



**COMMANDER'S
GUIDE**
to
the Industrial Hygiene
Professional



**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

Safety and Occupational Health professionals are highly skilled. They play an integral part in executing the Army's health and wellness strategy. Occupational injury and illness compromise productivity and readiness. Industrial hygienists and industrial hygiene technicians are vital to the anticipation, recognition, evaluation and control of health hazards in garrison and deployment.

Working as a team with other safety professionals, facilities engineers, environmental engineers and occupational health nurses and physicians, industrial hygienists provide valuable guidance to commanders to reduce risk and protect the workforce.

Industrial hygienists are highly educated and motivated professionals. A significant percentage in the of Army are certified industrial hygienists, the gold standard in the practice. As members of Career Program-12 Safety and Occupational Health, they are required to complete core, functional and continued training and education to ensure they remain competent, relevant and ready to provide the best service possible.



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



I. Introduction to the industrial hygiene professional



What is the industrial hygiene profession?

Industrial hygiene is the science and art devoted to the anticipation, recognition, evaluation, prevention and control of environmental factors or stresses arising in or from the workplace that could cause sickness, impaired health and well being, or significant discomfort among workers or citizens of the community.

Industrial hygienists are scientists and engineers committed to protecting the health and safety of people in the workplace and the community. They play a vital role in ensuring federal, state and local laws and regulations are followed in the work environment.

What is the role of the industrial hygienist?

Department of the Army Pamphlet 40-503, The Army Industrial Hygiene Program, defines the responsibilities of industrial hygienists.

Industrial hygiene professionals support commanders by:

- Ensuring regulatory compliance with applicable federal, state and local laws and Army regulations pertaining to occupational health.
- Accurately identifying, characterizing and assessing potential workplace health hazards.
- Recommending appropriate engineering and administrative controls and/or personal protective equipment to prevent occupational illness, injury or death.
- Recommending personnel for exposure-based medical surveillance.
- Following IH business practices by capturing data such as workplace environmental monitoring; engineering and administrative controls; personal protective equipment; observation of work practices; and employee health hazard education and training in the Defense Occupational and Environmental Health Readiness System-Industrial Hygiene.
- Integrating established IH principles, concepts and functions in support of related programs, such as safety, occupational medicine, chemical surety, hearing and vision conservation, ergonomics, respiratory protection, radiation safety, HAZCOM, hazardous and medical wastes, indoor air/environmental quality, confined space entry, laboratory biosafety, asbestos control, lead abatement and environmental compliance.



II. Where does the industrial hygienist work?



Army industrial hygienists fall under the civilian GS-0690 job series; industrial hygiene technicians are GS-0640 job series. The majority belong to the Army Medical Department, with assignments worldwide at the Public Health Command and medical treatment facilities, including medical centers, medical department activities and occupational health clinics.

Industrial hygienists at the Public Health Command provide corporate policy, program direction and consultation. Installation-based industrial hygienists provide support to the MTF, garrison and all tenant activities. They may also support Army Reserve components as defined by support agreements.

Industrial hygiene personnel are staffed at Army Corps of Engineers headquarters and district offices worldwide.



III. Qualifications



Individual occupational basic requirements

Degree: Industrial hygiene, or a branch of engineering, physical science or life science that included 12 semester hours in chemistry, including organic chemistry, and 18 additional semester hours of courses in any combination of chemistry, physics, engineering, health physics, environmental health, biostatistics, biology, physiology, toxicology, epidemiology or industrial hygiene. Courses in the history or teaching of chemistry are not acceptable.

Evaluation of education: All science or engineering courses offered in fulfillment of the above requirements must be acceptable for credit toward the completion of a standard 4-year professional curriculum leading to a bachelor's degree in science or engineering at an accredited college or university.

While this definition does not include certification, the Army strongly encourages all eligible personnel to obtain American Board of Industrial Hygiene certification. ABIH has established that successful candidates for certificates will obtain the status of diplomat of the American Academy of Industrial Hygiene, subject to compliance with requirements.

Active ABIH certification requires that candidates be admitted to examination based upon academic training and four years experience for the certified industrial hygienist, successfully pass a one-day examination, and maintain active professional involvement by recertifying on a five-year cycle following first certification.

Complete qualifications are available at <http://www.opm.gov/qualifications/standards/IORs/g0600/0690.htm>.



IV. Sample position descriptions



Industrial Hygienist-Public Health Command GS-0690-12

Serves in the Industrial Hygiene Field Services Program, Occupational Health Sciences Portfolio, Institute of Public Health, U.S. Army Public Health Command, responsible for advising on industrial hygiene topics to anticipate, identify, evaluate and control occupational and environmental health hazards; promoting health, disease prevention, injury, and disability. Provides technical consultation on IH matters within USAPHC, Department of the Army (DA and Department of Defense).

Major duties

1. Plans and conducts IH surveys and health hazard studies. Evaluates health hazards and control measures. Selects appropriate sampling procedures. Reports technical findings and recommendations for control or elimination of hazards as required. 35%
 2. Advises customers on IH and occupational health issues. Reviews and researches various technical publications and websites or consultation with related occupational health professionals. Recommends ways to correct, reduce or remove occupational exposures and control methods. 30%
 3. Reviews and recommends improvements to guidance documents pertaining to IH. Drafts technical bulletins, guides, technical and field manuals, regulations, IH policy letters, occupational and environmental health related programs. Comments on proposed federal, consensus and DoD standards applicable to U.S. Army industrial hygiene program. 20%
 4. Attends conferences, committees, work groups, boards and symposia dealing with occupational and environmental health and safety matters. Briefs on occupational safety and health matters and applications as required. Mentors junior personnel on occupational and environmental health and their development. 15%
- Performs other duties as assigned.

Factors

1. Knowledge required by position FL1-7, 1250 Pts

Professional knowledge of industrial hygiene concepts, principles and practices, and chemical, biological and physical occupational health stressors.

Knowledge of industrial base, training and homeland security.

Skill to apply new developments of complex problems; head up teams conducting industrial hygiene surveys; check compliance with governing laws and regulations; anticipate, recognize, evaluate and control occupational health stressors; and apply new developments, experience and judgments to a variety of highly complex problems.

Ability to advise and direct a broad range of industrial hygiene matters, including conduct of health hazard assessment work with other health professionals; develop policies and procedures; interpret and implement occupational safety and health standards; communicate orally and in writing; assess ventilation systems; measure and compare ventilation system's performance.

2. Supervisory controls FL2-4, 450 Pts

Works under general supervision of the industrial hygiene program manager, who:

(a) sets overall objectives and resources available, allowing the incumbent to work independently; (b) assists with controversial matters; and (c) evaluates performance for feasibility and accomplishment of objectives.

3. Guidelines FL3-4, 450 Pts

Guidelines used include federal occupational health and safety standards, Army regulations, USAPHC, MEDCCOM technical bulletins, manuals and directives, environmental standards, and standards published by professional and trade organizations. Other guides include professional association textbooks. Due to the complex and unique nature of this field, technical issues encountered, and lack of precedents and technical guidance available, the incumbent must exercise considerable judgment and ingenuity in interpreting and adapting guides for new techniques and methods where appropriate guidelines are inadequate.

4. Complexity FL4-4, 225 Pts

The incumbent provides expert advice on a broad range of potential health hazards inherent to new Army weapons, equipment and materiel systems. Identification and assessment of health hazards involves novel or obscure problems that require the incumbent to be versatile and innovative in adapting and modifying precedents, methods and techniques. Assignments are characterized by many

difficult considerations due to breadth, diversity or intensity of occupational health problems encountered. Work involves major areas of uncertainty from complicated work processes; developmental equipment; the need to develop new methods to evaluate and control health hazards where relevant literature is inadequate or nonexistent; serious conflicts between industrial hygiene and management considerations; health effects from long term, chronic exposures are unknown or poorly defined; and exposures are complicated by mixtures of toxic and/or physical hazards. Leads development of unique military standards to be used for test operating procedures throughout the Army development community. The health hazard assessment report is critical in the materiel acquisition decision process.

5. Scope and effect

FL5-4, 225 Pts

The purpose of the work is to incorporate IH and occupational health concerns and controls into the work environment. This involves the development and design of safe and healthy workplaces and operations in a wide variety of Army locations to reduce or eliminate health hazards. Duties provide a healthful environment. Health concerns require the incumbent to convince decision makers that retrofitting, although costly, would benefit workers. The incumbent provides expert advice throughout DA and, as such, the work affects a wide range of DA's industrial activities and its overall occupational health and safety program.

6. Personal contacts

FL6-3, 60 Pts

Personal contacts are with coworkers, military and civilian personnel staff members at visited installations, professional engineers, engineering firms, Office of the Surgeon General, staff personnel at other major Army commands, installation commanders or their representatives, safety personnel, industrial hygienists, chemists, bio-acoustics personnel, physicians and other external professional IH and OH professional organizations.

7. Purpose of contacts

FL7-3, 120 Pts

Purpose of contacts is to provide expertise on a wide range of potential health hazards and to recommend corrective measures, i.e., system redesign operational use, etc. Contacts with the medical and development community require the skill and tact to overcome technical disagreements or to convince them of the necessity of certain control measures, particularly since control measures frequently result in higher costs and delays to production schedules and fielding of equipment. The incumbent maintains extensive contacts with research and development organizations to identify and recommend areas for HHA research to fill medical data gaps. Must use influence with military and civilian decision makers to resolve differing opinions and opposing views.

8. Physical demands

FL8-2, 20 Pts

Office work is sedentary in nature with normal amounts of walking, standing and carrying of light items. Investigations and surveys, however, involve moderate to heavy physical exertion, including carrying equipment trunks, climbing, standing, walking and bending, as well as use of personal protective equipment and occasional work in confined spaces.

9. Work environment

FL9-2, 20 Pts

Work is performed in an office setting that is well lit, heated and ventilated. Surveys and inspections, however, expose the incumbent to unpleasant and potentially hazardous conditions, including noise and toxic chemicals. Protective equipment is required in some situations.

Total: 2,820 points

Point range: 2,755 – 3,150 = GS-12

Note: Incumbent may spend up to 15 percent of their time in travel or TDY status.

FLSA outline

- Foreign exemption
- Executive exemption
- Exercises appropriate supervisory responsibility (primary duty)
- Customarily and regularly exercises independent judgment
- 80 percent test, if applicable (GS-5/6; sit 1 and 2 WS supervisors; law enforcement and firefighter supervisors through GS-9)
- Professional exemption
- Professional work (primary duty)
- Intellectual and varied work (more than dealing with procedures/ precedents)
 - Discretion and independent judgment
 - 80 percent test, if applicable (virtually never applies since GS-5/6 positions are trainees and other eligible incumbents are not professional)
- Administrative exemption
- Primary duty
- Policy or
 - Management or general business or supporting services or
 - Participation in the executive/administrative functions of a management official
- Non-manual work test
- Intellectual and significant (more than dealing with procedures/ precedents) or
 - Specialized and technical in nature, requiring considerable training/ experience
 - Discretion and independent judgment

Comments/explanations (state which major duties/job functions are exempt)

Classification comments: Work requires education and/or training of industrial hygiene concepts, principles and practices. Makes significant and complex determinations and recommendations. Work deviates from or goes beyond the selection and application of precedents, standard practices and standing procedures. Work is graded using classification standard guide for professional work.

Installation Level-Supervisory Industrial Hygienist GS-0690-12

This position is located within the Department of Preventive Medicine, Industrial Hygiene Section at various MTFs within the Southern Regional Medical Command. The incumbent serves as a technical supervisor and coordinator for local-level industrial hygiene services. Works under the general supervision of the chief, Industrial Hygiene Section, who reports to the MTF chief, Department of Preventive Medicine. Scope of the work requires a workforce of three to eight subordinates.

Major duties

1. Supervisory duties

In coordination with the industrial hygiene program manager, determines long-range work schedules and program activities based on program goals and objectives. Plans and adjusts day-to-day activities and determines priorities. Prepares and supports program budgetary and manpower feeder information, to include the preparation of program budget requirements. Develops new programs when necessary and establishes new or revised work methods for implementation purposes. Makes work assignments, established performance standards and completes work within the confines of established directives and policies. Reviews completed work of subordinates, accepting or rejecting work as situation dictates. Counsels subordinates as necessary, initiates disciplinary or recommendation actions as needed. Recommends request for personnel actions involving promotions, reassignment, etc., approves sick and annual leave on vacation schedules, resolves informal complaints, provides necessary on-the-job training, implements provisions of personnel management programs, and identifies training needs of subordinates and makes provisions for such training. Organizes workload to ensure full use of subordinates. Exercises personal leadership in establishing, maintaining and carrying out a continuing affirmative action program designed to promote Equal Employment Opportunity and affirmative action plans for personnel practice in the employment, development, advancement and treatment of subordinates. 25%

2. Technical duties

a. Provides technical information and assistance to facility management. Assists facility in meeting DA policies and procedures and applicable federal, state and local regulations. Provides instructions, training and advice to other safety and health personnel and assists in incumbent training. 35%

b. Conducts facility health and safety assessments. Checks for compliance with published health and safety standards and regulations and DA directives. Performs special industrial hygiene studies and provides advisory services. Conducts facility assessments, noting which operations could constitute potential health problems and collects samples where ceiling limits have been established. Reports assessment findings and recommended corrective measures. Makes follow-up visits to check that required abatement measures are completed. Maintains and validates that surveillance data is entered into the Defense Occupational and Environmental Health Readiness System - Industrial Hygiene. 30%

c. Advises on industrial hygiene matters. Performs workplace health assessments. Selects sampling equipment and analytical tests to be performed. Evaluates unique exposure and unusual hazards from complex work processes of hazardous materials. Writes technical articles on manufacturers' products for professional journals and newspapers. Audits records of work-related injuries and illnesses. Serves as technical representative for the agency and may testify in hearings involving DA. Performs special studies as requested. Helps develop or revise facility policies. 10%

Performs other duties as assigned.

GSSG factors

1. Program scope and effect

FL1-3, 550 Pts

Scope: Plans and organizes a comprehensive IH program at a large, complex military facility that identifies hygiene, safety and environmental health hazards and ascertains compliance with appropriate local, state and federal occupational health and safety standards and criteria documents, standards published by professional and trade organizations, and U.S. Army Public Health Command manuals, technical guides and policies, etc.

Effect: The work directly affects the effectiveness of the occupational health program, as well as the health and well-being of a large number of workers. Recommendations can result in substantial abatement cost to the Army.

2. Organizational setting

FL2-1, 100 Pts

The incumbent reports to a GS-13 or equivalent, who reports to the chief of Preventive Medicine who may be an O5 or O6, who may or may not report to a general officer or SES.

3. Supervisory and managerial authority exercised

FL3-3, 775 Pts

Meets level 3-2c, where the employee exercises at least eight of the fifteen delegated supervisory authorities and responsibilities described. Supervises the assigned professional and technical staff. Plans work, establishes priorities, assigns work, reviews and accepts or rejects work. Establishes and evaluates performance standards, initiates or recommends personnel actions, and interviews and selects candidates for vacant subordinate positions. Identifies developmental and training needs of employees and either provides or arranges for training. Hears and resolves employee complaints, refers more serious complaints and grievances not resolved to higher authority for resolution. Approves and schedules leave. The incumbent is responsible for planning, direction and timely execution of day-to-day IH program activities. Work product generated by subordinate staff is reviewed, validated and approved by the incumbent.

4. Personal contacts

Sub-factor 4A, nature of contacts

FL4A-2, 50Pts

Incumbent meets with local managers, supervisors, employees, bargaining unit representatives (if applicable), and safety and occupational health professionals. The incumbent also meets with counterparts at other Army installations, the civilian community, and local and private industry business representatives.

Sub-factor 4B, purpose of contacts

FL4B-2, 75 Pts

The purpose of contacts is to evaluate working conditions for hazards to health and safety, gain compliance with published standards, exchange information, provide advice and coordinate work efforts. (Potential safety hazards noted during assessments will be referred to the service chief and management.) Parties contacted during assessments might be skeptical and technical disagreements often develop, requiring tact and professional manner on the part of the incumbent. Contacts require skill in gaining the confidence, respect and trust of all parties.

5. Difficulty of typical work directed

FL5- 6, 800 Pts

The incumbent directs a workforce consisting of one GS-11 industrial hygienist, four GS-07 IH technicians, and one clerical assistant. Since work performed by the industrial hygienist constitutes 25 percent or more of the organization's workload, this level is credited.

6. Other conditions

FL6-2, 575 Pts

Provides supervision over significant and extensive coordination and integration of a number of important projects or program segments of professional work comparable in difficulty to the GS-11 level. Incumbent makes major recommendations that have direct and substantial effect on the organization and projects managed, and restricting, reorienting and recasting immediate and long-range goals, objectives, plans, and schedules to meet changes in legislation, program authority or funding. The incumbent provides technical supervision for a group of subordinates who perform IH work that impacts the medical center and its mission, production, operations, processes, program planning, business costs and human resource issues. This work integrates programs and their requirements with the facility's mission, goals, objectives and processes. Work also validates the effectiveness of the IH program using performance criteria to eliminate or control hazards within acceptable limits.

Special situations

The areas serviced use complex work procedures, processes and exotic chemicals, and also present other unusual problems or conditions that require extensive investigation or are not adequately covered by standards. Supervisory and oversight work may be complicated by special situations and/or conditions (e.g., variety of work performed, alternate work schedules, changing mission and goals, grow-the-Army initiatives, command priorities, location of work sites, special staffing situations, and impact of specialized programs).

Total: 2,955 points

Point range: 2,755 – 3,150 = GS-12



FLSA outline

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- ___ 80 percent test, if applicable (GS-5/6; sit 1 and 2 WS supervisors; law enforcement and firefighter supervisors thru GS-9)
- ___ Professional exemption
- ___ Professional work (primary duty)
- ___ Intellectual and varied work (more than dealing with procedures/ precedents)
- ___ Discretion and independent judgment
- ___ 80 percent test, if applicable (virtually never applies since GS-5/6 positions are trainees and other eligible incumbents are not professional)
- ___ Administrative exemption
- ___ Primary duty
- ___ Policy or
- ___ Management or general business or supporting services or
- ___ Participation in the executive/administrative functions of a management official
- ___ Non-manual work test
- ___ Intellectual and significant (more than dealing with procedures/ precedents) or
- ___ Specialized and technical in nature, requiring considerable training/ experience
- ___ Discretion and independent judgment
- ___ 80 percent test, if applicable

Incumbent meets the intent of professional exemption.



V. Roles and responsibilities



The installation Army Medical Department industrial hygiene program manager (or equivalent U.S. Army Corps of Engineers, Army National Guard/Army National Guard of the United States, and U.S. Army Reserve staff member):

- Develops and implements an IH program.
- Reviews, approves and evaluates IH staff individual development plans based on Army Civilian, Training, Education and Development System guidance to ensure staff can fulfill assigned duties and responsibilities.
- Uses the Department of Defense Industrial Hygiene Exposure Assessment Model as the business practice for IH.
- Develops standing operating procedures for IH practices.
- Uses the master schedule in DOEHRs-IH to schedule IH survey and workplace monitoring tasks to reflect IH priorities and resources.
- Develops a system for tracking and documenting DA-required activities and IHP support activities not available in DOEHRs-IH (e.g., mandatory training, meetings, design reviews and command requests).
- Prepares a prioritized budget plan for annual staffing, equipment, supplies and reference material requirements and costs.
- Provides written reports of sampling results, survey information and recommendations to customers and applicable installation program managers (e.g., safety, occupational health and installation management program managers).
- Performs annual assessment of the IHP and participates in external audits to document program effectiveness and make improvements.
- Upholds the standards of conduct and code of ethics and maintains qualified IH personnel.
- Ensures the AMEDDD Command Management System and Assistant Chief of Staff for Installation Management Installation Status Report are complete. (Industrial hygiene metrics are extracted from DOEHRs-IH data and feed two separate Army metrics systems, the AMEDDD CMS and the Army ISR.)

VI. Keys to success



Leadership

- Rely on the professional expertise of your industrial hygienist
- Foster collaboration between safety, occupational health and environmental resources that support your organization
- Hold the industrial hygiene professional accountable for his/her performance duties listed in the position description
- Encourage professional development and certification

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 can I help you?”
- Be visible and accessible to your command and customers

Performance objectives examples

- Develop and execute an installation industrial hygiene program in accordance with Department of the Army Pamphlet 40-503
- Use DOEHRS-IH as your business practice
- Provide accurate, timely and reasonable customer service and consultation
- Identify, assess and effectively manage resources for maximum program execution

Rating scheme

- Army industrial hygienists at the installation level are generally rated by the chief, Preventive Medicine.

Administrative concerns

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 and overtime with prior approval.

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

Budget

Army industrial hygiene programs are funded by the Defense Health Program. Industrial hygiene careerists and interns may apply for professional development funds through Career Program-12, Safety and Occupational Health.



References

29 CFR 1910

Occupational Safety and Health Standards

29 CFR 1960

Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters

DODI 6055.1

DoD Safety and Occupational Health Program

<http://www.dtic.mil/whs/directives/corres/pdf/605501p.pdf>

DODI 6055.05

Occupational and Environmental Health

<http://www.dtic.mil/whs/directives/corres/pdf/605505p.pdf>

Army Regulation 40-5

Preventive Medicine

http://www.apd.army.mil/pdffiles/r40_5.pdf

Department of the Army Pamphlet 40-21

Ergonomics Program

http://www.army.mil/usapa/epubs/pdf/p40_21.pdf

DA Pam 40-503

Industrial Hygiene

http://www.apd.army.mil/pdffiles/p40_503.pdf

Useful links

Army Industrial Hygiene

<http://phc.amedd.army.mil/topics/workplacehealth/ih/Pages/default.aspx>

American Board of Industrial Hygienists

<http://www.abih.org/>

American Industrial Hygiene Association

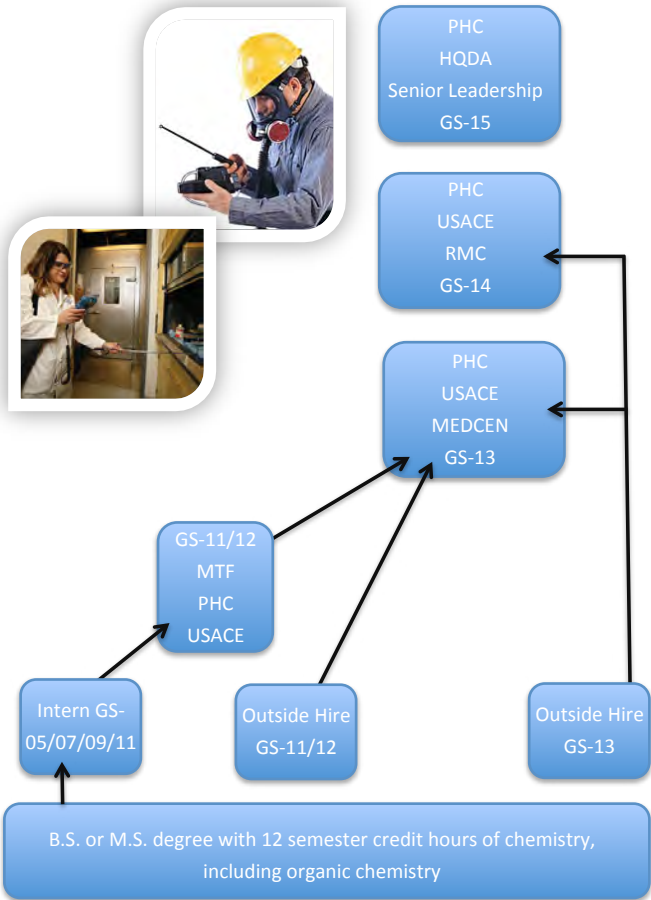
<http://www.aiha.org/Pages/default.aspx>



Appendix A

Below is a detailed career path for 0690 personnel.
For more information, visit <https://safety.army.mil/cp12/Whoarewe/0690IndustrialHygiene/tabid/2255/Default.aspx>.

CP-12 - 0690 Industrial Hygiene Career Path





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