

CAREER DEVELOPMENT PROGRAM FOR SAFETY AND OCCUPATIONAL HEALTH AND INDUSTRIAL HYGIENE PERSONNEL

NAVEDTRA 10076A



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for SHORE NAVOSH TRAINING WORKING GROUP
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FOREWARD

This publication provides guidance on career development for personnel employed in the safety and occupational health and industrial hygiene professions. It has been developed for the Navy Occupational Safety and Health (NAVOSH) Shore Training Working Group under the direction of the NAVOSH Training Group Steering Committee.

The publication contains information on what is considered to be developmental requirements for personnel to be fully qualified as safety or industrial hygiene professionals in the Navy and recommended

methods for those personnel to attain qualifying experience. The guidelines contained herein have been developed to aid in establishment of individual development plans aimed towards achieving needed competencies. The guidelines should be carefully reviewed by the manager to determine if they are consistent with the mission and scope of the activity.

The publication is structured to provide: methods for program development and maintenance (Chapter 1), career development plan for safety personnel (Chapter 2), industrial hygiene personnel (Chapter 3), safety and occupational health managers, and supervisory industrial hygienists (managers) (Chapter 4), and guidelines for development plans (Chapter 5). Appendix A and A-1 provides a sample IDP as well as a blank form. Appendix B provides some sources for developmental training.

Completion of the recommended professional development actions identified in this plan will result in professional proficiency but will not necessarily guarantee promotion to the next grade level. Promotions are competitive based and may require additional actions to be completed. Career ladder progression must be coordinated with servicing human resource offices.

Recommendations for change or improvement to this publication may be submitted to the Chairman, NAVOSH Shore Training Working Group, c/o Chief of Naval Operations (N454), Washington, D.C. 20350-2000.

CHAPTER 1

PROGRAM DEVELOPMENT AND MAINTENANCE

1. Coverage. The safety and occupational health and industrial hygiene career development program is designed to cover civilian employees of the Department of the Navy in the following classification series: Safety Technician, GS-019; Safety Specialist, GS-018; Safety Engineers, GS-803; Supervisory Safety Specialist, GS-018; Safety Manager, GS-018; Industrial Hygiene Technician, GS-640; Industrial Hygienist, GS-690; and Supervisory Industrial Hygienist, GS-690. The guidelines in this publication may also be applied to identifying developmental needs for military personnel in equivalent positions. Military equivalents include NOBC's 0862, 2740, 8656 and 8995, from ENS to CDR; and NECs 9571 and SW-6021, from E-4 to E-9.

2. Program Organization. The program is organized under the auspices of the NAVOSH Training Group Steering Committee in accordance with the requirements of Chapter 6 of OPNAV 5100.23 series and 29 CFR 1960.56(b) through 1960.58. A Shore NAVOSH Training Working Group has been established to review, develop and recommend training requirements and actions necessary to facilitate compliance with regulations. The direction provided in this publication is consistent with the requirements of SECNAVINST 12410.24, Civilian Leadership Development.

3. Implementation Process. Career Development Plans for additional classification series may be added to this publication as developed by the Shore NAVOSH Training Working Group and approved by the NAVOSH Training Group Steering Committee. Recommendations on program actions, additions and changes to this publication, and resource requirements, will be submitted by the Shore NAVOSH Training Working Group to the NAVOSH Training Group Steering Committee. If adopted by the committee, actions will be included in the Navy Occupational Safety and Health and Hazardous Materials Control and Management Navy Training Plan (NTP), NTP S-40-8603, and action organizations identified.

4. Actions. The career development guidelines in this publication are for use in the development and implementation of Individual Development Plans (IDPs) as required by the OPNAVINST 5100.23 Series.

5. Professional Certification. Personnel in either the safety or industrial hygiene career fields are encouraged to strive for professional certification. While Certified Safety Professional (CSP) and Certified Industrial Hygienist (CIH) are widely recognized as professional certifications, they are not the only certifications available. Other certifications available include Occupational Safety & Health Technologist (OHST) and Industrial Hygienist In Training (IHIT). (The IHIT certification is highly recommended for Industrial Hygiene Officers (IHO's) by the end of second tour). Typically, such certifications require a Bachelors degree or higher in specific fields. Professional publications such as *AIHA Journal*, *Applied Occupational & Environmental Hygiene*, *Occupational Health & Safety* and *Professional Safety* can provide the names and addresses of sources for professional certifications. It is up to each individual to make a determination of the type of certification which is most appropriate to their career.

This guidance is consistent with the requirements of SECNAV 12410.24. Progression to higher graded positions may become more difficult to obtain without such certification.

CHAPTER 2

CAREER DEVELOPMENT PLAN FOR SAFETY (OCCUPATIONAL SAFETY & HEALTH) PERSONNEL

1. Introduction. The Career Development Plan (CDP) provided in this chapter identifies developmental assignments, formal training and other activities considered necessary to achieve the knowledge, skills and abilities (KSA's) deemed important for personnel assigned to safety (occupational safety and health) positions. This chapter outlines actions for entry through journeyman level personnel, including personnel in the GS-019, Safety Technician series. Completion of these actions will provide personnel the necessary background to become fully qualified journeyman Safety Specialists, GS-018/11. These guidelines also apply to personnel in the Engineer, GS-803 series, who serve as Safety Engineers or who provide technical support to the Safety Manager/ staff.

2. Safety Program Scope. Safety programs provide technical assistance to headquarters, station, unit, or activity commands in matters relating to the prevention of mishaps and the administration of mishap prevention programs at Navy facilities, or involving Navy material or operations. These programs cover not only government property and personnel, but also public and contractor personnel at government facilities or using government property.

3. Functions Performed by Safety Personnel. Safety professionals are expected to perform the following functional tasks in varying degrees of magnitude depending on the nature, size and scope of their organization:

- a. Participate in overall activity/unit management including committees, councils, budgeting, employee relations, injury compensation, training, and providing other functional assistance.
- b. Manage or assist in the overall management of the activity safety and occupational health program. Review and interpret national, federal, defense, and Navy safety standards, manuals, reports and other formal written communications, and develop local guidance. Act as technical advisor and coordinator on safety and occupational health issues. Recommend safety protective equipment and material.
- c. Administer specialized safety sub-programs such as traffic safety, explosives safety, radiation safety, hazardous material control and management, confined space entry, laser safety, recreation, athletic and home safety, public safety, fire protection and prevention, electronics safety, training safety, and diving safety.
- d. Coordinate safety education, training and motivational programs, including developing or providing training or training materials.
- e. Evaluate safety program effectiveness and the achievement of safety objectives. Identify deficiencies, recommend corrective measures and develop implementation plans.

f. Perform safety analyses of data to identify trends and hazard reduction requirements and actions.

g. Conduct inspections of facilities, equipment, material and operations to identify hazards and prepare inspection reports which recommend corrective measures. Develop and maintain abatement programs for identified hazards. Evaluate levels of risk for determining hazard correction priorities.

h. Investigate mishaps and hazardous incidents to determine causation factors and/or improper work/behavioral practices. Prepare mishap investigation reports.

i. Develop or evaluate hazard controls and recommend hazard control measures for unsafe conditions, operations and practices.

j. Perform safety research to identify hazard control measures, potential failure modes and methods to improve program effectiveness.

k. Review plans, designs and specifications for operations and facilities to identify proper hazard controls. Coordinate control measures and programs with management officials/ contractors.

4. Knowledge, Skills and Abilities (KSA's) Required to Perform Safety Functional Tasks. Table 2-1 describes the KSA's considered necessary to perform the functions discussed in section 3 above. The KSA's identified are used to develop Journeyman Safety Specialists, and only certain elements of the KSA will apply to Safety Engineers, Technicians and Collateral Duty Safety personnel.

5. Description of Safety Positions.

a. SAFETY TECHNICIANS. Navy civilian safety technicians are responsible for field level work and are not typically assigned to administer elements of command safety programs. Safety technicians conduct field testing, inspections, surveys, research, data analysis, assist in conducting training, and submit field notes to safety specialists. Grades for GS-019, safety technicians, can be as low as GS-2 but typical entry grade is GS-5 or GS-7. Personnel in the GS-019 series who have attained the GS-05/07 level can qualify for vacancies in the GS-018 series providing adequate time in grade requirements are satisfied.

b. SAFETY SPECIALISTS. Navy civilian safety specialists are responsible for the major elements of a command safety program. Safety specialists provide technical guidance to supervisory personnel and advise the safety manager on the status of their assigned areas of responsibility. Safety specialists are normally assigned to specific operations or geographical areas and/or to specific safety sub-programs such as explosives safety, radiation safety, accident data analysis, safety training, etc. Safety specialists perform the tasks identified focusing on the non-engineering aspects of those tasks. The entry level for safety specialist is normally GS-05 in the 018 series and the GS-11 is considered the journeyman level.

c. SAFETY ENGINEERS. Navy civilian safety engineers are responsible for the engineering design, selection and/or evaluation of hazard controls, or safety standards, and for conducting safety engineering reviews of Navy environments and materials. Safety engineers provide technical guidance for the safety manager and other organizational engineering or technical divisions. Safety engineers perform the tasks identified above, focusing on the engineering aspects of those tasks. The entry level for safety engineers is normally on the GS-5 or 7 level, in the 803 classification series. The journeyman level is GS-11 or 12 depending on the nature, size and risks at the employing activity.

d. Collateral Duty Safety Officers. Collateral duty safety officers typically serve as liaisons between the tenant and host command as well as safety advisors to the Commanding Officer/Officer-in-Charge, and may be civilian or military.

6. Development Plan. This plan is designed to provide an effective procedure for developing qualified journeyman level safety personnel dependent on scope and mission of the activity. Safety specialists at the entry level (GS-5) may or may not have adequate complimentary technical and general education backgrounds. Most entry level safety personnel (technicians, specialists or engineers) will not have an adequate safety education or field experience background, nor are they generally familiar with Navy work environments. The following CDP provides for integrated training and experience in all aspects of safety and occupational health as found in Navy work environments. Development periods as described are approximately 24-36 months in length for safety trainees (technicians, specialists and engineers) and will develop the specialist/ engineer through the GS-7 & GS-9 level to the fully qualified journeyman level (GS-11). Requirements may have been accomplished through previous experience or academic training. Variations to the plans should be defined in specific Individual Development Plans (IDPs) to accommodate command and individual requirements.

a. Field Activity Safety Program Assignments. On-the-job (OJT) training for entry level personnel must be oriented to providing exposure in all KSA's. Table 2-2 lists subject matter and recommended assignments for supervised OJT training and is based on gaining experience in a diversified safety program. This table is not applicable to collateral duty safety personnel. Safety trainees should be required to actively participate in all safety program functional areas during their developmental period. The time line identified for the exposure to KSA's need not be executed in consecutive time periods. The goal of OJT assignments is to develop basic abilities and provide sufficient experience to perform effectively and independently at the journeyman level. OJT is situationally dependent upon the requirements and mission of the activity.

b. Activity Functional Rotational Assignments. Safety trainees should receive orientations in each major functional element of an activity. Table 2-3 lists recommended assignments. These assignments are designed to familiarize the trainee with organization and functional requirements. The goal of the orientations is to provide exposure and experience with all elements of activity operations and Navy safety program administration in order to meet overall KSA requirements and

perform professionally at the journeyman level. For small or tenant activities where major safety programs (i.e. materials handling, crane operations, confined space entry, etc.) may not be applicable, consideration should be given to rotating the trainee to the host or an industrial tenant activity for short periods to familiarize them with these programs and enhance their career development.

c. Formal Classroom Training. Table 2-4 lists formal training subject matter considered necessary for a fully qualified journeyman. In addition, journeymen may need other specialized training in order to perform assigned tasks or manage programs. Table 2-5 lists additional training requirements for personnel assigned specific program responsibilities, typically personnel at the GS-9 or 11 level. Identified references should be reviewed periodically to determine if changes have occurred in training requirements. Subject matter listed in Tables 2-4 and 2-5 may be completed through a variety of methods including college courses, correspondence courses, workshops and conferences. Appendix A provides a matrix of available subject training resources. Information regarding non-commercial courses should be obtained from CANTRAC or the Catalog of Occupational Safety and Health Training Courses (NAVEDTRA 10075 (series)). The assigned supervisor is responsible for ascertaining sources of approved training (federal and commercial) to meet training needs. To complete the plan, individual self development may be necessary and must be encouraged. The goal of formal classroom training is to provide the trainee with technical knowledge in all primary elements of the safety profession in the Naval environment.

TABLE 2-1

KNOWLEDGE, SKILLS AND ABILITIES (KSA's)

<p>FUNCTION 1: Administer safety sub-programs</p>		
<p>a. <u>Knowledge</u> of the various safety sub-programs such as occupational health, fire protection and prevention, explosives safety, traffic safety, radiation safety, etc.</p>	<p>b. <u>Skill</u> in management including providing leadership and direction.</p>	<p>c. <u>Ability</u> to manage and administer programs.</p>
<p>FUNCTION 2: Provide safety education, training and motivational programs.</p>		
<p>a. <u>Knowledge</u> of education, training and motivation programs for effective adult learning.</p>	<p>b. <u>Skill</u> in conducting safety education and training and preparation of training materials for presentations.</p>	<p>c. <u>Ability</u> to develop or evaluate safety education, training or motivational material and programs.</p>
<p>FUNCTION 3: Evaluate safety program effectiveness.</p>		
<p>a. <u>Knowledge</u> of safety program evaluation techniques.</p>	<p>b. <u>Skill</u> at gathering and reviewing data essential for evaluation.</p>	<p>c. <u>Ability</u> to objectively evaluate program effectiveness and to recommend improvement.</p>
<p>FUNCTION 4: Perform safety analysis.</p>		

<p>a. <u>Knowledge</u> of safety analysis methods, hazard control techniques, and safety science.</p>	<p>b. <u>Skill</u> in conducting analysis, interpreting data, and developing conclusions.</p>	<p>c. <u>Ability</u> to perform safety analysis of data, facilities, equipment, material and operations.</p>
<p>FUNCTION 5: Perform safety inspections.</p>		
<p>a. <u>Knowledge</u> of safety standards, and workplace environments, operations, material and equipment.</p>	<p>b. <u>Skill</u> in conducting inspections and preparing written reports.</p>	<p>c. <u>Ability</u> to recognize violations of standards and potential risk factors, and to determine corrective measures.</p>
<p>FUNCTION 6: Investigate mishaps and prepare reports.</p>		
<p>a. <u>Knowledge</u> of mishap causation factors and investigation techniques.</p>	<p>b. <u>Skill</u> in conducting investigations and preparing reports.</p>	<p>c. <u>Ability</u> to conduct investigations, recognize causal factors and determine preventive measures.</p>
<p>FUNCTION 7: Develop and evaluate hazard controls.</p>		
<p>a. <u>Knowledge</u> of hazard control principles , methods, and practices.</p>	<p>b. <u>Skill</u> in selecting and evaluating specific hazard controls.</p>	<p>c. <u>Ability</u> to evaluate safety risk factors.</p>
<p>FUNCTION 8: Conduct safety research.</p>		

<p>a. <u>Knowledge</u> of research principles and techniques.</p>	<p>b. <u>Skill</u> in conducting literature, laboratory, and field research.</p>	<p>c. <u>Ability</u> to organize, administer and evaluate research projects.</p>
<p>FUNCTION 9: Review plans and designs.</p>		
<p>a. <u>Knowledge</u> of safety standards and hazard control principles and blue print and design principles.</p>	<p>b. <u>Skill</u> in performing reviews and evaluations and in making hazard control recommendations.</p>	<p>c. <u>Ability</u> to review plans, designs, and contracts to evaluate safety features.</p>

TABLE 2-2

FIELD ACTIVITY SAFETY PROGRAM ASSIGNMENTS (OJT)

SUBJECT MATTER	LENGTHS (In weeks)			KSA EXPOSURE (Table 2-1)
	ENGINEER	SPECIALIST	TECHNICIAN	
Occupational Health	5 - 7	24 - 28	5- 7	1 a,b,c
Hazardous Materials	N/A	5 - 7	5 - 7	1 a,b,c
Safet Sub-Programs Administration	5 - 7	40	N/A	1 a,b,c
Safety Training	5 - 7	12 - 14	5 - 7	2 a,b,c
Safety Program Evaluation	5 - 7	3 - 4	N/A	3 a,b,c
Hazard Analysis & Control	65 - 70	12 - 14	12 - 14	4, 7, 9 a,b,c
Safety Inspections	12 - 14	20 - 22	54	5, 9 a,b,c
Mishap Investigation and Reporting	20 - 22	20 - 22	12 - 14	6 a,b,c
Safety Research	24 - 28	3 - 4	12 - 14	8 a,b,c

This table represents 75% of the first two years of development.

TABLE 2-3

ACTIVITY FUNCTIONAL ROTATIONAL ASSIGNMENTS

FUNCTIONAL ELEMENT	LENGTHS (In days)			KSA EXPOSURE (Table 2-1)
	ENGINEER	SPECIALIST	TECHNICIAN	
Public Works/Construction/Maintenance	3 - 4	3 - 4	4 - 5	4, 5, 9 a,b,c
Personnel/Training	0.5 - 1	0.5 - 1	0.5 - 1	2 a,b,c
Medical/Industrial Hygiene	1 - 2	3 - 4	1 - 2	1, 5, 6 a,b,c
Fire protection/Prevention	3 - 4	2 - 3	3 - 4	1, 2, 5, 7 a,b,c
Planning/Engineering	3 - 4	0.5 - 1	0.5 - 1	4, 7, 8, 9 a,b,c
Operations/Production	3 - 4	3 - 4	4 - 5	5, 7 a,b,c
Research, Testing, Development & Evaluation/Quality Assurance	0.5 - 1	0.5 - 1	NA	7, 8 a,b,c

This table represents 5% of the first two years of development.

TABLE 2-4

FORMAL TRAINING SUBJECT MATTER LIST

SUBJECT MATTER	LENGTH (in weeks)	(TABLE 2-1)
Statistics	1	3,4,7 a
Hazard Control and Prevention	1	3,5,7 a
Safety Law	1	5a
Occupational Health and Industrial Hygiene	1*	1,2,3,5,7 a
Hazardous Materials	1*	1,3,5 a
System Safety	1	1,4 a
Explosives Safety	2	1, 4,5 a
Confined Space Entry	2	1, 4, 5 a
Electrical Safety	1*	1, 4, 5 a
Ventilation Design	1	1, 5, 7, 9 a
Fire Prevention/Life Safety	1	1, 4 a
Safety Training Methods	1**	2 a
Mishap Investigation	1***	1, 4, 6 a
Radiation Safety (Ionizing and Non-Ionizing)	2	1, 4, 5 a
Traffic Safety	1	1, 6 a
Safety Engineering/Facility Design	1	9 a
Ergonomics	1	
Machines and Machine Guarding	1	4, 5, 6, 7, 9 a

Safety Appraisal	1*	3, 4 a
Navy Occupational Safety and Health Standards/Osha Standards	3*	1, 2, 3, 4, 5, 6, 7, 9 a
Introduction to Navosh ****	1*	1 a

1 Some course titles are generic and may differ depending on source.

2 Courses may vary by several days in length dependent on source.

- * Mandatory to become fully qualified GS-018-11 IAW OPNAV 5100.23 (series)
- ** Mandatory to instruct safety and health courses of 2 hrs or more in length
- *** Mandatory to conduct Class A, B or C accident investigations
- **** Mandatory for collateral duty safety personnel

TABLE 2-5

FORMAL TRAINING REQUIREMENTS FOR PROGRAM MANAGEMENT

PROGRAM DESIGNATION	REFERENCE	TRAINING REQUIRED
Asbestos Program Manager (Need not be the Safety Mgr)	OPNAV 5100.23 (series), Chapter 17	3 day Abatement Project Designer Course*; 2 day Asbestos Inspector/ Management Planner Course* and Naval Facilities Engineering Service Center Asbestos Program Manager Course (Accreditation as Asbestos Inspector required as prerequisite.)
Confined Space Entry Program Manager/Assistant Confined Space Entry Program Manager (CSPM/ACSPM) & Gas Free Engineer/Assistant Gas Free Engineer (GFE/AGFE)	OPNAV 5100.23 (series), Chapter 27 & NAVSEA S6470-AA-SAF 10	Confined Space Entry (A-493-0030)
Ergonomics Program Manager	OPNAV 5100.23 (series), Chapter 23	Ergonomics (A-493-0024)
Explosives Safety Officer (ESO)	NAVSEA OP-5, Vol. 1, 6th Edition	Explosives Safety for Officers, Managers & Supervisors (AMMO-C-25) and Explosives Safety for Naval Facility Planning (AMMO-C-15)
Explosives Safety Specialist	NAVSEA OP-5, Vol. 1, 6th Edition	Basics of Naval Explosives Hazard Control (AMMO-C-21) and Explosives Safety for Officers, Managers & Supervisors (AMMO-C-25)
Hazardous Materials Control & Management (HMC&M) Program Manager (or Coordinator)	OPNAV 5100.23 (series), Chapter 7	Hazardous Materials (Coordinator/ Manager) (A-493-0031)
Laser Systems Safety	OPNAV 5100.23	Laser Systems Safety

Officer (LSSO)	(series), Chapter 22 & SPARWAR 5100.12 (series)	Officer (Category I) (A-493-0038); or, Laser Systems Safety Officer (Category II) (A-493-0067); dependent on laser classification. (Note: Refresher training required if technical training is not used within 1 yr of course completion)
Radiation Safety Officer (Ionizing) and Assistant Radiation Safety Officer (RSO/ARSO)	NAVSEA S0420-AA-RAD-010	Radiation Safety Officer (S-4J-0016); If X-ray only, X-ray Radiation Safety Officer Course (S-491-0016)
Weight Handling Equipment Program	OPNAV 5100.23 (series), Chapter 31	Cranes and Materials Handling for General Industry (A-493-0074) or equivalent.
Workplace Monitor (shipyards only)	OPNAV 5100.23 (series), Chapter 8	Workplace Monitor Training & Certification (BUMED)
Respiratory Protection Program Manager	OPNAV 5100.23 (series), Chapter 15	Respiratory Protection Program Manager (#A-493-0072) or equivalent

*** Annual training required.**

CHAPTER 3

CAREER DEVELOPMENT PLAN FOR INDUSTRIAL HYGIENE PERSONNEL

1. Introduction. The career development plan (CDP) provided in this chapter identifies assignments, orientations, and formal training considered necessary to achieve the knowledge, skills and abilities (KSA's) deemed important for personnel in industrial hygiene positions. This chapter outlines actions for entry level personnel considered necessary in their development to the journeyman level. Completion of the CDP guidelines will provide personnel the necessary background to become fully qualified professionals in the civilian classifications of Industrial Hygiene Technician, GS-0640, and Industrial Hygienist, GS-0690. These guidelines may also be used to develop plans for military personnel in the equivalent position of NOBC 0862.

2. Industrial Hygiene Program Scope. Industrial hygiene programs provide direction and support to headquarters, station, unit or activity commands in matters relating to occupational health hazards in the workplace. Programs are also provided to assist in administering health hazard specific prevention programs at Navy facilities, ashore and afloat, and during operations involving Navy personnel. Programs cover government property and personnel and oversight of public and contractor personnel at government facilities or performing operations on government property. The Industrial Hygiene program is under the technical direction of the Bureau of Medicine and Surgery which is responsible for the accession, distribution, training and quality assurance aspects of IH professionals.

3. Functions Performed by Industrial Hygiene Personnel. Industrial hygiene professionals are expected to perform the following functional tasks in varying degrees of magnitude depending on the nature, size and scope of their organization or geographical support area:

a. Participate in overall activity/unit management including committees, councils, budgeting, employee relations, injury compensation, training, and providing other functional assistance relative to occupational health issues.

b. Assist in the overall implementation of the activity occupational health program. Review and interpret national, federal, defense, and Navy occupational health standards, manuals, reports and other formal written communications. Develop formal guidance as necessary to ensure activity compliance with all such directives. Serve as technical advisor on all such issues.

c. Participate in, administer or audit/review, as required, specialized industrial hygiene programs such as noise, sight conservation, lead, asbestos, ionizing and non-ionizing radiation, laser, ventilation systems, respiratory protection, ergonomics and indoor air quality. Evaluate occupational health programs effectiveness and achievement of objectives. Identify areas of effectiveness and efficiencies, recommend corrective actions, and develop program improvements/implementation plans when appropriate.

d. Conduct industrial hygiene surveys and evaluations of work processes, facilities, buildings, ships, equipment and materials to identify health hazards. Conduct workplace monitoring as required by survey results and by mandated stressor-specific periodic monitoring requirements (e.g., lead, asbestos, cadmium, etc) to evaluate exposure levels.

e. Provide survey/ evaluation reports, including findings, recommended corrective actions, notifications of personnel exposure and medical surveillance enrollment notices. Develop, maintain and execute hazard abatement and workplace monitoring programs, including risk assessment, to determine corrective actions and sampling priorities. Make recommendations to higher authority for necessary research when evaluations show insufficient information exists on the stressor.

f. Develop, review, audit, coordinate and/or provide occupational health training and education and/or provide informal/GMT health training.

g. Analyze exposure sampling data to identify exposure trends and candidates for hazard reduction and to recommend corrective actions.

h. Investigate personnel exposure mishaps, spills and hazardous conditions/incidents to determine exposures and make recommendations for corrective actions and/or remediation.

i. Evaluate, recommend and/or develop hazard control measures for unhealthful working conditions, operations and practices, including operation process or procedure changes; material substitution; process enclosures/isolation; process ventilation; personal protective equipment/chemical protective clothing; and administrative controls.

j. Review new and rework plans, designs and specifications for work processes, operations, facilities, buildings, and ships to identify health hazards and proper controls. Coordinate with contractor representatives as appropriate.

4. Knowledge, Skills and Abilities (KSA's) Required to Perform Industrial Hygiene Tasks. Table 3-1 describes the KSA's considered necessary to perform the functions described in section 3 above. The KSA's identified are used to develop Journeyman Industrial Hygienists, and only certain elements of the KSA will apply to Industrial Hygiene Technicians.

5. Description of Industrial Hygiene Positions.

a. Industrial Hygiene Technician. Navy civilian industrial hygiene technicians work under the technical direction of an Industrial Hygienist. Industrial Hygiene technicians conduct field sampling, inspections, surveys, research, and submit field notes to industrial hygienists. Entry grades for GS-640, industrial hygiene technicians, is GS-5 and progresses to GS-9.

b. Industrial Hygienist. Navy industrial hygienists are responsible for the anticipation, recognition, evaluation and control of chemical, biological, physical, and ergonomic health hazards for all Navy operations, personnel and environs. They provide technical assistance and support for all facets of the industrial hygiene program. The entry level for the industrial hygienist is normally GS-5 in the 0690 series and the GS-0690-12 level is considered the journeyman level. Entry level for military equivalent personnel is from ENS to LTJG.

6. Development Plan. This plan is designed to provide an effective procedure for developing qualified journeymen industrial hygiene personnel relative to the scope and mission of the activity. Industrial hygienists at the entry level (GS-5) may or may not have adequate complimentary technical backgrounds, nor are they generally familiar with Navy environments. The CDP for industrial hygienists is based on the assumption that the individual has the general education background at least at the baccalaureate level, no on-the-job training (OJT) experience and a modest amount of technical knowledge. The development periods as described for industrial hygiene technicians are approximately 24 months in length, and will develop the technician through the GS-09 level. Development periods as described for industrial hygienists are approximately 36 months in length and will develop the industrial hygienist through the GS-11 level in preparation for transition to GS-690, GS-12, Journeyman level through selective competition. The goal is to gain experience, confidence and competency in industrial hygiene practice, including the general areas of industrial hygiene fundamentals, instrument applications, hazard abatement, health hazard recognition, and sampling, survey and evaluation techniques. Variations to the plan should be defined in specific Individual Development Plans (IDP's) to accommodate command and individual requirements. Prior knowledge and education must be considered in the development of the IDP.

a. Field Activity Industrial Hygiene Assignments. OJT for entry level personnel must be oriented to providing exposure to all KSA's. Table 3-2 lists subject matter and recommended assignments for supervised OJT and is based on gaining experience in a diversified occupational health program. Industrial hygiene trainees should be required to actively participate in all occupational health functional areas during their developmental period. Time lines identified for exposure to KSA's, need not be executed in consecutive time periods. The goal of OJT assignments is to develop basic abilities and provide sufficient experience to perform effectively and independently at the journeyman level.

b. Activity Functional Rotational Assignments. Trainees should receive orientations in each major functional element of an activity. Table 3-3 lists recommended assignments. These assignments are designed to familiarize the trainee with organization and functional requirements. The goal of the orientation is to provide the exposure and experience with all elements of activity organizations and Navy health programs administration in order to meet overall KSA requirements and perform professionally at the journeyman level.

c. Formal Classroom Training. Table 3-4 lists formal training subject matter considered necessary for a fully qualified journeyman. In

addition, industrial hygienists may need other specialized training in order to perform assigned tasks or manage programs. Table 3-5 may be used as a quick reference to determine training requirements for certain program management or specialized areas, but it is important to review the appropriate references which may change as information is updated. Subject matter listed in Tables 3-4 and 3-5 may be completed through a variety of methods including college courses, correspondence courses, workshops and conferences. Appendix B provides a matrix of available subject training resources. Information regarding non-commercial courses should be obtained from CANTRAC or the Catalog of Occupational Safety and Health Training Courses (NAVEDTRA 10075 series). The assigned supervisor is responsible for ascertaining sources of approved training (federal and commercial) to meet training needs. Requirements may have been accomplished through previous experience or academic training. To complete the plan, individual self development may be required and must be encouraged. The goal of the formal classroom training is to provide the individual with technical knowledge in all primary elements of the industrial hygiene profession in the Navy environment.

d. Industrial Hygiene Officers (IHO's) Training. Table 3-6 lists training considered necessary for the professional development of industrial hygiene officers (IHO's). Supervisors should strive to ensure that the identified training is completed by IHO's prior to assignment to the fleet. In addition, training should be identified for professional development dependent upon duties and responsibilities. The IHO career development plan recommends attainment of IHIT by the end of the second tour, attainment of CIH by the end of the fourth tour, and attainment of a graduate degree in IH or a related field by the end of the fifth tour. In addition, certain key billets will be "K" coded which requires CIH and a graduate degree.

TABLE 3-1

KNOWLEDGE, SKILLS AND ABILITIES (KSA's)

<p>FUNCTION 1: Provide Advisory and Technical Support to the Activity Industrial Hygiene Program</p>		
<p>a. <u>Knowledge</u> of industrial hygiene programs and a broad range of Navy, Federal and consensus occupational health standards.</p>	<p>b. <u>Skill</u> in interpreting and communicating highly complex technical information through oral and written reports.</p>	<p>c. <u>Ability</u> to develop program policies, procedures, and regulations; effectively communicate and participate in problem solving; and provide technical recommendations and assistance.</p>
<p>FUNCTION 2: Evaluate, Audit, Review Industrial Hygiene Programs for Effectiveness, and Achievement of Objectives</p>		
<p>a. <u>Knowledge</u> of industrial hygiene program requirements and evaluation procedures.</p>	<p>b. <u>Skill</u> in conducting program audits, and measuring program effectiveness.</p>	<p>c. <u>Ability</u> to conduct program reviews and develop valid recommendations.</p>
<p>FUNCTION 3: Conduct Industrial Hygiene Surveys and Workplace Evaluations</p>		
<p>a. <u>Knowledge</u> of activity work practices, potential health hazards, use and calibration of industrial hygiene equipment.</p>	<p>b. <u>Skill</u> in applying experienced judgement.</p>	<p>c. <u>Ability</u> to conduct industrial hygiene surveys, use and calibrate industrial hygiene equipment.</p>
<p>FUNCTION 4: Generate Written and Oral Evaluation Reports</p>		
<p>a. <u>Knowledge</u> of industrial hygiene survey report formats, technical writing, and oral presentation techniques.</p>	<p>b. <u>Skill</u> in interpreting, developing, preparing and evaluating industrial hygiene reports, instructions and publications.</p>	<p>c. <u>Ability</u> to communicate effectively through clear, concise written reports, and oral presentations.</p>
<p>FUNCTION 5: Develop, Review, Audit, Coordinate and/or Provide Occupational Health Training and Education</p>		
<p>a. <u>Knowledge</u> of industrial hygiene subject matter, and adult training methods.</p>	<p>b. <u>Skill</u> in conducting occupational health education and training and preparation of training materials for presentations.</p>	<p>c. <u>Ability</u> to develop and conduct occupational health training courses.</p>
<p>FUNCTION 6: Analyze Exposure Sampling Data and Perform Valid Exposure Assessments</p>		
<p>a. <u>Knowledge</u> of statistical analysis, theories, methods and techniques and exposure assessment criteria.</p>	<p>b. <u>Skill</u> in applying statistical analysis techniques and correlating data.</p>	<p>c. <u>Ability</u> to provide statistically valid data and exposure assessments.</p>

FUNCTION 7: Investigate Personnel Exposure Incidents and Make Recommendations for Corrective Actions		
a. <u>Knowledge</u> of mishap causation factors, investigation procedures and investigative techniques.	b. <u>Skill</u> in conducting investigations and preparing reports.	c. <u>Ability</u> to conduct investigations, recognize causal factors, and determine preventive measures.
FUNCTION 8: Evaluate and Recommend Hazard Control Measures and Corrective Actions for Unhealthful Working Conditions		
a. <u>Knowledge</u> of hazard control principles, methods and practices.	b. <u>Skill</u> in using sound hazard control principles.	c. <u>Ability</u> to make sound recommendations for corrective actions.
FUNCTION 9: Conduct Design/Specification/Process Reviews to Identify Health Hazards and Compliance with Specifications and Applicable Regulations		
a. <u>Knowledge</u> of schematic, technical drawings and specifications and regulatory requirements.	b. <u>Skill</u> in interpreting technical drawings and specifications and identifying deficiencies.	c. <u>Ability</u> to provide appropriate design specification and process review results.
FUNCTION 10: Use Automated Data Processing Systems and Processes Employed in Conjunction with Occupational Health Activities		
a. <u>Knowledge</u> of computer systems, programs and processes.	b. <u>Skill</u> in using automated data processing equipment and related software.	c. <u>Ability</u> to access and use programs, enter and process data, and create documents with word processing systems.

TABLE 3-2

FIELD ACTIVITY INDUSTRIAL HYGIENE PROGRAM ASSIGNMENTS (OJT)

SUBJECT MATTER	LENGTH (In Weeks)		KSA Exposure (Table 3-1)
	Industrial Hygienist	Industrial Hygiene Technician	
Sampling and Monitoring Techniques	3 - 4	36 - 38	3 a,b,c
Laboratory Techniques	0.5 - 1	3 - 4	3 a,b,c
Hazardous Materials	2 - 3	3 - 4	7, 8 a,b,c
Industrial Hygiene Survey Report	15 - 16	NA	8, 10 a,b,c
Hazard Analysis and Control	6 - 8	3 - 4	2, 8, 9 a,b,c
Risk and Exposure Assessment	6 - 8	3 - 4	6, 9 a,b,c
Automated Data Processing	1 - 2	1-2	10 a,b,c
Industrial Hygiene Walk-through	20 - 24	13 - 14	3, 4, 6 a,b,c
Standards Research	4 -5	1 - 2	1 a,b,c
Technical Design Review	2 - 3	NA	8, 9 a,b,c
Occupational Safety	1 - 2	0.5 - 1	1 a,b,c
Industrial Hygiene and Safety Training	1 - 2	1 -2	5 a,b,c
Medical Surveillance	1-2	N/A	1,6 a,b,c
Mishap/Spill/Incident Response	4 -5	3 - 4	7 a,b,c

This table represents 75% of the first two years of development

TABLE 3-3

ACTIVITY FUNCTIONAL ROTATIONAL ASSIGNMENTS

FUNCTIONAL ELEMENT	LENGTH (In days)		KSA Exposure (Table 3-1)
	Industrial Hygienist	Industrial Hygiene Technician	
Occupational Medicine	0.5 - 1	0.5 - 1	1, 2 a,b,c
Audiology	0.5 - 1	0.5 - 1	1, 2 a,b,c
Preventive Medicine	0.5 - 1	0.5 - 1	1, 2 a,b,c
Epidemiology	0.5 - 1	0.5 - 1	1, 2 a,b,c
Toxicology	0.5 - 1	0.5 - 1	1, 2 a,b,c
Ship Repair/Maintenance	2 - 3	2 - 3	3, 6 a,b,c
Aircraft Repair/Maintenance	2 - 3	2 - 3	3, 6 a,b,c
Facilities Construction/Maintenance	2 - 3	2 - 3	3, 6 a,b,c
Environmental	2 - 3	2 - 3	3, 6 a,b,c
Transportation	2 - 3	2 - 3	3, 6 a,b,c
Engineering/Contracts	2 - 3	2 - 3	3, 6, 8, 9 a,b,c
Materials/Supplies	1 - 2	1 - 2	3, 6 a,b,c
Shipboard/Afloat Programs	2 - 3	2 - 3	3, 6 a,b,c
Administrative Command	1 - 2	1 - 2	3, 6 a,b,c
Utilities	2 - 3	2 - 3	3, 6 a,b,c
Medical/Dental	1 - 2	1 - 2	3, 6 a,b,c

This table represents 5% of the first two years of development

TABLE 3-4

FORMAL TRAINING SUBJECT MATTER LIST

4. Funding. Funding will come out of local budgets. It will be up to the manager/supervisor to initiate appropriate planning, programming, and funding.

APPENDIX A

INDIVIDUAL DEVELOPMENT PLAN	EMPLOYEE'S NAME: Doe, John R.	SSN: 000-00-0000
PRIVACY ACT STATEMENT GENERAL-This information is provided pursuant to Public Law 93-570 (Privacy Act of 1974)	SERIES/GRADE: GS-0018-00 Safety & Occupational Health Specialist RATE/RANK:	

administration of the Federal Training Program. The purpose of this form is to document the nomination of trainees and completion of training, and it serves as the principal repository of personal, fiscal and administrative information about trainees and the programs to which they participate. The form becomes part of the permanent employment record of the participants in training programs and is included in the Government's Personnel Data File.

Effects of Nondisclosure-Personal information provided on this form is given on a voluntary basis. Failure to provide this information, however, may result in ineligibility for participation in training programs.

LEADERSHIP/MANAGEMENT TRAINING
DESIRED (Y/N)? YES

PHONE:
000-0000

SHORT TERM GOALS:

Improve performance in present position.

TRAINING:

	COMPLETED (X)	PRIORITY (1,2,3)	DEVELOPMENTAL ASSIGNMENTS
1. Hazardous Materials (A-493-0031) 2/98		1	a. Serve as member of training safety and firefighting review team. FY98-99
2. Basic Explosives Safety (S-000-0025) FY98		1	b. Observe explosive safety inspection at field activity FY98
3. Machinery/Machine Guarding (S-493-0001) FY99		1	c. Provide advice/assistance relative to revision of:
		1	OPNAVINST 1500.75 CNETINST 1500.20C
4. Electrical Safety (NEC) (local) FY99			d. Conduct explosive safety inspection at field activity FY99

REMARKS:

This IDP is a two year development plan covering FY98 & 99

EMPLOYEE'S SIGNATURE:

DATE:

IMMEDIATE SUPERVISOR'S
SIGNATURE:

DATE:

APPENDIX A-1

**INDIVIDUAL DEVELOPMENT
PLAN**

EMPLOYEE'S NAME:

SSN:

PRIVACY ACT STATEMENT

GENERAL-This information is provided pursuant to Public Law 93-570 (Privacy Act of 1974)

Authority-Government Employees Training Act of 1958 (US Code, Title 5, sec 4101 to 4118)

Purpose and Uses-The information is used in the administration of the Federal Training Program. The purpose of this form is to document the nomination of trainees and completion of training, and it serves as the principal repository of personal, fiscal and administrative information about trainees and the programs to which they participate. The form becomes part of the permanent employment record of the participants in training programs and is included in the Government's Personnel Data File.

Effects of Nondisclosure-Personal information provided on this form is given on a voluntary basis. Failure to provide this information, however, may result in ineligibility for participation in training programs.

SERIES/GRADE:

RATE/RANK:

ORGANIZATIONAL CODE:

LOCATION:

LEADERSHIP/MANAGEMENT TRAINING DESIRED
(Y/N)?

PHONE:

SHORT TERM GOALS:

TRAINING:

COMPLETED

PRIORITY

DEVELOPMENTAL
ASSIGNMENTS

(X)

(1,2,3)

REMARKS:

EMPLOYEE'S SIGNATURE:	DATE:	IMMEDIATE SUPERVISOR'S SIGNATURE:	DATE:
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APPENDIX B

SUBJECT MATTER TRAINING RESOURCE MATRIX

SUBJECT	NAVOSHENVTRACEN	OHSATI	OTHER GOVT (see footnote)	LOCAL COLLEGE or COMM VENDOR
Accounting Principles			11	X
Advanced Health Care Safety	*			X
Advanced Management Concepts	*		11	X
Applied Industrial Hygiene	*			X
Applied Industrial Toxicology	*			X
Afloat Environmental Protection Coordinator	X			
Afloat Hazardous Material	X			

Afloat Safety Officer	X			
Asbestos Program Manager Course			8	
Asbestos Inspector			4,9	X
Asbestos Management Planner			4,9	X
Asbestos Project Designer			4,9	X
Analysis of Airborne Asbestos Samples			4,7,9	X
Analysis of Bulk Asbestos Samples			4,7,9	X
Associate Safety Professional (ASP) Preparation Course				x
Basics of Naval Explosives Hazard Control			1	
Briefing Techniques			11	X
Confined Space Entry	X	X	9	X
Comprehensive Industrial Hygiene Review	*			X
Conducting Indoor Air Quality Investigations	*		9	X
Construction	X	X	10	X

Cranes & Material Handling	X	X	10	X
CRIMP/HICS Workshop	X			
Certified Safety Professional (CSP) Preparation Course				x
Division Officer School			12	
Ergonomics	X		10	X
Electrical Safety		X	9,10	X
Electrical Standards	X	X	9,10	X

APPENDIX B(con't)

SUBJECT MATTER TRAINING RESOURCE MATRIX

Essentials of Safety Mgmt	*			x
SUBJECT	NAVOSHENVTRACEN	OHSATI	OTHER GOVT (see footnote)	LOCAL COLLEGE or COMM VENDOR
Explosives Safety for Naval Facility Planning			1	
Explosives Safety for Officer, Managers & -			1	

Fall Protection	X	X	10	X
Fire Protection & Life Safety	X	X	10	X
Fundamentals of Industrial Hygiene	*	X	10	X
General Industry Standards	X	X	10	X
Ground Safety for Marines	X			
Hazard Control & Prevention		X	10	X
Hazardous Waste Operations (HAZWOPER)	X		4,9	X
Hazardous Substance Incident Response & Management	X		4,9	X
Health & Safety in Health Care Settings	*		9	X
Hospital Occupational Health	*		9	X
IMA Asbestos Removal	X			
Indoor Air Pollution	*		9	X
Indoor Air Quality Assessment & Management	*		9	X
Industrial Hygiene				X

Industrial Hygiene in the Hospital Setting	*		9	X
Industrial Hygiene Measurements	*		9	X
Industrial & Occupational Toxicology	*		9	X
Industrial Ventilation Design & Testing	*		8,9	X
Introduction to Hazardous Materials (Ashore)	X			
Introduction to Industrial Hygiene for Safety Prof.	X		10	
Laser Systems Safety Officer (Category I & Category II)	X			
Legal Aspects Of OSH	*			X

APPENDIX B(con't)

SUBJECT MATTER TRAINING RESOURCE MATRIX

Legal Aspects of Safety & Environmental	*			x
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Legal & Ethical Issues in OSH	*			X
SUBJECT	NAVOSHENVTRACEN	OHSATI	OTHER GOVT (see footnote)	LOCAL COLLEGE or COMM VENDOR
Legal Concerns of OSH Professionals	*			X
Machinery & Machine Guarding	X	X	10	X
Management & Admin Skills for the OSH Professional	*			X
Management Techniques	*		9	X
Math & Science for Safety Professionals	*			X
Microcomputers				X
Mishap Investigation & Prevention	X	X	3,10	X
Mishap Recordkeeping Seminar	X			
NAVOSH Standards	X			
Nonionizing Radiation	*		9	X
Occupational Health & Safety Technician (OHST) Preparation -				x

Occupational Health Program Management	*		9	X
Occupational Safety and Health 2000 (OSH 2000)	X			
Occupational Safety in the Health Care Settings	*		9	X
Operational Risk Management			2,5	
Oral Presentations & Written Communications				X
Practical Statistics	*			X
Principles of Industrial Hygiene	*		9	X
Radiation Safety Officer			6	
Radio Frequency & Microwave Radiation Safety	*		9	X
Respiratory Protection Program Manager	X	X		
Risk Assessment	*			X
Safety Appraisal	X			X
Safety Certification Review	*			X
Safety Programs	X			

Safety Training Methods	X		10	X
Submarine Safety Officer	X		12	
SUBJECT	NAVOSHENVTRACEN	OHSATI	OTHER GOVT (see footnote)	LOCAL COLLEGE or COMM VENDOR
Survey of Industrial Hygiene	*		9	X

APPENDIX B(con't)

SUBJECT MATTER TRAINING RESOURCE MATRIX

Safety Psychology	*			X
Statistics for Managers	*			X
Statistical Analysis	*			X
Shipboard Asbestos Emergency Response	X			
Understanding Human Behavior			11	X
Workplace Monitoring			7	

- 1 - ARMY DEFENSE AMMUNITIONS CENTER AND SCHOOL
- 2 - ARMY SAFETY CENTER/ARMY MATERIAL COMMAND/ARMY CORPS OF ENGINEERS
- 3 - DEPT OF TRANSPORTATION SAFETY INSTITUTE
- 4 - ENVIRONMENTAL PROTECTION AGENCY/EDUCATION RESOURCE CENTERS
- 5 - NAVAL SAFETY CENTER

ACTIVITY

7 - NAVY ENVIRONMENTAL HEALTH CENTER

8 - NAVAL FACILITIES ENGINEERING SERVICE CENTER, PORT HUENEME

9 - NIOSH/EDUCATION RESOURCE CENTERS

10 - OSHA TRAINING INSTITUTE

11 - OFFICE of PERSONNEL MANAGEMENT

12 - SURFACE WARFARE OFFICERS SCHOOL, NEWPORT, RI

Note: For specific non-commercial course information, refer to CANTRAC or the Catalog of OSH Training Courses (NAVEDTRA 10075 series). For information on approved commercial courses, contact the servicing HRO training officer. Course titles may vary dependent on source of training.

* Tuition assistance available based on a first come, first serve basis.