



**COMMANDER'S
GUIDE**
to
The Industrial Safety Track



**ARMY SAFE
IS ARMY STRONG**

Army Civilian Corps Creed

I am an Army Civilian — a member of the Army Team

I am dedicated to our Army, our Soldiers and Civilians

I will always support the mission

I provide stability and continuity during war and peace

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

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

I am an Army Civilian

**ARMY SAFE
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Foreword

Accidental mishaps, injuries and deaths have a detrimental impact on Army readiness. No matter the cause, the loss of any Soldier has immediate and long-lasting effects for his or her battle buddies, fellow Soldiers, Family members and our nation. Safety is not an option we can afford to sacrifice or minimize - it is the central pillar of the Army's mission and its people.

Commanders have an invaluable and indispensable asset in the industrial safety professional. These professionals have completed comprehensive training and education that rival the best world-class programs available. They are a commander's most valuable resource in protecting their Soldiers and team members. Through continuing education and leader development, these professionals will continue to be long-term assets for all Army leaders.

This guide explains the roles and responsibilities of industrial safety professionals and how they work to enhance Army operations. Please use this resource for not only your benefit, but for the safety and wellbeing of all your Soldiers and team members. Thank you for hard work and vigilance in keeping the Army's workforce safe and ready to defend our nation's freedom and resources. Please let me and my safety professionals know how the U.S. Army Combat Readiness Center can help you achieve your safety goals.

A handwritten signature in black ink, appearing to read 'J. Farnsworth', with a stylized flourish at the end.

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



I. The Army safety profession and the industrial safety track



Army safety and occupational health professionals assist commanders in the prevention of accidents, incidents and events that may harm Army personnel and cause damage to property and the environment. They use qualitative and quantitative analyses of both simple and complex products, systems, operations and activities to identify hazards. They evaluate hazards to identify what events might occur, the probability of occurrence and severity of results, risk levels (a combination of probability and severity), and potential loss incurred. They consider these factors in making risk management decisions to commanders, managers, designers, employers, government agencies, contractors and other organizations on risk management and appropriate mitigation measures. Recommendations may include safe work practices and administrative controls (e.g., plans, policies, procedures, training, work breaks and worker rotation), engineering controls (e.g., redesigning facilities, equipment or processes to remove hazards or implement non-hazardous substitutes, enclosing the hazard or establishing barriers), and personal protective equipment.

Industrial safety professionals are an essential function of every Army installation and organizations located at a wide variety of DoD and non-DoD facilities. Industrial safety professionals are responsible for providing a safe and healthful work environment for all Soldiers, civilian, contractor employees and visitors at Army facilities and project sites. Industrial safety professionals provide oversight of work activities by identifying, controlling and mitigating hazards in a variety of general industry, construction, maritime and other activities.

Examples include:

- Fire hazards
- Electrical hazards

- Marine hazards
- Machine guarding hazards
- Load handling equipment hazards
- Trenching and excavation hazards
- Scaffolding/ work platform hazards
- Safe access and fall protection hazards
- Hazardous material handling and storage hazards
- Environmental hazards

These safety professionals must prepare recommendations and advise project/facility managers of the best means for complying with standards and reducing hazards to ensure a safe work environment for employees. Since they interact with employees, supervisors, managers, as well as federal, state, and other authorities, safety personnel need to effectively communicate and collaborate at all levels. Vigilant and continuous risk management is critical in maintaining a safe work environment.

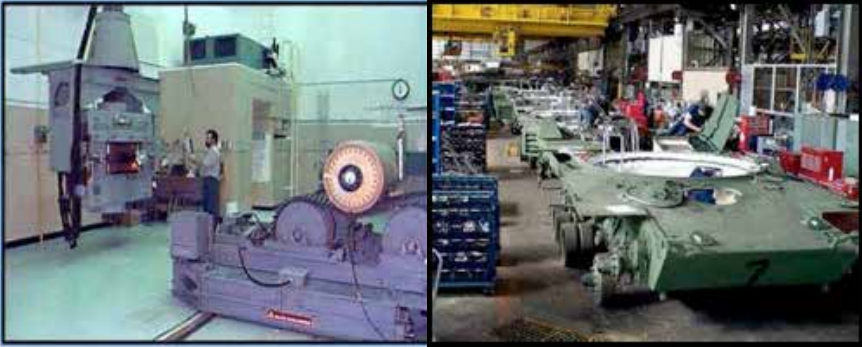
Within the Army, organizations that employ industrial safety professionals include major command assignments throughout the world.

Duty assignments may include various Army Commands and Army Service Component Commands:

- Training and Doctrine Command (TRADOC)
- Forces Command (FORSCOM)
- Army Materiel Command (AMC)
 - * Arsenal, proving grounds, maintenance, testing, and research facilities, ammunition and explosive facilities.
- U.S. Army Europe (USAREUR)
- U.S. Army Forces Korea (USFK)
- U.S. Army Pacific Command (USARPAC)
- Installation Management Command (IMCOM)
 - * Installation safety offices
 - * Departments of Public Works
 - * U.S. Army Environmental Command
- U.S. Army Corps of Engineers (USACE)
 - * Division, district, area and resident offices, cold regions and waterway experimental facilities, power plants, dams, locks and harbor facilities.

The industrial safety professional and the CP-12 career field

The Army does not have a military occupational specialty for safety; instead, Department of the Army civilians are trained in Career Program-12 (CP-12) to fill this critical need.



II. Qualifications



Safety career fields include:

- 0017 - Explosives Safety
- 0018 - Safety and Occupational Health
- 0019 - Safety Technician
- 0081 - Fire Protection and Prevention
- 0089 - Emergency Management
- 0099 - General Student Trainee
- 0301 - Miscellaneous Administration and Program
- 0303 - Miscellaneous Clerk and Assistant
- 0340 - Program Management
- 0343 - Management and Program Analyst
- 0344 - Management and Program Clerical and Assistance
- 0399 - Administration and Office Support Student Trainee
- 0640 - Industrial Hygiene Technician
- 0690 - Industrial Hygiene
- 0699 - Medical and Health Student Trainee
- 0803 - Safety Engineer
- 1306 - Health Physicist
- 1399 - Physical Science Student Trainee
- 1815 - Air Safety Investigator
- 1825 - Aviation Safety
- 1899 - Investigation Student Trainee
- 5205 - Gas and Radiation Detection
- 5427 - Chemical Plant Operating

Incumbents in most industrial safety professional positions perform duties as safety and occupational health managers and specialists. However, the industrial safety professional may be required to perform duties of other occupational series such as 0690 industrial hygienist, 0803 safety engineer and other CP-12 series.



What type of work does the industrial safety professional perform?

The industrial safety professional performs a wide range of safety and occupational health duties and provides oversight at many DoD and non-DoD locations such as:

- Power plants, locks and dams
- Military and civil works construction sites
- Harbors, shipyards, and marine facilities
- Formerly used defense and hazardous toxic and radiological waste sites
- Federal, state, local and host nation interagency and work for others
- Overseas humanitarian assistance and foreign military sales
- Emergency management, disaster preparedness and response locations
- Unit, intermediate and depot maintenance facilities
- Research, development, experimental and testing facilities
- Ammunition, explosives and demilitarization facilities
- Recreational areas

OPM GS-0018 individual occupational requirements

Education

Undergraduate and graduate education: Major study - safety or occupational health fields (safety, occupational health, industrial hygiene) or degree in other related fields that included or were supplemented by at least 24 semester hours of study from among the following (or closely related) disciplines: safety, occupational health, industrial hygiene, occupational medicine, toxicology, public health, mathematics, physics, chemistry, biological sciences, engineering and industrial psychology.

OR

Experience

General experience (for GS-5 positions): Experience in scientific or technical work that provided an understanding of the basic principles and concepts of the safety and occupational health field. Creditable general experience must have demonstrated the achievement of knowledge equivalent to the education described above.

Specialized experience (for positions above GS-5): Experience in or related to safety and occupational health that provided the specific knowledge, skills, and abilities to perform successfully the duties of the position.

Examples of qualifying specialized experience include:

- Managing safety or occupational health program elements.
- Developing and recommending safety and occupational health policy to higher levels of management.
- Applying safety and occupational health laws, regulations, principles, theories, practices and procedures as a basis for offering advice or to resolve technical matters dealing with occupational safety and health requirements.
- Developing safety and occupational health standards, regulations, practices, and procedures to eliminate or control potential hazards.
- Developing or implementing programs to reduce the frequency, severity and cost of accidents and occupational illnesses.
- Analyzing or evaluating new and existing jobs, processes, products, or other systems to determine the existence, severity, probability and outcome of hazards.
- Designing or modifying workplaces, processes, products, or other systems to control or eliminate hazards.
- Inspecting or surveying workplaces, processes, products, or other systems for compliance with established safety and occupational health policies or standards and to identify potential new hazards.

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- Designing or modifying workplaces, processes, products, or other systems to control or eliminate hazards.
- Inspecting or surveying workplaces, processes, products, or other systems for compliance with established safety and occupational health policies or standards and to identify potential new hazards.
- Training of workers, supervisors, managers, or other safety and occupational health personnel in safety or occupational health subjects.
- Work in occupational fields as a safety engineer, industrial hygienist, fire prevention engineer, health physicist or occupational health nurse.

OPM qualifications for the 0018 series are available on the OPM classification and qualification website.

Industrial Safety Track Career Development

The GS-0018 CP-12 Safety and Occupational Health Master Training Plan outlines the development plan for all career paths for Interns (GS-7/9), Journeyman (GS-11/12/13) and Senior level positions (GS-14/15).

To develop a solid foundation in the knowledge, skills and experience required for the industrial safety professional to successfully perform their duties they must complete several training and educational requirements.

All 0018 series employees must complete the appropriate courses seen below and receive a CP-12 safety and occupational health certificate to be considered for future assignments and promotions.



Required Fundamentals for Interns

- Introduction to Ammunition
- Commander's Safety Course
- Additional / Collateral Duty Safety
- Action Officer Development
- Introduction to Risk Management
- Introduction to Contracting
- Supervisor's Safety Course
- Systems Safety Engineering
- Basic Toxicology
- Military Briefings
- Supervisor Development
- Systems Acquisition
- Manager Development
- Emergency Planning (FEMA)

Level 1 Skills

- Safety Program Management
- Organizing and Conducting Safety Meetings / Councils
- Safety Office Administration
- Safety Awards Program
- Safety Management Systems
- Writing and Briefing Techniques
- Critical Thinking and Analysis
- Quantitative Safety (Metrics)
- Life Safety
- Risk Management and Job Hazard Analysis
- Psychology of Accident Prevention
- Motor Vehicle and Transportation Safety
- Radiological Health and Safety
- Safety Training and Educational Strategies
- Explosives Safety Management
- Systems Safety and Analysis
- Legal Aspects of Occupational Health and Safety
- Public Affairs, Media and Safety
- OSHA Construction Standards
- Electrical Safety
- Hazardous Materials (HAZMAT)
- Hazardous Waste Operations and Emergency Response (HAZWOPER)

- Ergonomics
- Industrial Hygiene
- Hazardous Environment Operations / Confined Space
- OSHA General Industry Standards
- Fundamentals of Occupational Health
- Tactical Safety
- Accident Investigation and Analysis
- Blueprint Reading and Interpretation
- Aviation Safety Management
- Range Safety
- Civilian Education System Foundation Course

Level 2 Skills

- Civilian education system courses at appropriate level
 - ASSE Certificate in Safety Management or NSC Advance Certificate in Safety *
 - ASP/CSP/CIH/CHP Certification *
- * Recommended courses or certification

Level 3 Skills

- Civilian education system advanced course
- Senior safety summit

Specialized Training Examples or Experience

- Cranes/ load handling equipment safety
- Diving safety (SCUBA, Surface Supplied Air and Scientific)
- Safe access and fall protection
- Electrical safety/arc flash analysis
- Machine guarding
- Marine and water safety (Dredging, water vessels and recreational sites)
- Trenching and excavation safety
- Underground and Tunneling construction safety
- Commercial demolition and blasting safety
- Occupational health management
- Emergency management operations and disaster preparedness
- Facility system safety
- Work platforms/scaffolding safety
- Process Safety Management





III. Position description sample



SAFETY AND OCCUPATIONAL HEALTH SPECIALIST, GS-0018-12 (USACE District) MAJOR DUTIES

Serves as principal assistant to the chief of the safety office, in the planning, developing and directing of the overall district safety and occupational health program comprised of the prevention of injuries and property damage, fire prevention and protection, safety education and training, ergonomics, control of hazards to public persons visiting district installations and projects and evaluating a wide variety of construction and maintenance/high risk activities and recurring district field operations.

Confers with project engineers during development of project plans and specifications to identify safety deficiencies and related hazards. Assists project design and construction engineers in the application of safety, fire codes and safety engineering standards. Reviews structures under construction to assure inclusion of safety features. Confers with construction and design engineers to initiate changes when safety deficiencies and related hazards are discovered. In some instances is assigned to provide a complete safety review of completed plans and specifications.

Reviews contractor and government accident prevention plans for adequacy and completeness and surveys construction sites for hazards. Prepares survey reports and provides recommendations to reduce or eliminate existing or potential hazards. Participates in accident prevention planning and preconstruction conferences with construction management personnel, contractor representatives, project design and construction engineers and uses agency representatives. Recommends safety controls for projects involving several contractors.

Provides safety expertise and initiates studies relative to development of safe work procedures and controls for construction and maintenance activities. Examples are: use of toxic chemicals, safety net and fall protection applications, machinery and mechanized equipment hazard controls, personal protective equipment for a variety of engineering and construction work activities, protective devices for members of

the public who are visiting district projects, the development of guards and safe operating procedures for new types of construction equipment and scaffolding installations.

Makes field determinations and recommends accident prevention measures to assure availability of personal protective equipment for control of environmental and health hazards. Conducts on-site surveys of construction, maintenance and public areas to evaluate programs and make recommendations to control hazards and compliance with prescribed safety requirements.

Studies, plans and develops controls for environmental health hazards such as noise, sight, temperature extremes, toxic and nuisance dusts, dermatitis, pesticides, asbestos, confined space activities, lead paint and others. Recommends establishment of control measures by isolation, substitution of less harmful substances, ventilation, use of protective equipment, etc. Uses a variety of test instruments to determine hazards and harmful accumulation of toxic materials or noise, light or air quality.

Investigates accidents or reviews accident reports to evaluate the adequacy of corrective actions required and serves as a member or technical advisor to boards investigating major accidents. Makes studies relative to accident trends at projects that are experiencing higher than expected numbers of accidents. Performs accident statistical analysis to determine needed accident control measures. Makes special studies of specific accident hazards during field surveys.

Conducts research and recommends control measures for water supply, toilet facilities, sewage, industrial waste disposal and insect and rodent control.

Reviews and revises existing command safety policies and procedures as required. Identifies and recommends development of new policies as required. Drafts the new policies.

Prescribes and develops plans and procedures for reducing workplace hazards. Makes surveys to determine adequacy of ergonomic and environmental hazards and recommends corrective actions.

Prescribes and develops standards and procedures for fire prevention activities and fire protection devices. Conducts surveys to determine adequacy of housekeeping procedures, use and storage of highly flammable liquids and substances, burning and disposal of flammable debris and waste material and the use of heating devices.

Prescribes and evaluates procedures for the control of hazardous, toxic, and radioactive waste (HTRW) and underground storage

tank (UST) activities in construction at formerly used defense sites (FUDS). This includes explosive, use, storage and handling procedures; decontamination procedures for explosive and chemically contaminated facilities and hot work permit controls and procedures for work in hazardous areas.

Assists in developing safety training programs and materials for safety training and safety indoctrination of engineers, inspectors and equipment operators. Conducts safety training for new employees, supervisors and managers.

Assists in planning and coordinating safety and occupational health promotional events.

Performs other duties as assigned.

Factor 1. Knowledge Required by the Position

Comprehensive knowledge of occupational safety principals, practices, procedures, regulations, methods, techniques, and standards which enable the safety specialist to conduct surveys in area and/or resident offices where such facilities as military hospitals, barracks, dining halls, testing facilities, maintenance shops, hangers, runways, etc., are in varying phases of construction or remodeling. Conducts surveys in areas where core drilling, dredging operations and maintenance and repair of facilities and recreation facilities are being performed.

Knowledge of building design, construction standards, procedures, methods and techniques sufficient to evaluate proposed and actual plant expansions or modifications including utility systems and building materials and actual construction of civil and military facilities. The specialist uses this knowledge to devise new techniques to resolve hazardous construction equipment operations and construction practices. Possess knowledge of low-level ionizing and non-ionizing radiation sources sufficient to detect hazards to employees and to specify control measures in conformance with applicable safety standards.

Knowledge of ergonomic and workplace environmental conditions sufficient to detect hazards and to specify control measures in conformance with applicable safety standards.

Practical knowledge of psychological and physiological factors related to human performance sufficient to evaluate the interaction between employees and equipment operations and to educate and motivate employees to apply good safety practices when conducting their work assignments.

Factor 2. Supervisory Controls

The supervisor sets general objectives and makes assignments. The safety specialist establishes priorities and deadlines in consultation with the supervisor. The employee independently carries out the assignment, coordinating with other subject matter specialists as needed and exercises considerable judgment and discretion in applying methods and procedures to resolve complex safety problems. Findings and recommendations are accepted as technically correct. Completed work is reviewed to assess accomplishment of objectives and compliance with agency regulations.

Factor 3. Guidelines

Guidelines include published federal occupation safety standards, agency operation manuals and supplemental instructions, national consensus standards, standard textbooks, professional journals and past inspection reports. Available guidelines frequently are inadequate and require the safety specialist to exercise ingenuity in searching for applicable precedents to determine the seriousness of regulatory violations. In addition, the safety specialist uses resourcefulness in deviating from the standards and established safety practices to properly evaluate unconventional new, hazardous work operations, materials and recently introduced equipment and machinery. The safety specialist must exercise experienced judgment to modify past practices and devise new methods to control hazardous exposures.

Factor 4. Complexity

The work includes broad and diverse assignments requiring innovative analysis of high- risk activities. The safety specialist weighs, considers, and evaluates serious conflicts between construction and operational requirements involving hazardous conditions and materials and the application of safety standards that often require protective measures affecting the timeliness of completing the work. Employees may be assigned to high risk jobs such as those at confined space underground fuel storage tanks, high rise vertical steel construction and tunnels or engaged in operations where chemicals, hazardous waste cleanup or unexploded ordinance are involved. In many instances, elimination or control of unsound but often traditional work practices and dangerous physical conditions threatening individual safety and property loss requires the development of new mishap prevention techniques or modifications of accepted specialized safety procedures. The work typically requires interpretation of a variety of occupational circumstances to adapt known control or protective measures to eliminate or minimize hazardous situations.

Factor 5. Scope and Effect

The purpose of this position is to inspect, assess, evaluate and resolve critical safety and occupational health problems of specific safety programs, projects or functions of contractors and work operations performed by operations and maintenance personnel at various facilities and new projects where harbor maintenance, diving, powerhouses, the welding of used fuel lines and storage containment and core drill operations are performed. The safety specialist identifies unsafe operations and conditions at these facilities and analyzes subsequent abatement plans to implement their effectiveness in the control of hazards. He or she recommends alternative control actions or measures where management has failed to propose a satisfactory solution to hazards that have been identified by employees, supervisors and him or herself.

Factor 6. Personal Contacts

Personal contacts of a non-routine nature are with a variety of individuals such as contractors and their representatives, union officials, and professionals from other federal agencies or outside organizations including those from state and local governments.

Factor 7. Purpose of Contacts

The purpose of the contacts is to obtain technical information, explain contents of proposed or established standards or regulatory criteria and reconcile or resolve technical differences or judgments concerning safety provisions and their application in the construction industry. The safety specialist must exercise tact and diplomacy in negotiating acceptance of standards by labor unions, management representatives and insurance companies.

Factor 8. Physical Demands

Survey duties require considerable walking, crouching and prolonged standing. Occasionally there may be a need to lift and carry moderately heavy objects and test equipment. The work requires a degree of agility and dexterity when inspecting construction sites.

Factor 9. Work Environment

The safety specialist is frequently and regularly exposed to a variety of industrial hazards including irritant chemicals and fumes, moving machine parts, arctic temperatures and high noise levels. Protective devices such as a hard-hat, steel-toed shoes, earmuffs or plugs, goggles and/or a respirator may be required when performing surveys.



IV. Performance objectives



- Develop and execute a safety and occupational program management program that emphasizes continuous risk management and accident prevention planning.
- Provide accurate, timely and reasonable customer service and consultation.
- Identify, assess and effectively manage resources for maximum program execution.
- Review/comment on contractor-prepared accident prevention plans and activity/job hazard analysis.
- Review/comment on contract specifications and ensure applicable contract FAR, DFAR, EFAR or other appropriate clauses are included.
- Participate on project development teams during the concept, design, and construction phases, and assist in evaluation of safety requirements for construction, major repairs, upgrades, modifications or demolition of facilities and other structures such as harbors, breakwaters, tunnels, utility corridors, etc.
- Conduct site/facility safety inspections/audits, prepare reports and provide corrective actions in a timely manner.
- Prepare accident/mishap lessons learned and distribute to the work force as appropriate.
- Analyze accident data, trends and develop accident prevention measures. Review and reassess risk management processes for changes and additions to control measures and supervisory actions.
- Seek guidance and confer with technical and engineering experts for safety concerns when a skill set is not available to make competent/qualified recommendations.
- Participate in and serve as a technical advisor for the organization's safety committee.

V. Keys to success



Leadership

- Rely on the professional expertise of your industrial safety professional.
- Foster collaboration between safety, occupational health and environmental resources that support your organization.
- Hold the industrial safety professional accountable for his/her performance duties listed in the position description.
- Encourage professional development and certification.
- Ensure the industrial safety professional is involved in all planning and/or coordination of meetings for training events and/or contingency operations.
- Ensure open lines of communication through direct and unfiltered access by ensuring he or she is a member of the commander's special staff.
- Establish the organization's safety culture through personal example and decisive engagement.
- Hold the industrial safety professional accountable for the performance of duties listed in position descriptions.
- Expect the safety engineer to identify and assess hazards and provide mitigation options for the commander's decision-making process.
- Complete administrative responsibilities IAW local Civilian Personnel Advisory Center requirements

Individual

- Ensure occupational health issues are addressed at all levels based on appropriate Army regulations, DoD regulations and directives, OSHA standards and applicable federal law.
- Be proactive, not reactive.
- Form alliances to leverage your resources.

- Do not say “no,” say “How I can help you?”
- Be visible and accessible to your command and customers.
- Make sound risk decisions and be accountable for your decisions.

Rating scheme

Industrial safety professionals are generally rated by the organization’s safety manager or commander.

Administrative

Duty hours are 80 hours per pay period, with daily shifts that align with the local installation. For example, at some Army depots, four days/10 hours per day is the standard work shift. Employees may accrue compensatory time and overtime pay with prior approval.

Awards may be bestowed for exceptional performance in accordance with Army Regulation 672-20.

Budget

Funding for the industrial safety professionals will vary dependent on the organizational funding sources. Industrial safety careerists and interns may apply for professional development funds through Career Program-12, Safety and Occupational Health.

VI. References



29 CFR 1910, OSHA Standards for General Industry

29 CFR 1926, OSHA Standards for the Construction Industry

29 CFR 1915, Occupational Safety and Health Standards for Shipyard Employment

29 CFR 1917, Marine Terminals

29 CFR 1918, Safety and Health Regulations for Longshoring

29 CFR 1960, Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters

29 CFR 1960.25, Qualifications of Safety and Health Inspectors and Agency Inspections

DODI 6055.01, DoD Safety and Occupational Health Program

DODI 6055.05, Occupational and Environmental Health

Army Pamphlet 40-503, The Army Industrial Hygiene Program

Army Regulation 385-10, The Army Safety Program

Army Pamphlet 385-10, The Army Safety Program

U.S. Army Corps of Engineers, EM 385-1-1. Safety and Health Requirements

Useful links

Occupational Safety & Health Administration (OSHA)

U.S. Army Corps of Engineers

U.S. Army Material Command

U.S. Army Installation Management Command

CP-12 Career Program

American Society of Safety Engineers

Board of Certified Safety Professionals

National Safety Council



