g., S-3, S-4, Engineering, and Logistics) and with QASAS support personnel?	DA Pam 385-64, para 1-6.b.(2)

4.3.2	Does the installation have any arms rooms storing A&E? If so, are they licensed IAW the Army Arms Rooms Policy? Is the installation complying with the provision of storing only ONE case of salute rounds in the arms room?	
	“IF APPLICABLE”; Note: Memorandum, Office of the Director of Army Safety (DACS-SF), 18 August 2004, subject: Storage of Operational, Training, and Ceremonial Ammunition in Arms Rooms	
Section 5	Facilities Conformance	
Section 5.1	Lightning Protection	
5.1.1	LPS Recordkeeping	
5.1.1.1	Are LPS inspections and test records available for six inspection cycles?	DA Pam 385-64, para 17-29
5.1.1.2	Do LPS test results have a drawing showing the location for each specific test point?	
5.1.1.3	Note: The drawing is required to ensure the same point is tested during each test cycle thus ensuring accurate trending.	
5.1.1.4	Is the LPS electrically tested (bonding resistance and resistance to earth tests) every two years, or after facility modification that may affect bonding?	DA Pam 385-64, table 17-1, and Appendices B and D
5.1.1.5	Is the LPS visually inspected every twelve (12) months?	DA Pam 385-64, table 17-1 and para 17-13 and 17-27
5.1.2	LPS Trend Analysis	
5.1.2.1	Is the safety office completing a trend analysis after each testing cycle?	DA Pam 385-64, para 17-29
5.1.2.2	(a) Are work orders submitted to correct deficiencies identified during LPS inspections and tests?	
5.1.2.3	(b) Does Safety monitor the work orders to ensure needed maintenance is accomplished?	DA Pam 385-64, para 17-13.c.(2)
5.1.2.4	Are repairs verified and retests accomplished after completion of the work?	
5.1.3	LPS Training Requirements	
5.1.3.1	Are personnel responsible for maintenance, inspection, and testing familiar with the fundamentals described in NFPA 780 and DA Pam 385-64?	DA Pam 385-64, para 17-13.c.(1)(b)
Section 6	Emergency Response	
6.1	6.1 Fire Station A&E Maps	
6.1.1	Do personnel responsible for managing A&E keep current information on the type and location of A&E storage and provide this information to safety and fire fighting personnel?	DA Pam 385-64 para 6-1.d.
Section 7	Tenants	

Section 8	Master Planning	
Section 8.1	Installation Master Plan	
8.1.1	Master Planning Participation	
8.1.2	When construction not related to A&E operations is required within QD arcs, safety managers ensure ESSPs and licenses are updated and approved at the appropriate level.	DA Pam 385-64 para 1-6b(12)
8.1.3	Does the Safety Manager review the installation master plan and QD compliance for planned facilities on existing A&E sites prior to and after construction?	DA Pam 385-64, para 1-6.b.(8)
8.1.4	Does the Safety Manager actively participate in the installation master planning process and annually review the installation master plan to ensure construction is not planned inside explosives safety arcs?	DA Pam 385-64, para 1-6.b. (12)
8.1.5	Do QASAS personnel provide technical assistance to Safety Managers in assisting in the installation master planning process and reviewing, annually, the installation master plan to ensure construction is not planned inside explosive safety arcs?	DA Pam 385-64, para 1-7.h.
Section 8.2	New Construction In/Near Explosives Area	
8.2.1	Does the installation have a consolidated explosives safety master plan?	DA Pam 385-64, para 1-11
8.2.1.1	(a) Is the master plan current?	
8.2.1.2	(b) Does the explosives safety manager's plan map show all explosives facilities and the associated QD arcs?	DA Pam 385-65, para 2-2
8.2.2	Is new construction/MCA underway, planned in, or near current A&E facilities?	DA Pam 385-64, para 1-11
8.2.3	Has the master plan been reconciled to assure there are no conflicts and/or impacts on explosives safety QD arcs?	DA Pam 385-64,
8.2.4	Has the Safety Manager reviewed the master plan and QD compliance for planned facilities prior to and after construction?	DA Pam 385-64, para 1-7.f
Section 9	Ranges	
Section 9.1	Range Control	
9.1.1	Has the Range Control Officer developed an installation-level range regulation and/or SOP?	AR 385-63, para 1-6.c (18); DA Pam 385-64, para 1-12
9.1.2	Does the command ensure warnings are issued at least 24 hours in advance through public news media, indicating the date and time before firing operations that may involve possible hazards to the general public?	DA Pam 385-63, para 1-6.a (3)
Section 9.2	Range Operations	
9.2.1	Are procedures established and functioning for controlling and coordinating the use of airspace?	DA Pam 385-63, para 2-4
9.2.2	Is there a local policy in place to stop all firing when aircraft traverse the controlled firing area?	DA Pam 385-63, para 2-4.f

9.2.3	Do the RCO, Installation Safety, and the QASAS review and provide oversight of range operations to ensure proper explosives practices on ranges?	DA Pam 385-63, para 1-6.b, c and d
9.2.4	Is the RCO exercising oversight of the unit range OIC and RSO training programs and serving as the authority on suspension or termination of OIC/RSO certifications?	DA Pam 385-63, para 1-6.c (12)
Section 9.3	Range Records	
9.3.1	Does range control maintain current maps and/or other documentation showing current and former impact areas?	DA Pam 385-63, para 1-6.c (8)
	Note: SDZs and ground hazards are range operation functions, normally not a part of explosives safety. Also, SDZs are very specific and developed for each training event and considers the training scenario, weapon(s) system(s) involved, munition(s) to be fired, and training objectives to be met.	
9.3.2	Are files maintained and updated with current and historical usage data on the installation range(s) to include known hazards, type of ammunition expended on each range, dud accumulation/disposal records, and clearance status?	DA Pam 385-63, para 1-6.c (4)
Section 9.4	Range Access and Visibility	
9.4.1	Are warning signs posted around the installation training complex to warn and prohibit entry by unauthorized persons and to alert authorized personnel entering a hazard area?	DA Pam 385-63, para 2-2
9.4.2	Are scarlet danger flags (range flags) displayed and supplemented by a blinking red light during hours of darkness at appropriate points to warn personnel approaching a firing area in use?	DA Pam 385-63, para 4-2.a
9.4.2.1	(a) Are impact areas properly posted with the correct UXO warning signs?	
9.4.2.2	(b) Are they located at the appropriate intervals?	
9.4.2.3	(c) Have other positive controls been implemented?	DA Pam 385-63, para's 2-1.b, 2-2.b, and 2-2.c
9.4.2.4	(d) Are they in English, and if applicable, the appropriate foreign language? "AS APPLICABLE"	DA Pam 385-63, para 2-2.d
Section 10	Contractors	
Section 10.1	Contract Requirements	
10.1.1	Does the contracting officer insert contract requirements for DoD 4145.26-M to apply to contractors performing work or services on DoD contracts, subcontracts, purchase orders, or other methods for ammunition and explosives?	AR 385-10, para 4-2.a and c
10.1.2	Is the contracting officer responsible, with input from the Director of Safety, for evaluating and assuring contractor compliance with the occupational safety and health requirements in the contract?	AR 385-10, para 4-5.a

10.1.3	Whenever the contracting officer becomes aware of any noncompliance with contract safety requirements or any condition that poses a serious or imminent danger to the health or safety of the public or Government personnel, does the contracting officer:	AR 385-10, para 4-5.b
10.1.3.1	(1) notify the contractor orally,	
10.1.3.2	(2) follow-up with written confirmation,	
10.1.3.3	(3) request immediate initiation of corrective action?	
10.1.4	If, after receiving notice, the contractor fails or refuses to take prompt corrective action, does the contracting officer issue an order stopping all or part of the work until satisfactory corrective action has been taken?	AR 385-10, para 4-5.d
Section 11	Facility Maintenance	
Section 12	Demilitarization/Destruction	
Section 13	CRM	
13.1	Does the Safety Manager review CoRAs and CCRs for completeness and accuracy prior to forwarding for approval?	DA Pam 385-64, para 1-6.b.(10); DA Pam 385-10, para 2-20.b
13.2	Is DA Form 7632 (Certificate of Risk Acceptance) used to document and accept risks associated with violations of explosives safety standards?	DA Pam 385-30, para 1-5.d; DA Pam 385-64, para 1-4.a.
13.3	Does Safety Manager maintain a list of approved CORAs, waivers, exemptions; and advise the incoming commander of existing CORAs, waivers, exemptions, deviations and plans for correction?	DA Pam 385-64, para 1-6.b.(11)
13.4	Are copies of CoRAs:	DA Pam 385-30, para 4-11.g
13.5	(1) for greater than sixty-calendar days provided to the organization's ACOM, ASCC, and DRU safety office,	
13.6	(2) for a period greater than sixty-calendar days provided to USATCES?	
13.7	Are CCRs processed in accordance with requirements of DA Pam 385-30 para 4-12?	DA Pam 385-30, para 4-12
13.8	Are there situations requiring an explosives safety CoRA/CCR for which one has not been prepared?	DA Pam 385-64, para 1-4.a; DA Pam 385-65, para 2-7; DA Pam 385-30
13.9	Are all explosives safety CoRAs/CCRs approved by the appropriate level of command?	DA Pam 385-65, para 2-7.a; DA Pam 385-30, table 4-2
13.10	Note: Waivers and exemptions in existence prior to the change to CoRA.	
13.11	Are CoRAs and the supporting risk analysis reviewed annually for changes, i.e. encroachment, increase in hazard, and mission requirements?	DA Pam 385-65, para 2-7.c (2)

13.12	Note: Waivers and exemptions in existence prior to the change to CoRA.	
13.13	Has a CoRA been used to alter or bypass regulatory (DoD, Army, Federal, State, or other authority) requirements or policies for convenience rather than a documented compelling or strategic reason?	DA Pam 385-30, para 1-7.a
Section 14	Explosives Safety Issuances	
Section 14.1	Safety Information Distribution	
14.1.1	Does the safety office maximize distribution of explosives safety information and promotional material (e.g., safety alerts, messages, safety posters, safety of use messages, HQDA policy, CSA/VCSA Sends, etc.) USATCES Explosives Safety Bulletin?	DA Pam 385-10, Table J-2
Section 15	Records Management	
Section 16	Inspections/Evaluations/Audits	
Section 16.1	Safety Inspections	
16.1.1	Does the Safety Manager ensure safety inspections are conducted for all A&E production, handling, storage, use, maintenance, demilitarization, and disposal areas at least annually and maintain a list of all such areas and records of inspections?	DA Pam 385-64, para 1-6.b.(5)
16.1.2	Monitor, on periodic basis, selected A&E-related activities/operations to evaluate explosives safety and integration of risk management?	DA Pam 385-64, para 1-6.b. (15), (16)
16.1.3	Is the safety office a member of a work planning council or group that receives work orders to ensure those involving explosives safety receive appropriate priority for correction based upon the safety risk?	
16.1.4	Does the Safety Manager serve as the focal point for and coordinate explosives safety program requirements with tenant unit Commanders and provide concurrence on explosives safety programs of tenant units?	DA Pam 385-64, para 1-6.b.(7)
16.1.5	Investigate and report A&E accidents, incidents and mishaps, per DODM 6055.09-M, AR 385-10, and DA Pam 385-40, and document disseminate explosives safety lessons learned?	DA Pam 385-64, para 1-6.b.(18)
Section 17	Training	
Section 17.1	Employee Training	
17.1.1	Are safety managers ensuring explosives safety training requirements are properly identified, resourced, and complied with?	AR 385-10 para 5-4b(6)
17.1.2	Is explosives safety training being completed by installation personnel with A&E responsibilities, such as those who produce, handle, transport, store, inspect, test, maintain, use, demilitarize or dispose of explosives?	AR 385-10, para 10-10.b; DA Pam 385-64, para 1-8 and table 1-1

17.1.3	Does the Safety Manager ensure procedures are developed and in place for training personnel responsible for A&E operations, operational personnel (including security personnel), and fire fighters in fire and chemical hazard symbols and in precautions and procedures for fighting fires when A&E are involved?	DA Pam 385-64, para 1-6.b.(13)
17.1.4	Have all personnel, supervisory and non-supervisory, who conduct A&E-related activities completed safety training appropriate for their activities including periodic refresher training. Training has been accomplished as required in table 1-1 of DA Pam 385-64?	DA Pam 385-64 para 1-8a-b
17.1.5	Are personnel with responsibilities for using fire extinguishers receiving training on general principles of fire extinguisher use and the hazards involved with incipient stage fire fighting upon initial assignment and at least annually thereafter?	DA Pam 385-64 para 6-10b
17.1.6	Have personnel involved with the classification, preparation of items and/or bills of lading, inspection of vehicles and/or shipments, loading or unloading of carriers, driving, or other duties that directly involve the transportation of A&E completed training and certification IAW DTR 4500.9-R and DOT regulations?	DA Pam 385-64 para 20-2
Section 17.2	Safety Personnel Training	
17.2.1	Have the safety specialists, managers and professionals completed the Army explosives safety courses identified in DA Pam 385-64 table 1-1?	DA Pam 385-64, para 1-8 and table 1-1
Section 17.3	Firefighter Training	
17.3.1	Are training of firefighters; adequacy of plans and procedures for responding to A&E emergencies; conduct of fire drills; and availability and adequacy of firefighting equipment and fire/chemical hazard symbols?	DA Pam 385-64, 1-10.f.
Section 17.4	UXO Awareness	
17.4.1	Has the installation commander established an aggressive education program for on-/off-post personnel to include school children (kindergarten through 12th grade) on the dangers of trespassing on ranges/training areas and the handling of UXO?	AR 385-63, para 1-6.a (1); DA Pam 385-63, para's 1-6.a (1) and 1-6.b (6); DA Pam 385-64, para 2-16.a.
17.4.2	Does the Safety Manager assist the Commander and staff with safety concerns associated with real property containing or suspected of containing A&E (UXO)?	DA Pam 385-64, para 1-6.b.(17)
Section 18	Accident Prevention Program	

Appendix B Explosives Safety Management Program Template

Installation

Explosives Safety Management Program

1. Purpose: This policy implements the Explosives Safety Management Program (ESMP) of **installation**. This policy complies with the requirements set forth in DoDD 6055.9E, DoDI 6055.16, DoDM 6055.09-M, AR 385-10, and DA Pam 385-64.
2. Applicability: This policy applies to all organizations with an ammunition and explosives (A&E) mission located on **installation**.
3. Responsibility: The Senior Commander for **Installation** is responsible for the overall ESMP. Commanders or directors of all tenant organizations located on **installation** with an A&E mission will establish and implement a written ESMP that complies with AR 385-10, DA Pam 385-64, and this policy. Tenant ESMPs will include A&E life cycle management from cradle to grave. Every effort will be taken to remove excess, unwanted, unneeded, or unknown A&E inventory from storage. Each organization will have a surveillance program to ensure safety of A&E in storage.
4. This policy implements the Executive Explosives Safety Council (EESC).
 - a. The EESC is chaired by the **installation** Senior Commander. The **installation** EESC will be organized as a standing installation council to discuss and resolve managerial explosive safety policy issues. The council gives all tenant headquarters a voice in the formulation of **installation** explosives safety policies. The council will make recommendations to the chairman on **installation** explosives safety policy and program management. This council will meet semi annually or at the call of the chairman. EESC members are ? **Will there be voting members?**
 - b. This policy also implements the **installation** Explosive Safety Working Group (ESWG) and is organized as standing working group to discuss and resolve technical explosives safety policy issues. The working group will give appropriate tenant organizations a voice in the formulation of technical explosives safety policy issues. This working group is chaired by the **Senior Commander** Safety Office. This working group will meet quarterly or at the call of the chairman. **Who are the members? Are there voting members?**
 - c. Any future proposed changes of the ESMP will be reviewed by ESWG and adopted by the EESC.
 - d. The proponent for this policy is **Senior Commander** Safety Office **and is executed by USAG-Garrison Safety Office.**

Organization and Staffing

Senior Commander Safety Office and **USAG-Garrison** Safety Office will be staffed appropriately to manage this ESMP. Tenant organizations will have adequate safety staff to manage their ESMP. Organizations without adequate explosives safety staff may request Quality Assurance Specialist (Ammunition Surveillance) (QASAS) technical assistance from HQ, AMC according to AR 702-12.

Tenants

All tenants with an A&E mission on Installation will have a detailed ESMP tailored to their operation which addresses the requirements stated in the AR 385-10 and DA Pam 385-64 as a minimum. A copy of the ESMP will be provided to the **Senior Commander** Safety Office. Each tenant will have a documented agreement (MOA, MOU or Lease) with the senior Commander related to explosive safety and ESMP. Any unique or unusual explosive operation which is not covered by DA Pam 385-64 will be documented in the agreement and brought to the attention of **Senior Commander** Safety Office.

Contractors

a. All contracts involving A&E will include DFARS, clause 223.370. Clause 223.370 requires the use of DoD contract safety manual and safety oversight. Also, this clause cannot be removed without authorization of Director of **Senior Commander** Safety. The requiring activity will review all contracts for other safety requirements.

b. Besides the DFARS clause, all A&E contracts on Installation will stipulate compliance with A&E safety requirements, accident reporting provisions and develop an ESMP as required by AR 385-10 and DA Pam 385-64.

c. For operations monitored by DCMA on **Installation**, the DCMA safety representative will coordinate issues with the **Senior Commander** Safety Office.

Master Planning

a. Real Property Master Planning (RPMP) is a continual, collaborative, and integrated process, primarily performed at the installation level, reflective of mission requirements. In order to maintain this process it is imperative that all **Installation** tenants utilize the systems specified in **(Garrison Regulation)** when requesting changes or additions to the RPMP. Chief, **Senior Commander** Safety Office will participate in the **Installation** Real Property Planning Board (RPPB) to ensure that all new construction is properly sited according to explosive safety standards.

b. Any real property known or suspected to contain Munitions and Explosives of Concern (MEC), Unexploded Ordnance (UXO), or Chemical Warfare Materiel (CWM) will be treated and handled according to USAG-**Garrison Regulation XX**.

c. The USAG-**Garrison** will review annually (and document the review) the **Installation** explosives location map to monitor encroachment within ESQD and ensure required explosives safety site plans, submissions and explosives licenses are accomplished. The **Senior Commander** Safety Office will monitor the overall **Installation** explosives map and address any conflicts and/or deviations required to maintain the master plan.

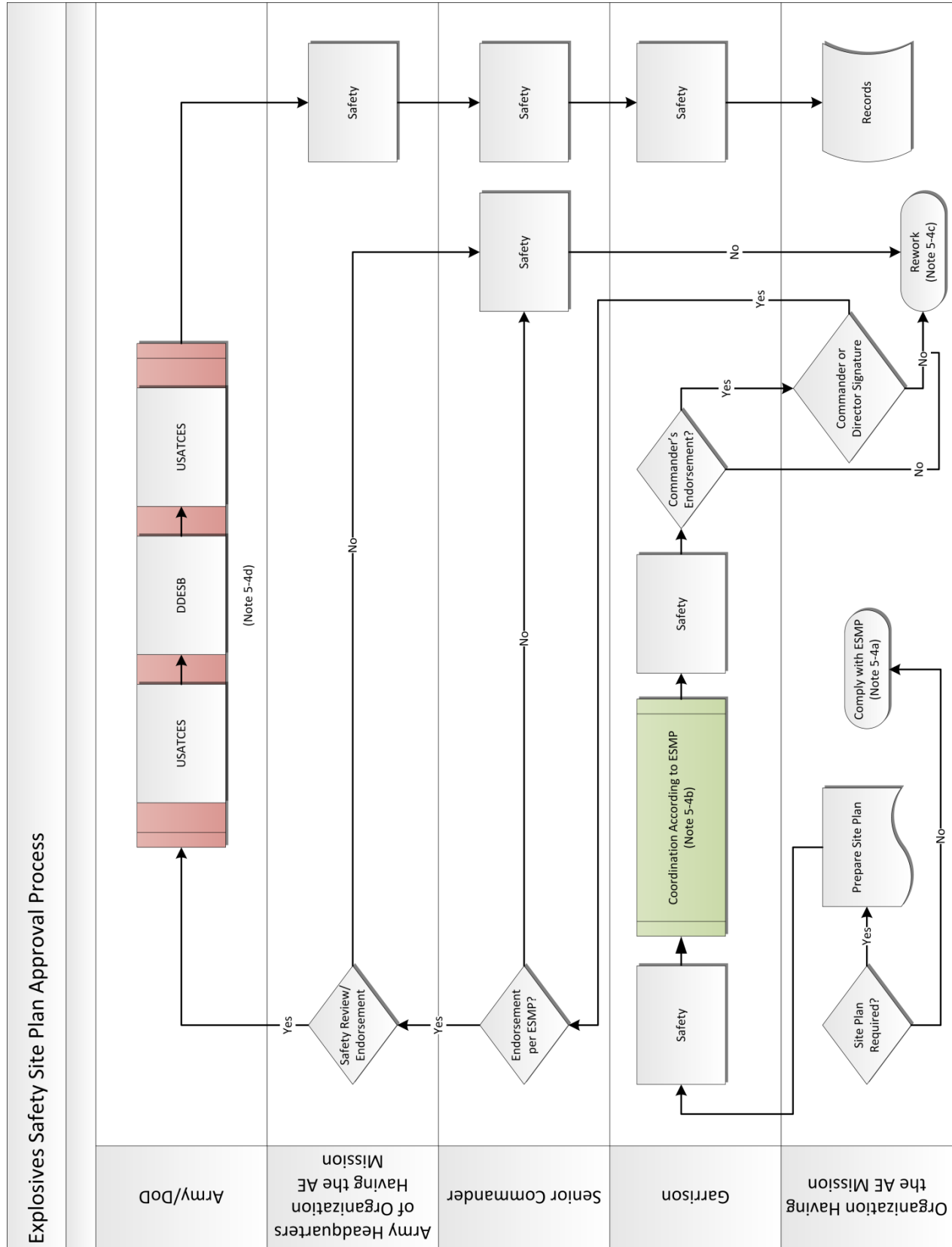
Site Planning

1. All locations with A&E on **installation** must have an approved Explosive Safety Site Plan (ESSP) as required by DA Pam 385-64 and DA Pam 385-65. All **installation** site plans will have the concurrence of the Senior Commander or designee.

2. All site plans for submission will be signed by the head of the submitting organization. Prior to submission to the Senior Commander, coordination will be completed with USAG-**Garrison**. Technical issues will be addressed by the **Senior Commander** Safety Office with affected organizations.

3. Coordination with the **Senior Commander** Safety Office during development of the ESSP will expedite the process. ESSPs that include protective construction designs to reduce QD requirements or for personnel protection will have engineering designs coordinated with and approved by the US Army Engineering and Support Center, Huntsville, AL or the Naval Facilities Engineering and Expeditionary Warfare Center (NAVFAC EXWC), Port Hueneme, CA prior to submission to USAG-**Garrison**.
4. The organization having the A&E mission is responsible to retain official documentation of the approved site plan. USAG-**Garrison** will maintain a copy of the approved site plan for master planning purposes.
5. All explosives facilities on **installation** must have an explosives license as required by the DA Pam 385-64. Each tenant will complete an explosives license request to USAG-**Garrison**. USAG-**Garrison** will review, approve and maintain a copy of the explosives license. Each tenant must maintain a copy and annually review the license against their site plan and provide USAG-**Garrison** a memorandum stating verification of review. Technical issues will be addressed by the **Senior Commander** Safety Office with affected organizations.

A suggested ESSP approval process is shown in the below flow chart.



Facilities Conformance

Tenants are responsible to ensure facility construction meets requirements of approved explosives safety site plan in accordance with the DA Pam 385-64. Tenants are also responsible for conducting periodic inspections of their facilities to ensure continued compliance with the approved ESSP and are responsible for submitting work orders for facility non-conformances. USAG-Garrison will review and release work orders pertaining to explosives safety for work completion. Senior Commander Safety Office / USAG-Garrison Safety Office have the authority to inspect any facility at any time on Installation.

Facility Maintenance

All organizations will have a program to address facility maintenance. Each Program will:

- e. Ensure facility maintenance plans and schedules are in place for explosives related and supporting structures.
- f. Ensure action plans are in place for identifying, funding, and correcting facility deficiencies (repair, replacement, modification).
- g. Ensure periodic inspection and trend analysis is conducted on lightning protection systems. See DA Pam 385-64 for guidance.
- h. Ensure specialized training and certification is provided (if required) to maintain explosives facilities.

Ranges

a. Organization is designated as the Senior Commander's representative for Command and Control (C2) for range and test areas on Installation and will work with USAG-Garrison to accomplish the installation range and test missions. All tenant activities will coordinate with Organization for current test and firing range status. Range operations will be in accordance with Standard Operating Procedures (SOP) published by Organization and USAG-Garrison. Any military forces to include Army National Guard and Army Reserves coming onto Installation for on post training will coordinate and schedule through USAG-Garrison.

b. Organizations with RDT&E mission will utilize DA Pam 385-64 criteria and documentation for all explosives operations. Safety Directors of organizations with a RDT&E mission will utilize and document application of appropriate explosive safety considerations per DA Pam 385-64 for all explosives operations (i.e. support facilities, loading rooms, temperature conditioning buildings, service magazines, open storage pads, etc.). However, when a test to be conducted involves the firing of a projectile (including rockets and missiles) or the delivery of bombs; and the use of a surface danger zone (SDZ) and/or weapon danger zones (WDZ) maximizes safety then, the SDZ process may be used IAW DA Pam 385-63. When a munition and/or weapon system does not have an approved SDZ/WDZ, the deviation process contained within DA Pam 385-63 will be followed. The deviation limitations listed in DA Pam 385-63 do not apply.

Demilitarization and Destruction

a. Demilitarization or destruction of ammunition, explosives, and propellants will be accomplished by reclamation, Open Burning / Open Detonation (OB/OD) incineration, or other approved methods.

b. **Organization** is designated as the Senior Commander's representative for demilitarization and disposal of A&E on **Installation** and operates the permitted OB/OD area. Any organization or tenant on Installation conducting demilitarization or destruction will have current SOPs in place. Safety managers for these organizations will periodically monitor A&E disposal and demilitarization activities.

c. In accordance with **Installation Regulation XX** the USAG-**Garrison** will be the single organization to contact the Explosives Ordnance Disposal (EOD) when EOD support is required. USAG-**Garrison** Safety will notify **Senior Commander** Safety of all EOD operations on Installation.

Risk Management

a. When DoD and Army Explosives Safety regulations and policies cannot be met on **Installation**, the procedures set forth in DA Pam 385-30 will be followed. The risk acceptance process for Army organizations is shown below in the CoRA/DARAD approval flow chart. Other Government Agencies (OGA) and Non Government Organizations (NGO) located on **Installation** will specify an equivalent risk acceptance process in their ESMP.

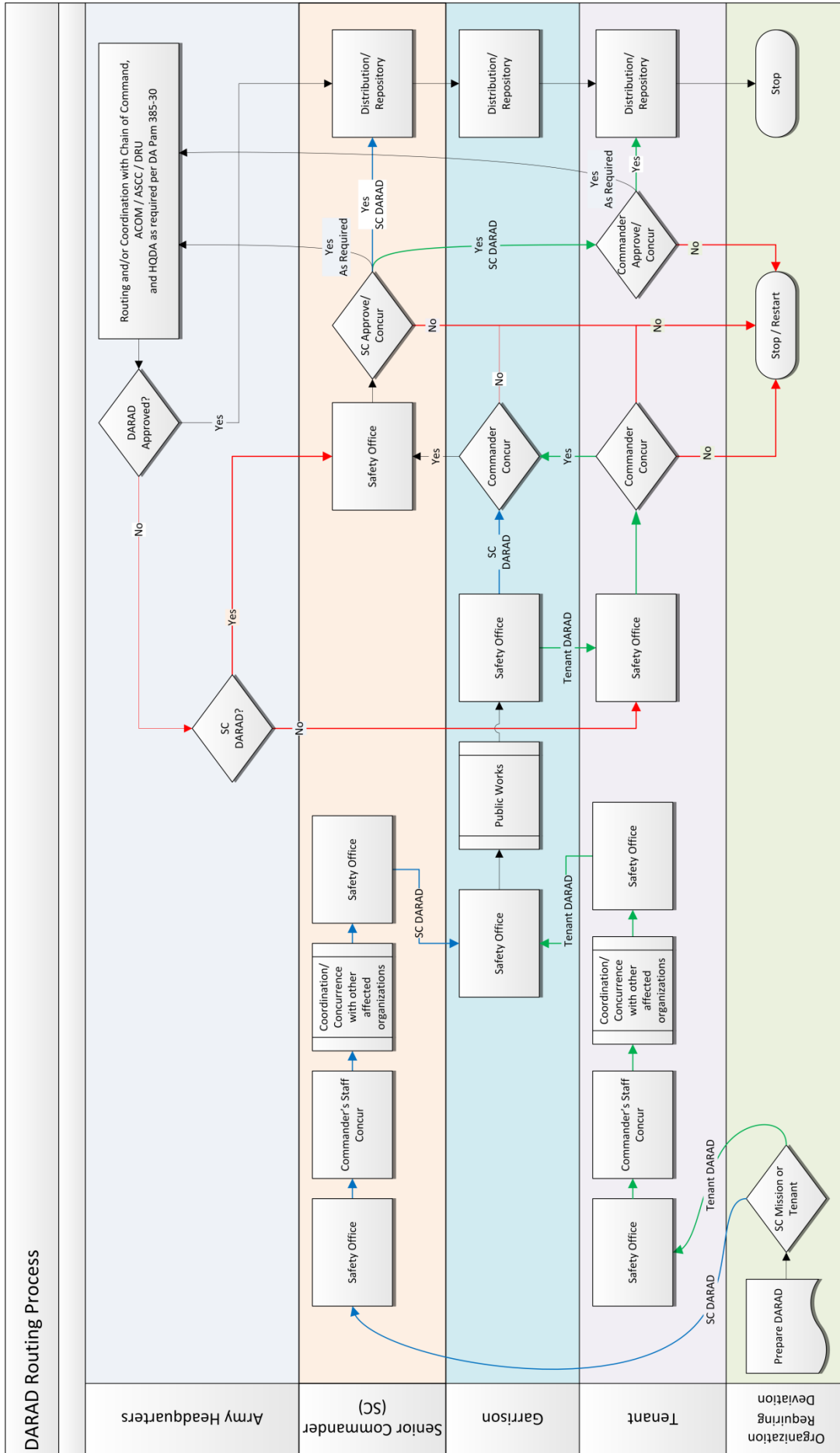
b. Approval authority will be equivalent to Army requirements specified in DA Pam 385-30. All risk acceptances requiring a CoRA/DARAD on **Installation** will be submitted to the **Senior Commander** Safety Office for review and USAG-**Garrison** for repository. All medium and high level risk acceptances will be concurred by the Senior Commander.

CoRA/DARAD approval flowchart

The flowchart on the next page is a suggested approval process for a risk acceptance. DA Pam 385-30, Mishap Risk Management is under revision. The new revision will replace the term CoRA with DARAD, Deviation Approval and Risk Acceptance Document.

Notes:

6. See DA Pam 385-30, paragraph 4-9f for standards determining risk ownership and DARAD routing.
7. Risk acceptance may occur at various stages of this process, depending on the risk level.
8. The SC lane and the term "SC DARAD" encompasses DARADs initiated by any local activity falling under the SC's command, including both garrison and mission organizations.
9. The "Safety Office" in the SC lane refers to the senior commander's designated safety office.
10. Routing/coordination with HQDA may include USATCES, ODASAF and/or ASA(IEE). See DA Pam 385-30, paragraph 4-10.



Accident Prevention Program

All tenants with an A&E mission on **Installation** will have explosive safety as an integral part of their accident prevention plan. This accident prevention plan will be tailored to their operation which addresses the requirements stated in the AR 385-10 table 1-1 and DA Pam 385-10 as a minimum. A copy of the accident prevention plan will be provided to the **Senior Commander** Safety Office.

Emergency Response

a. **Installation** Fire Department will conduct fire prevention inspections in A&E facilities and have the authority to inspect any facility at any time on **Installation**. All organizations located on **Installation** with an A&E mission will maintain the proper fire and chemical hazard symbols of explosives present within the facility. In addition, **USAG-Garrison** Safety and the **Installation** Fire Department will be notified when those hazards change. In the event of an explosives accident, the **Installation** Fire Chief will be the Incident Commander in charge of the emergency response until the scene is declared safe.

b. The scene will be turned over to the Senior Commander. **Senior Commander** Safety Office and **USAG-Garrison**, Director of Emergency Services will control the site after completion of the emergency response actions. The scene will be secured by **USAG-Garrison** security force until the Senior Commander releases the accident scene.

c. **Insert provisions for complying with the Emergency Planning Community Right-to-Know Act (EPCRA), Section 302-312 and DOD or DA implementing policies. (DA Pam 385-64 paragraph 6-20d)**

d. **Insert information about local emergency planning committee.**

e. Each organization with A&E missions on **Installation** will develop emergency action plan (EAP) and will practice their plan at least annually. There will be an annual **Installation** wide emergency drill specific to an A&E accident or incident.

f. Any release of information to the public will be made by the Senior Commander's Public Affairs Office (PAO) only.

g. Army Accident Investigation team will be coordinated through **Senior Commander** Safety Office. All class A & Class B Army explosive accidents will be lead by a board from US Army Safety Center or USATCES.

Inspections, Evaluations and Audits

a. All tenant organizations will conduct and document periodic internal (at least annual) inspections and/or audits of A&E activities to ensure compliance with DoD and Army A&E policies.

b. The tenant's safety office or other assigned safety personnel will document final A&E facilities acceptance inspections following construction, renovation, or modification of facilities prior to commencing any explosives operation.

c. The results of external inspections, evaluations, audits and surveillance efforts (HQ, IG, technical assistance, DDESB survey or program evaluation) will be incorporated into action plans, lessons learned and will be tracked to remediate inspection deficiencies.

d. Inspection records will be made available for review during **Senior Commander** Safety Office and higher headquarters program evaluations.

Explosives Safety Issuances

a. Explosive safety issuances consist of, but may not be limited to, local policies (SOPs), Army Regulations (ARs), pamphlets, and other publications.

b. All organizations and tenants on **Installation** will have SOPs which include A&E safety management. All organizations and tenants on **Installation** with A&E operations will review SOPs on a bi-annual basis except for demilitarization SOPs which will be reviewed annually. Recommended format to be used during the development of an SOP is detailed in AMC-R 700-107. The originating organization will obtain appropriate professional safety support for review and concurrence of hazard analysis and SOPs.

c. All **Installation** or activity policies will comply with Army and DoD requirements and will be reviewed by explosives safety personnel prior to approval.

d. Any compensatory measures to manage risk will be documented and controls in place to ensure compliance.

e. All **Installation** or activity facility will be aware of and take precautions with any Hazards of Electromagnetic Radiation to Ordnance (HERO) unsafe munitions on **installation**. If a HERO unsafe munition is located on **installation** or if a munition will be rendered HERO unsafe, the **Senior Commander** Safety Office will be notified.

Records Management

a. Tenant organizations will maintain records as required by Army Regulations. Records will be made available for review during **Senior Commander** Safety Office and higher headquarters program evaluations.

b. Lightning Protection System (LPS) test and inspection records for the past six inspections cycles will be maintained by the tenant organization.

c. Inventory records will be maintained and managed to control NEW, HD, and compatibility requirements per site plans and licensing.

Training

a. All tenant commanders or directors will ensure all personnel who are involved in A&E operations, receive explosives safety training 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. The minimum requirements for training are delineated in table 1-1 of DA Pam 385-64. Tenant organizations will maintain training records on their employees.

b. **USAG-Garrison** will provide training for the 3Rs (Recognize, Retreat, Report) and UXO safety education training/information will be provided to people living on the **installation** or that work on or use the property. This training will be taught to all contractors that will do any digging on **Installation**.

Appendix C Explosives Safety Site Plan Decision Process

Step	Responsible Party	Action
“Is an ESSP required?” decision process		
1	Organization having the A&E mission (conducting an A&E activity or needing an A&E facility)	<p>COMPILE key data describing your A&E mission requirements to include:</p> <p>a. List of DODICs which are required.</p> <p>b. Total NEW (net explosives weight) for each hazard division (i.e. 1.1, 1.2.1, 1.2.2, 1.3, 1.4)</p> <p>c. Description of the type of activity to be performed and/or the facility requested (e.g. construct three 80’ earth covered magazines, range support facility for 1.4 A&E use only, storage & handling of mission required 1.4S only - unit arms room, temporary, nonrecurring training exercise (not to exceed 30 days) .</p> <p>d. A map or drawing of the proposed location for the facility or location where the activity will be conducted.</p>
2	Organization having the A&E mission	<p>DETERMINE if an ESSP or other action is required for the planned activity using the following decision process:</p> <p>a. <u>If</u> the key data matches any of the scenarios listed in Para 4-1a. of DA Pam 385-64 <u>THEN</u> proceed to next step.</p> <p>b. <u>If</u> the key data matches any of the scenarios listed in Para 4-1b of DA Pam 385-64 then a DDESB approved ESSP is not required - <u>STOP</u>. Document your decision making process and file decision paperwork for future reference. Storage locations will require an explosives license IAW Chapter 5 of DA Pam 385-64.</p> <p>c. <u>If</u> there is any doubt about the determination or the scenario matches any of the scenarios listed in Para 4-1c, then <u>SKIP</u> to STEP 39.</p> <p>d. <u>If</u> the key data matches any of the scenarios listed in Para 4-1d, <u>THEN STOP</u>. An ESSP is not required but an explosives license is required IAW Chapter 5 of DA Pam 385-64.</p>
Preliminary ESSP development & approval process		
3	Organization having the A&E mission	<p>PREPARE an initial Draft preliminary ESSP meeting the requirements of DA Pam 385-64, DA Pam 385-65, and the USATCES Explosives Safety Site Plan Developer’s Guide. NOTE: This must be submitted electronically - use ESS (Explosives Safety Sitting) application if available to prepare ESSP and check compliance with QD requirements.</p>
4	Organization having the A&E mission	<p>FORWARD a copy of the Draft preliminary ESSP to the Garrison Safety Office for coordination according to the procedure established in the installation ESMP.</p>
5	Garrison Safety Office	<p>DISTRIBUTE to other appropriate Garrison organizations for review and comment (e.g. DPW/Master Planning, Emergency Services, DOL, etc).</p> <p>CONSOLIDATE review comments and provide to originating organization.</p>
6	Organization having the A&E mission	<p>AMEND Draft preliminary ESSP based on Garrison review comments. Prepare final Draft preliminary ESSP for submission to USATCES/DDESB including cover memo. FORWARD to Garrison Safety Office</p>
7	Garrison Safety Office	<p>REDISTRIBUTE to appropriate Garrison organizations for final review. If revised site plan is acceptable, then prepare Garrison Commander’s endorsement.</p>
8	Organization having the A&E mission	<p>FORWARD final Preliminary ESSP to the Installation Senior Commander’s Safety Office. PROVIDE a CC copy to the Garrison Safety Office.</p>

Step	Responsible Party	Action
9	Installation Senior Commander Safety Office	REVIEW final Preliminary ESSP and obtain Senior Commander endorsement. FORWARD final Preliminary ESSP to Organization with A&E mission higher
10	Organization with A&E mission higher HQ	PREPARE a review and concurrence memo and forward thru chain of command to USATCES.
11	USATCES	REVIEW and provide approval of preliminary ESSP with any required modifications.
12	USATCES	FORWARD Preliminary ESSP to DDESB for review and approval.
13	DDESB	REVIEW and APPROVE Preliminary ESSP and return to USATCES for routing.
14	USATCES	ENDORSE DDESB Preliminary ESSP approval and return thru HQs to the originating organization.
15	Organization having A&E mission	PROVIDE a copy of the DDESB and USATCES approved Preliminary ESSP to the Garrison Safety Office.
16	Organization having A&E mission	CONDUCT activity or proceed with construction planning process through normal Command or USAG DPW processes to the point of having adequate detailed plan for Final ESSP submission/approval. DO NOT begin construction until a Final DDESB approved ESSP is obtained.
17	Garrison Safety Office	NOTIFY DPW/Master Planning of preliminary ESSP approval
18	DPW/Master Planning	UPDATE Master Planning documents and installation drawings/maps with the inhabited building distance arc(s) required by the approved ESSP.
Final ESSP development and approval process		
19	Organization having A&E mission	Using the Preliminary ESSP as a starting point, DEVELOP a draft Final ESSP for DDESB approval which addresses the USATCES comments to the Preliminary ESSP. NOTE: This must be submitted electronically - use ESS (Explosives Safety Sitting) application if available to modify the Preliminary ESSP in ESS and recheck compliance with QD requirements.
20	Organization having the A&E mission	FORWARD a copy of the Draft Final ESSP to the Garrison Safety Office for review and comment.
21	Garrison Safety Office	DISTRIBUTE to other appropriate Garrison organizations for review and comment (e.g. DPW/Master Planning, Emergency Services, DOL, QASAS, etc). CONSOLIDATE review comments and provide to originating organization.
22	Organization having the A&E mission	AMEND Draft Final ESSP based on Garrison review comments. Prepare Final ESSP for submission to USATCES/DDESB including cover memo.
23	Garrison Safety Office	REDISTRIBUTE to appropriate Garrison organizations for final review. If revised site plan is acceptable, then prepare Garrison Commander's endorsement.
24	Organization having the A&E mission	FORWARD Final ESSP to the Installation Senior Commander's Safety Office. PROVIDE a CC copy to the Garrison Safety Office.
25	Installation Senior Commander Safety Office	REVIEW Final ESSP and obtain Installation Senior Commander endorsement. FORWARD Final ESSP to Organization with A&E mission higher HQ.
26	Organization with A&E mission higher HQ	PREPARE a review and concurrence memo and forward thru chain of command to USATCES.

Step	Responsible Party	Action
27	USATCES	REVIEW and provide approval of Final ESSP with any required modifications. COORDINATE between the originating unit, their higher HQ, and the Garrison safety office on any changes.
28	USATCES	FORWARD Final ESSP to DDESB for review and approval.
29	DDESB	REVIEW and APPROVE Final ESSP and return to USATCES for routing.
30	USATCES	ENDORSE DDESB Final ESSP approval and return thru HQs to the originating organization.
31	Organization having A&E mission	PROVIDE a copy of the DDESB and USATCES approved Final ESSP to the Garrison Safety Office and DPW Project Manager in the case of construction.
32	DPW Project Manager	COORDINATE between the Organization having the A&E mission and the construction contractor on any modifications required based on the DDESB final approval.
33	DPW Project Manager	ENSURE the facility is constructed with applicable DoD and Army requirements and specification detailed in the DDESB approved ESSP.
34	DPW Project Manager	COORDINATE with Organization with A&E mission safety office and USAG Safety Office on final review and acceptance of the facility.
35	Organization having A&E mission	COMPLETE required DPW documents for turnover of the facility to the using organization.
36	DPW/Master Planning	UPDATE Master Planning documents and installation drawings/maps with the inhabited building distance arc(s) required by the approved ESSP.
37	Organization having A&E mission	OBTAIN an Explosives License for the facility once full compliance with the AR/DA Pam requirements and DDESB approved ESSP has been validated.
38	Organization having A&E mission	OPERATE the facility in compliance with applicable AR/DA Pam requirements including annual validation of the license. - STOP
ACOM, ASCC, DRU evaluation		
39	Organization having A&E mission	FORWARD the Key Data noted in Step 1 thru your chain of command to the ACOM, ASCC, or DRU Safety Office as applicable - with a cover memo of the recommended action.
40	ACOM, ASCC, or DRU Safety Office	REVIEW the available Key Data in comparison to the requirements in DA PAM 385-64 Para 4-1.
41	ACOM, ASCC, or DRU Safety Office	DETERMINE the required siting action per the four options noted in Step 2 and document the basis for this determination. a. IF options a, b, or d (ESSP required, No ESSP required, or No ESSP required but explosives license required - THEN Respond to Organization having A&E mission with determination thru normal command channels. GO TO NEXT STEP. b. IF it is determined that special siting and documentation requirements should be applied document those requirements - THEN Respond to Organization having A&E mission with those requirements thru normal command channels. SKIP TO STEP # 41.

Step	Responsible Party	Action
42	Organization having A&E mission	GO TO STEP # 2 and proceed using ACOM, ASCC, or DRU safety office determination of decision process.
43	Organization having A&E mission	APPLY siting and documentation requirements provided by ACOM, ASCC, or DRU safety office to the activity or facility. END.