

**BY ORDER OF THE
SECRETARY OF THE AIR FORCE**

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Special Management

**HAZARD COMMUNICATION
(HAZCOM) PROGRAM**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This Air Force Instruction (AFI) implements Department of Defense Instruction (DoDI) 6050.05, *DoD Hazard Communication (HAZCOM) Program*, and Air Force Policy Directive (AFPD) 90-8, *Environment, Safety and Occupational Health Management and Risk Management*. Unless otherwise noted, the guidance and procedures outlined in this AFI apply to all United States Air Force (USAF) military and civilian personnel at AF installations, geographically separated units (GSU) within the United States (US) and its territories, and direct reporting units (DRU) and field operating agencies (FOA) not located on AF installations. For installations and GSUs located in foreign countries, this AFI only applies to the extent it addresses matters not covered by country-specific Final Governing Standards, the Overseas Environmental Baseline Guidance Document, Combatant Command policy, and environmental consideration annexes to operation orders, operation plans, or other operation directives that apply at the overseas location. Additionally, this AFI applies to the AF Reserve (AFR), the Air National Guard (ANG). Further, the ANG or AFR, in coordination with Air Force Civil Engineering (AF/A4C), will support the intent of this AFI, but where needed may prepare an appropriate policy, supplement, guidance, and/or procedural document reflecting its unique legal status, resources, and structure, as recognized by the Reserve Component authorities of Title 10 of the United States Code and other governing authorities. Government-owned, contractor-operated (GOCO) operations within the US or US territories shall implement 29 CFR 1910.1200. GOCO operations outside the regulatory jurisdiction of the Occupational Safety and Health Administration (OSHA) shall comply with this standard in response to Federal Acquisition Regulation (FAR) 52.223-3, *Hazardous Material Identification and Material Safety Data*. Refer recommended changes and questions about this publication to

the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. The authorities to waive wing/unit level requirements in this publication are identified with a tier (“T-0, T-1, T-2, T-3”) number following the compliance statement. See AFI 33-360, *Publications and Forms Management*, for a description of the authorities associated with the tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the requestors commander for non-tiered compliance items. This publication may be supplemented at any level when additional or more stringent safety and health criteria are required. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS).

SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. Major changes include merging of AFI 90-821, *Hazard Communication (HAZCOM) Program* and AFI 48-158, *Occupational Exposure to Hazardous Chemicals in Laboratories*. AFI 48-158 is superseded by AFI 90-821 and has been rescinded.

Chapter 1

PROGRAM OVERVIEW

1.1. Purpose. This AFI is intended to minimize the incidence of chemically induced occupational and environmental health-related illnesses and injuries by establishing guidance for training employees on the health and physical hazards associated with and proper preventive measures to be taken when using or handling hazardous chemicals in work areas.

1.2. Scope. This AFI provides the requirements for an effective AF HAZCOM Program for those work areas that have workers that handle or use hazardous chemicals. All employees that work in an environment where hazardous chemicals are known to be present in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency, will be provided information about the hazardous chemicals to which they may be exposed. This information shall be provided by means of a written work area-specific HAZCOM program, including but not limited to Safety Data Sheets (SDSs, formerly known as Material Safety Data Sheets or MSDSs), labels, and other forms of warning, information and training.

1.2.1. This AFI applies to:

1.2.1.1. All AF military and civilian personnel who use, handle, or may be potentially exposed to hazardous chemicals while working under a contractor or working in contractor facilities. The AF retains ultimate responsibility for AF personnel participation and oversight.

1.2.1.2. Contractor employees who are employed at AF-owned or operated facilities that may be exposed to hazardous chemicals used during an AF operation with the following **exceptions**:

1.2.1.2.1. This AFI does not excuse contractors, as stipulated in their specific contracts, from their compliance obligations under 29 CFR 1910.1200 or any applicable State and local requirements.

1.2.1.2.2. Contractors are required to train their own employees in accordance with 29 CFR 1910.1200 and any applicable State and local requirements. Contractors are not authorized to use the AF HAZCOM Program for this purpose.

1.2.1.3. 29 CFR 1910.1200 has primacy over state programs at AF installations even if the state has an OSHA-approved state program.

1.2.2. Laboratories are primarily governed by 29 CFR 1910.1450, *Occupational Exposure to Hazardous Chemicals in Laboratories*. Such laboratories include educational, histopathology, clinical, and small experimental laboratories. This section on laboratories does not apply to dental, pharmacy, nondestructive inspection (NDI), precision measurement equipment laboratories, quality control laboratories, and laboratories that rely solely on prepackaged, commercially-prepared kits. The elements of a complete laboratory safety and health program (**Chapter 4**) include: a written chemical hygiene plan, the appointment of a chemical hygiene officer, medical consultation/examination, worker information and training, mishap reporting, hazard identification through use of labels and Safety Data Sheets (SDS), hazard controls, record keeping, worker exposure determination and notification, and chemical selection.

1.2.3. In work operations, such as warehousing, where employees only handle chemicals in sealed containers that are not opened under normal conditions of use, this AFI applies to these operations only as follows:

1.2.3.1. Labeling requirements of [paragraph 3.1.3](#).

1.2.3.2. SDS requirements of [paragraph 3.1.4](#).

1.2.3.3. Training requirements of [paragraph 3.1.6](#).

1.2.4. Materials Exempt from the AF HAZCOM Program.

1.2.4.1. The AF HAZCOM program will apply the exemptions provided in 29 CFR 1910.1200(b)(6)

1.2.4.2. Munitions as defined in AFMAN 21-200, *Munitions and Missile Maintenance Management*.

1.2.5. Materials Exempt from the AF HAZCOM Program Labeling Requirements. HAZCOM Program labeling requirements exemptions are listed in 29 CFR 1910.1200(b)(5)

1.3. Hazard Classification. The AF will rely on the hazard classification of the supplier or manufacturer of purchased chemicals. For AF produced chemicals, the AF activity controlling the formulation will make the hazard classification and produce an SDS in accordance with (IAW) 29 CFR 1910.1200. (T-0) The AF activity producing the chemical will include hazard classification procedures in their work-area specific written program, and ensure their personnel are trained on the hazards. (T-0) If the chemical is transferred to any other organization, the producing organization will provide an SDS with the shipment and transmit the SDS to the SDS Focal Point at the United States Air Force School of Aerospace Medicine (USAFSAM) for submission into Enterprise Data Repository. (T-1)

Chapter 2

ROLES AND RESPONSIBILITIES.

Note: Roles and responsibilities for laboratories will be handled separately under [Chapter 4, para 4.2](#).

2.1. Assistant Secretary of the Air Force for Installations, Environment, and Energy (SAF/IE).

2.1.1. Establish AF Environment, Safety, and Occupational Health (ESOH) policy and promulgate and oversee AF HAZCOM Program policy.

2.1.2. Coordinate AF HAZCOM Program implementation and compliance efforts with those of the other Services to identify common areas of interest and to help prevent duplication of effort.

2.2. Assistant Secretary of the Air Force for Acquisition, Technology, & Logistics (SAF/AQ). SAF/AQ will incorporate AF HAZCOM Program requirements, where applicable, into acquisition processes through policies, procedures, and training.

2.3. Air Force Surgeon General (AF/SG).

2.3.1. **Air Force Medical Support Agency (AFMSA).** AFMSA will provide policy and guidance to facilitate effective implementation of the AF HAZCOM Program.

2.3.2. Air Force Medical Operations Agency (AFMOA).

2.3.2.1. Advocate for Defense Health Program (DHP) funding needed for the AF Medical Service (AFMS) to execute AF HAZCOM requirements and to maintain the occupational and environmental health portion of the SDS focal point at the USAFSAM.

2.3.2.2. Validate and allocate DHP resources required for occupational and environmental health surveillance activities associated with the HAZCOM Program at MAJCOM installations and GSUs.

2.3.2.3. Provide policy interpretation and guidance for AFMS personnel to execute AF HAZCOM Program requirements at installations and GSUs.

2.4. MAJCOMs, FOAs and DRU Commanders.

2.4.1. Provide execution guidance, resolve questions, and provide interpretation of AF HAZCOM Program requirements for their installations and units.

2.4.2. Specify AF HAZCOM Program support responsibilities for GSUs.

2.4.3. **MAJCOM Surgeons (MAJCOM/SG).** MAJCOM/SGs will ensure Bioenvironmental Engineering (BE) and Public Health (PH) at the MAJCOM's installations provide technical assistance, such as health-risk assessment and training assistance, to installation personnel covered by this AFI. For AFR host locations, this responsibility is shared by AFRC/A7 in concert with AFRC/SG.

2.4.4. **Air Force Civil Engineer Center (AFCEC).** AFCEC will establish procedures with the Enterprise Environmental, Safety, and Occupational Health-Management Information

System (EESOH-MIS) Program Office to electronically submit SDSs to the USAFSAM focal point for submittal into Enterprise Data Repository. (T-1)

2.5. United States Air Force School of Aerospace Medicine (USAFSAM).

2.5.1. USAFSAM Occupational and Environmental Health Department (USAFSAM/OE).

2.5.1.1. Be the focal point for SDSs. USAFSAM/OE will ensure the occupational and environmental health portion of the SDS and associated data is entered into Enterprise Data Repository. (T-0)

2.5.1.2. Will review submitted SDSs for completeness and legibility, request additional information from chemical manufacturers to correct SDS deficiencies, or return deficient SDSs to the appropriate procurement officer to correct the deficiencies. (T-0)

2.5.1.3. Will function as the Air Force Occupational and Environmental Health Focal Point, per CFR 1910.1200, and as such, (T-0)

2.5.1.3.1. Will obtain and safeguard chemical manufacturer's proprietary and/or trade secret information. (T-1)

2.5.1.3.2. Will assist BE in performing health risk assessments using proprietary and/or trade secret information. (T-1)

2.5.1.4. Will plan, program, and budget for the SDS focal point activities. (T-1)

2.5.1.5. Develop and maintain AF HAZCOM supervisor training, a work-area specific training template (which must be able to be modified or supplemented locally so that it is work-area specific) and training templates for OSHA expanded standards. This training must be readily available AF-wide. (T-1)

2.5.2. USAFSAM Public Health Education Division (USAFSAM/PHD). USAFSAM/PHD will assist USAFSAM/OE in the development and maintenance of HAZCOM training materials and tools as requested. (T-3)

2.6. Wing/Installation Level Commanders. Will ensure all installation hazardous material (HAZMAT) Tracking Activities (HTAs), formally known as HAZMARTs, meet relevant AF HAZCOM Program requirements. (T-0)

2.6.4. Medical Group Commanders (MDG/CC). MDG/CCs will ensure qualified occupational and environmental health (OEH) personnel perform the responsibilities described in [paragraph 2.6.4.2.](#) for installations without a BE function. (T-3) For AFR host locations, this function is supported by the Mission Support Group Commander (MSG/CC) and capability gaps will be handled through established Wing procedures.

2.6.4.1. Public Health.

2.6.4.1.1. Will assist work area supervisors with accessing USAFSAM's training materials and tools. (T-1)

2.6.4.1.2. Will assist BE with addressing work area supervisor inquiries regarding potential health hazards associated with hazardous chemicals, especially those related to mutagens, teratogens, carcinogens, and reproductive hazards. (T-2)

2.6.4.1.3. Shall review and approve new or modified work area-specific HAZCOM training plans for technical accuracy and completeness prior to implementation by the work area supervisor. (T-3)

2.6.4.2. Bioenvironmental Engineering.

2.6.4.2.1. As requested, BE will provide clarification to work area supervisors on potential health hazards, training requirements, and regulatory requirements associated with hazardous chemicals and the AF HAZCOM Program. (T-1)

2.6.4.2.2. Shall review and approve new or modified work area-specific HAZCOM training plans for technical accuracy and completeness prior to implementation by the work area supervisor. (T-3)

2.6.4.2.3. Will assess work area program compliance in conjunction with routine or special assessments and when deemed necessary. (T-0)

2.6.4.2.4. Must maintain access to SDSs contained in Enterprise Data Repository. (T-0)

2.6.4.2.5. When requesting proprietary information, BE personnel shall contact USAFSAM/OE. (T-1) USAFSAM/OE will act as the Air Force agent to validate the need for information, facilitate the exchange of it, and assist BE to perform a sound health risk assessment when a request for disclosure is denied. Submit requests for proprietary information to the ESOH Service Center: esoh.service.center@us.af.mil.

2.6.4.2.6. Provide HAZCOM advice to the Contracting Office upon request to assist in ensuring contracts include hazardous chemical identification and data requirements as appropriate. (T-3)

2.6.4.2.7. Provide guidance to contracting officer when contract requires contractor access to Enterprise Data Repository. (T-1)

2.6.5. Hazardous Material Tracking Activities.

2.6.5.1. Work area supervisors will obtain SDSs for hazardous chemicals received unless the SDS is already available in EESOH-MIS and Enterprise Data Repository. (T-0)

2.6.5.2. Work area supervisors shall ensure all hazardous chemicals are properly labeled prior to issue. Additional labeling is not required if the label is already compliant with 29 CFR 1910.1200(f) requirements. (T-0)

2.6.5.3. SDS gatekeeper shall provide new and updated SDSs to the EESOH-MIS Data Steward for submittal into EESOH-MIS IAW AFI 32-7086, *Hazardous Materials Management*. (T-1)

2.6.5.4. At the time of local purchase approval, the procuring organization will ensure to obtain the most current SDS from the identified vendor. (T-0)

2.6.6. Contracting Office. IAW FAR Subpart 23.3, include FAR clause 52.223-3 in all solicitations and contracts. Transmit contractor SDS submitted IAW this clause to potentially impacted AF work area supervisors and BE. (T-0)

2.6.7. Fire and Emergency Services (F&ES).

2.6.7.1. Provide technical expertise to work area supervisors on potential fire hazards, make recommendations regarding fire-prevention controls, and storage and handling to minimize or eliminate potential fire and explosion hazards. (T-3)

2.6.7.2. Review and approve new or modified work area-specific HAZCOM training plans. (T-3)

2.6.8. **Occupational Safety (SEG).** SEG will review and approve new or modified work area-specific HAZCOM training plans. (T-3)

2.6.9. **Squadron/Unit Level Commanders.** Squadron/Unit Commanders will provide a safe and healthy work environment and ensure all assigned personnel are familiar with the hazards within the work area, understand appropriate ways to manage risk associated with hazardous chemicals in the work area, and provide the resources to maintain effective work area-specific HAZCOM programs within work areas under their control. (T-3)

2.6.9.1. Ensure supervisors and employees who handle, use, or are potentially exposed to hazardous chemicals in the course of official AF duties are provided information and training on the AF HAZCOM Program and the specific hazards in their work areas according to [paragraph 3.1.6](#). (T-0)

2.6.9.2. Ensure supervisors of work areas where hazardous chemicals are used or handled, understand, prepare and implement a written work area-specific HAZCOM program, which includes a work area-specific training plan, tailored to their work area tasks and hazards. (T-0)

2.6.9.3. **Work Area Supervisors.** Work area supervisors are responsible for HAZCOM in their work areas, but may designate an alternate to assist in daily program execution.

2.6.9.3.1. Review USAFSAM's AF supervisor HAZCOM training initially and as needed to maintain competency. Contact PH for guidance on accessing USAFSAM's supervisor HAZCOM training. (T-1)

2.6.9.3.2. Develop and implement a written work area-specific HAZCOM program IAW [Chapter 3](#). This information shall be accessible by all assigned employees in the work area either electronically or hard copy. (T-0)

2.6.9.3.3. Develop a work area-specific HAZCOM training plan, if one does not exist, using USAFSAM's work area-specific training plan template. (T-0) Ensure BE, PH, SEG, F&ES, and any other locally determined organizations as necessary, review and approve new or modified work area-specific HAZCOM training plans for technical accuracy and completeness prior to implementation in the work area. (T-3)

2.6.9.3.4. Ensure assigned personnel receive and understand work area-specific HAZCOM training as described in [paragraph 3.1.6](#). (T-0)

2.6.9.3.5. Through formal contract pre-performance conferences or work area familiarization briefings, provide contractors information on AF operational hazards and protective measures, where and how relevant SDS information is available, and information on the hazardous chemical labeling system. (T-0)

2.6.9.3.6. Document supervisor, worker's initial assignment, and supplemental HAZCOM training on the AF Form 55, *Employee Safety and Health Record* or in other

AF-approved systems that track/verify training is accomplished. This record should also include external HAZCOM training provided to AF supervisors and employees from contractor organizations where applicable. (T-1)

2.7. Tenant Units. Tenant units will participate in and comply with all provisions of the HAZCOM program administered by their host installation. (T-1)

Chapter 3

WRITTEN WORK-AREA SPECIFIC HAZCOM PROGRAM REQUIREMENTS

3.1. Written Work-Area Specific HAZCOM Programs. Supervisors of work areas whose employees use, handle and/or will potentially be exposed to hazardous chemicals not exempted as described in [paragraph 1.2.4](#), must prepare and implement a written work area-specific HAZCOM program. (T-0) Written programs must be readily accessible (in either paper or electronic format) to all employees. Where personnel must travel between work areas during a work shift (e.g., their work is carried out at more than one geographical location such as flight line operations), the written work-area specific HAZCOM program may be kept at the primary work area facility. The written work area-specific HAZCOM program will be included in the work area Job Safety Training Outline (JSTO). (T-2) Reference AFI 91-202, *The US Air Force Mishap Prevention Program*, for additional information on preparing a JSTO. There is no requirement to maintain additional copies of the written work area-specific HAZCOM program in a separate binder, file, or other medium. Written work-area specific HAZCOM programs will include the following criteria or a description of how each of the following criteria will be met:

3.1.1. Hazardous Chemical List. The written work area-specific HAZCOM program must include a list of the hazardous chemicals present in the work area (the list may be compiled for the work area as a whole or for specified and readily distinguishable portions of the work area). The product identifier that is used on the SDS must be cross-referenced to the list. (T-0) The EESOH-MIS authorization report with product data may serve as the work area hazardous chemical list. Work area supervisors will, at least annually, reconcile SDSs on file (if files outside of Enterprise Data Repository and EESOH-MIS are maintained) and the work area hazardous chemical list and maintain documentation of the reconciliation. (T-1).

3.1.2. Non-Routine Tasks Involving Hazardous Chemicals.

3.1.2.1. Supervisors will ensure work area operating instructions (OIs), specific task lists, and job hazard analysis (JHAs) thoroughly describe non-routine tasks, associated hazards, and controls. OIs do not need to be prepared if technical orders (TOs) or other official documents adequately describe these tasks and associated hazards and controls. Supervisors will ensure workers review these procedures before performing non-routine tasks. (T-0)

3.1.2.2. When workers temporarily perform duties outside their normal jobs, the supervisor of the gaining activity will ensure these workers receive initial work area-specific HAZCOM training described in [paragraph 3.1.6.2](#), prior to beginning the activity. (T-0)

3.1.3. Labels and Other Forms of Warning.

3.1.3.1. Supervisors will ensure labels on containers of hazardous chemicals used in their work area meet 29 CFR 1910.1200(f)(6) through 29 CFR 1010.1200(f)(10) requirements, remain affixed to their containers, and are not obliterated or covered. (T-0)

3.1.3.2. If container labeling meets the 29 CFR 1910.1200(f) requirements, no additional labeling is required; however, the installation may affix other labels to containers for locally determined purposes.

3.1.3.3. If an employee transfers a chemical from a labeled container (for example, a 55-gallon drum) into a portable container for immediate use by the same employee who made the transfer, then the portable container does not need to be labeled according to 29 CFR 1910.1200(f) requirements. Immediate use material means that the hazardous chemical will be under the control of and used only by the person who transferred it from the labeled container and only within the work shift in which it was transferred. If the employee cannot maintain full control over the chemical or departs the work area, and if there is residual chemical left in the portable container, the chemical shall either be disposed of under applicable local disposal regulations, returned to its original container, or labeled in accordance with 29 CFR 1910.1200(f). (T-0)

3.1.3.4. Chemical manufacturer's warning labels must be replaced when:

3.1.3.4.1. The chemical manufacturer's warning label becomes illegible (T-0), or

3.1.3.4.2. The chemical is transferred during a pour-down activity. (T-0)

3.1.3.5. Enterprise Data Repository provides the capability to print a Chemical Warning Label in accordance with 29 CFR 1910.1200(f). Submit requests for label information to the ESOH Service Center: esoh.service.center@us.af.mil (T-0). For hazardous chemicals received through a DoD supply system, a supply discrepancy report should be submitted for material received with noncompliant labels IAW DLMS 4000.25, *Supply Standards and Procedures*. (T-0)

3.1.4. **Safety Data Sheets.** Installations will maintain documents consistent with 29 CFR 1910.1200(g). If a document consistent with 29 CFR 1910.1200(g) cannot be obtained from a supplier outside of the US, a document meeting the intent of 29 CFR 1910.1200(g) is acceptable. (T-0)

3.1.4.1. Work areas shall maintain a SDS (in either paper or electronic format) for every item on the work area-specific hazardous chemical list. Each SDS shall be readily available to workers in the work area. The SDS on file must match the product identifier of the chemical on-hand. If a new SDS is received, but the old chemical is still on-hand, the SDS which matched the old chemical must be retained as long as the old chemical is present in the work area. (T-0)

3.1.4.2. Ready access to SDSs in the work areas will be provided as follows:

3.1.4.2.1. Shop supervisors will ensure that all workers on all shifts know how to obtain an SDS and have unrestricted direct access to SDSs in their work area during all shifts. (T-0)

3.1.4.2.2. The location of SDSs and/or means of access for any work area will be determined locally. (T-3) Consideration should be given to how long it would take for a worker to obtain an SDS if it were needed to respond to a spill or if a worker was accidentally splashed with a hazardous chemical.

3.1.4.2.3. If the primary means for SDS access is electronic, a backup system for SDS access must be established in case primary computer access is disrupted. The back-up system may include, but is not limited to, paper copies, files on an external hard drive or CDs, fax, or telephone transmittal of hazard information from a nearby HTA or BE

Flight as long as the SDS is delivered to the site. Local BE judgment must be used to determine an adequate back-up system on a case-by-case basis. (T-0)

3.1.4.2.4. Where personnel must travel between work areas during a work shift (e.g., their work is carried out at more than one geographical location such as flight line operations), the SDS may be kept at the primary work area facility. (T-0)

3.1.4.3. Ensure any proprietary formulary and/or trade secret information in an SDS is protected and used only as allowed by 29 CFR 1910.1200(i). During the acquisition process, BE personnel will discuss trade-secret limitations with the work area supervisor; however, supervisors using chemicals with trade-secret information are encouraged to be familiar with requirements and restrictions listed in 29 CFR 1910.1200(i). (T-0)

3.1.4.4. For items procured through Defense Logistics Agency/General Services Administration that are received without a SDS, search Enterprise Data Repository to determine the correct SDS for the product (based upon the contract number) and ensure the SDS is submitted to the EESOH-MIS Data Steward for submittal into EESOH-MIS. A supply discrepancy report will be submitted for material received without a SDS in the Enterprise Data Repository. (T-0)

3.1.5. Contractors in AF Work Areas. When an AF work area uses hazardous chemicals in a way that contractor employees (e.g., a painting contractor working in an industrial shop) may be exposed, then access to the work area-specific written HAZCOM program must be provided by the work area supervisor to the contractors in accordance with 29 CFR 1910.1200(e)(2). Specifically, work area supervisors must provide contractors information on AF operational hazards and protective measures, where and how relevant SDS information is available, and information on the hazardous chemical labeling system. The contractor is responsible to determine the adequacy of the HAZCOM information for assessments of contractor employees, and is responsible for their own HAZCOM program. (T-0)

3.1.6. Employee Information and Training. Supervisors and employees who handle, use, or are potentially exposed to hazardous chemicals in the course of official AF duties must be provided HAZCOM training *prior* to the use of hazardous chemicals. In work operations where employees only handle chemicals in sealed containers, which are not opened under normal conditions of use, HAZCOM training shall cover to the extent necessary to protect them in the event of a spill or leak of a hazardous chemical from a sealed container. (T-0) Training template can be found on ESOH Service Center website.

3.1.6.1. Supervisor Training. All work area supervisors must review USAFSAM's supervisor HAZCOM training initially and as needed to maintain competency. Prior to assuming supervisory duties in a new work area, supervisors must review the existing work area-specific HAZCOM training plan and expanded standard training, if required in the work area. (T-1)

3.1.6.2. Initial Worker Training. Workers will receive comprehensive work area-specific HAZCOM training from their supervisors at the time of their initial assignment in a work area. (T-0) This training, at a minimum, will include the following:

3.1.6.2.1. The location and details of the work area-specific written HAZCOM program, including the hazardous chemical list and SDSs for the work area. (T-0)

- 3.1.6.2.2. Identification of operations or processes, including non-routine processes, in the work area where hazardous chemicals are present or used. (T-0) Supervisors may use the hazardous chemical authorization in EESOH-MIS or BE assessment letters as sources of information to meet this training requirement.
- 3.1.6.2.3. Identification of the hazard categories (e.g., flammability, carcinogenicity) or specific chemicals present in the work area. Including, but not limited to, those with specific regulatory requirements (e.g., asbestos, benzene, beryllium, cadmium, formaldehyde, hexavalent chromium, methylene chloride, and lead) and identification of chemicals that pose physical, health, simple asphyxiation, combustible dust, and pyrophoric gas hazards, as well as hazards not otherwise classified. (T-0)
- 3.1.6.2.4. Proper labeling of hazardous chemicals, including an explanation of the labels received on shipped containers and the work area labeling system. (T-0)
- 3.1.6.2.5. How to access and read SDSs, including the order of information and how employees can obtain and use the appropriate hazard information. (T-0)
- 3.1.6.2.6. Controls (engineering controls, administrative controls, and personal protective equipment) workers must use to minimize or eliminate exposure to hazardous chemicals while performing a specific process (e.g., the specific respirator for a specific spray-painting process). (T-0) Supervisors shall refer to the BE assessment letters for specific control requirements.
- 3.1.6.2.7. Emergency procedures, such as recognition of a spill or accidental chemical release (e.g., visual, odor, alarm) and escape procedures to include the locations of emergency eye wash stations, showers, and monitoring capabilities. (T-0)
- 3.1.6.2.8. Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.). (T-0)
- 3.1.6.2.9. Additional training on expanded standards as required by OSHA. (T-0) Expanded standards are regulated by 29 CFR 1910.1001-1053. Refer to BE assessment letters to determine if expanded standards apply in a work area.
- 3.1.6.3. **Supplemental Worker Training.** Training for all potentially affected employees is required when a new chemical hazard is introduced in the work area. The work area-specific training plan must be updated with the information concerning the new hazard or chemical and reviewed and approved by BE, PH, SEG, F&ES, and any other locally determined organizations as necessary. (T-1)
- 3.1.6.4. **Activities Not Co-located.** AF employees assigned to non-co-located activities, such as GOCO facilities, will be trained as GSUs. (T-1)
- 3.1.6.5. **Worker Knowledge Assessment.** Work area supervisors will, at least annually, assess worker knowledge of basic HAZCOM concepts and work area-specific HAZCOM procedures. Completion of the annual knowledge assessment must be documented. (T-1)

Chapter 4

LABORATORY SAFETY AND HEALTH PROGRAM

4.1. Laboratories are not required to establish a work area-specific HAZCOM program but instead must develop, implement and maintain a Chemical Hygiene Plan (CHP), and ensure workers are trained on the details of the CHP in accordance with 29 CFR 1910. 1450. (T-0)

4.2. Roles and Responsibilities.

4.2.1. Unit Commander shall:

4.2.1.1. Have ultimate responsibility for the chemical hygiene program in the unit. (T-0)

4.2.1.2. Appoint a chemical hygiene officer (CHO). (T-0)

4.2.2. A chemical hygiene officer (CHO) , typically the lab supervisor, must be appointed in writing by the unit commander. (T-0)

4.2.2.1. The CHO shall be an officer, non-commissioned officer (NCO) or civilian. To act as CHO, an NCO will have attained a 7-level qualification (or equivalent for civilians) in an appropriate specialty. (T-2)

4.2.2.2. The CHO shall review and evaluate the effectiveness of the CHP annually and update it as necessary. The annual review must be documented on the CHP. (T-0)

4.2.2.3. The CHO must be familiar with and follow all instructions in 29 CFR 1910.1450 regarding occupational exposures to hazardous chemicals in laboratories. (T-0)

4.2.2.4. CHO shall coordinate on both the draft and the final CHP and any subsequent changes with BE, PH, F&ES and SEG. (T-2)

4.2.3. Laboratory Supervisor has overall responsibility for the execution of the CHP in the laboratory. The Laboratory Supervisor may also be designated as the CHO. The Laboratory Supervisor shall:

4.2.3.1. Maintain an accurate hazardous material inventory. (T-1)

4.2.3.2. Ensure workers know and follow chemical hygiene procedures. (T-0)

4.2.3.3. Maintain adequate supplies of protective equipment. (T-0)

4.2.3.4. Routinely inspect chemical hygiene procedures and emergency equipment and ensure training and facilities are adequate. (T-0)

4.2.3.5. Provide workers with information and training to ensure they are apprised of the hazards of chemicals present in their area. (T-0)

4.2.4. Laboratory workers shall maintain familiarity with the CHP, know how to access the CHP, and conduct laboratory operations according to procedures documented in the CHP. (T-0)

4.2.5. Bioenvironmental Engineering (BE) serves as the primary contact for occupational health surveillance and monitoring. BE shall advise the laboratory personnel on chemical hygiene matters related to exposure determination, monitoring, notification, and control measures. (T-1)

4.2.5.1. BE shall evaluate potential chemical hazards and the adequacy of the CHP during routine assessments (T-1); conduct worker exposure determinations and inform workers of monitoring results in writing within 15 working days after receipt unless more stringent requirements apply (T-0); and recommend control measures to protect workers from chemical hazards. (T-1)

4.2.5.2. BE shall be requested to assist Laboratory Supervisors to develop training as appropriate, as well as coordinate on both the draft and the final CHP and any subsequent changes. (T-3)

4.2.6. **Public Health** serves as the primary contact for occupational health medical surveillance. PH shall be requested to assist Laboratory Supervisors to develop training as appropriate, as well as coordinate on both the draft and the final CHP and any subsequent changes. (T-3)

4.2.7. **Fire and Emergency Services (F&ES)** are the primary contacts for matters pertaining to explosion and fire hazards. F&ES shall be requested to assist Laboratory Supervisors to develop training as appropriate, as well as coordinate on both the draft and the final CHP and any subsequent changes. (T-3)

4.2.8. **Occupational Safety (SEG)** are the primary contacts for matters pertaining to occupational safety hazards. SEG shall be requested to assist Laboratory Supervisors to develop training as appropriate, as well as coordinate on both the draft and the final CHP and any subsequent changes. (T-3)

4.3. Specific Requirements:

4.3.1. Training will include:

4.3.1.1. Methods and observations that may be used to detect the presence of hazardous chemicals. (T-0)

4.3.1.2. Physical and health hazards of chemicals in the work area. (T-0)

4.3.1.3. Measures workers can take to protect themselves from these hazards such as work practices, emergency procedures, and personal protective equipment. (T-0)

4.3.1.4. Completion of initial and annual training will be documented. (T-0)

4.3.2. Mishap, Potential Mishap, or Occupational Overexposures. The Laboratory Supervisor shall report mishaps as required in AFI 91-204, *Safety Investigations and Reports*, and AFI 48-145, *Occupational and Environmental Health Program*. PH will provide the information required by 29 CFR 1910.1450 (g) (3) to the physician. When a private physician is used, the Laboratory Supervisor shall notify PH within 24 hours of a suspected or known overexposure of a civilian. PH will consult with the Chief of Aerospace Medicine or Occupational Medicine Consultant. The Occupational and Environmental Health Working Group Chairperson will request that the physician provide a written opinion as required in 29 CFR 1910.1450 (g) (4). (T-0)

4.3.3. Hazard Identification:

4.3.3.1. Original containers of a hazardous chemical will be labeled according to 29 CFR 1910.1450 (h) (1). All other chemical containers in the laboratory, regardless of size or type, will be labeled with its contents. (T-0)

4.3.3.2. SDSs will be maintained according to 29 CFR 1910.1450 (h) (1) (ii). (T-0)

4.3.3.3. Provisions for dealing with chemical substances developed in the laboratory are contained in 29 CFR 1910.1450 (h) (2) (i), (ii), and (iii). (T-0)

4.3.4. Hazard Controls. BE will evaluate potential exposures to chemical hazards in laboratories and determine the need for controls. The hierarchy of controls will be used when making control recommendations IAW AFI 48-145. (T-0)

4.3.4.1. Recommendations for administrative, engineering (e.g., laboratory-type hoods) and personal protective equipment will be provided by BE. This can be part of the routine assessment report or it can be accomplished during a special assessment. BE will routinely assess the effectiveness of all laboratory hoods at a frequency determined by BE. (T-1)

4.3.4.2. BE will evaluate potential inhalation hazards and determine the need for respirators and if required, the type of respirators required. Respirators will be provided according to 29 CFR 1910.1450 (i), and selected and used in accordance with AFI 48-137, *Respiratory Protection Program*. (T-0)

4.3.5. When the CHO becomes aware of new or modified laboratory operations that use new or existing chemicals, BE will be notified and an evaluation will be conducted as outlined in AFI 48-145. (T-1)

4.3.6. Record keeping. Records of worker monitoring, medical consultations, and examinations (29 CFR 1910.1450 (j)) will be maintained according to AFI 48-145. (T-0)

4.3.7. Worker Exposure Determination and Notification. Worker exposure determinations and notification shall comply with 29 CFR 1910.1450 (d). BE conducts worker exposure determinations whenever there is reason to believe that exposures to a substance that may exceed the action level and/or the occupational and environmental exposure level (OEEL). If monitoring is required, written notification may be either made individually or by posting results in an appropriate location that is accessible to workers. (T-0)

4.3.7.1. Provisions for occupational exposures to toxic and hazardous substances are presented in 29 CFR 1910, Subpart Z. Guidance outlined in 29 CFR 1910, Subpart Z should be considered for use as appropriate.

4.3.7.2. Chemical Selection. When selecting any chemicals, work area supervisors shall consider all potential adverse impacts (environmental, safety, health, etc.). (T-1)

DOROTHY A. HOGG
Lieutenant General, USAF, NC
Surgeon General

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 32-7086, *Hazardous Materials Management*, 4 February 2015

AFI 33-360, *Publications and Forms Management*, 1 December 2015

AFI 48-137, *Respiratory Protection Program*, 12 September 2018

AFI 48-145, *Occupational and Environmental Health Program*, 11 July 2018

AFI 91-202, *The US Air Force Mishap Prevention Program*, 24 June 2015 (Incorporating Change 1, 15 February 2017)

AFI 91-204, *Safety Investigations and Reports*, 27 April 2018

AFMAN 21-200, *Munitions and Missile Maintenance Management*, 9 August 2018

AFMAN 33-363, *Management of Records*, 1 March 2008

AFPD 90-8 *Environment, Safety and Occupational Health Management and Risk Management*, 14 March 2017

DLMS 4000.25, *Supply Standards and Procedures*, 4 May 2018, Change 6

DoDI 6050.05, *DoD Hazard Communication (HAZCOM) Program*, 26 February 2019

DoDI 6055.05, *Occupational and Environmental Health*, 11 November 2008

Federal Acquisition Regulation 52.223-3, *Hazardous Material Identification and Material Safety Data*

Title 29 Code of Federal Regulations, Part 1910.1200, *Hazard Communication*, 26 May 2012

Title 29 Code of Federal Regulations, Part 1910.1450, *Occupational Exposure to Hazardous Chemicals in Laboratories*, 22 January 2013

Title 15 United States Code Sections 2601-2629, *Toxic Substances Control Act*

Prescribed Forms

None

Adopted Forms

AF Form 55, *Employee Safety and Health Record*

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AF—Air Force

AF/A4C—Air Force Civil Engineering

AF/SG—Air Force Surgeon General

AFCEC—Air Force Civil Engineer Center

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFMOA—Air Force Medical Operations Agency

AFMS—AF Medical Service

AFMSA—Air Force Medical Support Agency

AFPD—Air Force Policy Directive

AFR—AF Reserve

AFRIMS—Air Force Records Information Management System

AFSC—Air Force Specialty Code

ANG—Air National Guard

BE—Bioenvironmental Engineering

CFR—Code of Federal Regulations

CHO—Chemical Hygiene Officer

CHP—Chemical Hygiene Plan

DHP—Defense Health Program

DoD—Department of Defense

DRU—Direct Reporting Unit

EESOH-MIS—Enterprise Environmental, Safety, and Occupational Health Management Information System

ESOH—Environment, Safety, and Occupational Health

FAR—Federal Acquisition Regulation

F&ES—Fire and Emergency Services

FOA—Field Operating Agency

GHS—Globally Harmonized System of Classification and Labeling of Chemicals

GOCO—Government-Owned, Contractor-Operated

GSU—Geographically Separated Units

HAZCOM—Hazard Communication

HAZMAT—Hazardous Material

HTA—Hazardous Material Tracking Activity

IAW—In Accordance With

JHA—Job Hazard Analysis

JSTO—Job Safety Training Outline

MAJCOM—Major Command

NDI—Nondestructive Inspection

OEEL—Occupational and Environmental Exposure Limit

PH—Public Health

SDS—Safety Data Sheet

SEG—Occupational Safety

ODS—Ozone Depleting Substance

OI—Operating Instruction

OPR—Office of Primary Responsibility

OSHA—Occupational Safety and Health Administration

PH—Public Health

RDS—Records Disposition Schedule

SAF/AQ—Assistant Secretary of the Air Force for Acquisition, Technology, & Logistics

SAF/IE—Assistant Secretary of the Air Force for Installations, Environment, and Energy

SG—Surgeon General

TO—Technical Order

US—United States

USAFSAM—United States Air Force School of Aerospace Medicine

Terms

Barriers to access—Anything that prevents employees from accessing HAZCOM information in their work area during all work shifts. For example, if SDS are maintained electronically and employees must ask permission from a supervisor to gain access to a computer and hence to an SDS, this is considered a “barrier to access.” Additionally, if there is particular software that is used to access HAZCOM information (e.g. EESOH-MIS) and this software requires a user login and password and all employees do not have a login and password or if employees are not trained on the use of the software, these are considered “barriers to access.”

Chemical—Any substance or mixture of substances.

Chemical manufacturer—An employer with a work area where chemical(s) are produced for use or distribution.

Classification—To identify the relevant data regarding the hazards of a chemical; review those data to ascertain the hazards associated with the chemical; and decide whether the chemical will be classified as hazardous according to the definition of hazardous chemical in this Attachment. In addition, classification for health and physical hazards includes the determination of the degree of hazard, where appropriate, by comparing the data with the criteria for health and physical hazards.

Container—Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of this Instruction, pipes or piping systems and engines, fuel tanks, or other operating systems in a vehicle are not considered to be containers.

EESOH—MIS—The Enterprise Environment, Safety, and Occupational Health Management Information System is an AF-approved automated system used to store and maintain all AF used SDSs, HAZMAT authorizations, and tracking of HAZMAT usage information.

Employee—A worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Office workers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.

Exposure—The intensity, frequency, and length of time personnel are subjected to a hazard.

Hazard category—The division of criteria within each hazard class, e.g., oral acute toxicity and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.

Hazard class—The nature of the physical or health hazards, e.g., flammable solid, carcinogen, oral acute toxicity.

Hazard not otherwise classified—An adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes addressed in 29 CFR 1910.1200. This does not extend coverage to adverse physical and health effects for which there is a hazard class addressed in 29 CFR 1910.1200, but the effect either falls below the cut-off value/concentration limit of the hazard class or is under a Globally Harmonized System of Classification and Labeling of Chemicals (GHS) hazard category that has not been adopted by OSHA (e.g., acute toxicity Category 5).

Hazard statement—A statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Hazardous chemical—Any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.

HAZMAT Tracking Activities—(formally known as HAZMARTs)—The HTA is the only entity on an installation authorized to issue government-owned HAZMAT, and is the only approved source for Class I ozone depleting substances. HTAs are locations where HAZMATs are managed and tracked using the EESOH-MIS. HTAs may store material or serve only as a tracking activity.

Health hazard—A chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard. The criteria for determining whether a chemical is classified as a health hazard are detailed in Appendix A to 29 CFR 1910.1200, *Health Hazard Criteria*.

Installation—For purposes of 29 CFR 1910.1200 and this AFI, an installation is a single geographic location with one or more work areas.

Label—An appropriate group of written, printed or graphic information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the immediate container of a hazardous chemical, or to the outside packaging.

Laboratory—A facility where relatively small quantities of hazardous chemicals are used on a non-production basis. Use of hazardous chemicals must meet all of the following conditions: i) chemical manipulations are carried out on a laboratory scale with all work with substances in containers designed to be easily and safely manipulated by one person; ii) multiple chemical procedures or chemicals are used; iii) procedures involved are not part of a production process, nor in any way simulate a production process; and iv) protective laboratory practices and equipment are available.

Mixture—A combination or a solution composed of two or more substances in which they do not react.

Non-routine tasks—Those tasks included within a work area's normal activities but performed infrequently, for example, cleaning a solvent tank and changing the solvent; temporary duties outside an individual's normal Air Force Specialty Code (AFSC) or job series.

Ozone depleting substance—A compound that contributes to stratospheric ozone depletion. ODS are generally very stable in the troposphere and only degrade under intense ultraviolet light in the stratosphere. When they break down, they release chlorine or bromine atoms, which then deplete ozone.

Physical hazard—A chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas. See Appendix B to 29 CFR 1910.1200, *Physical Criteria*.

Product identifier—The name or number used for a hazardous chemical on a label or in the SDS. It provides a unique means by which the user can identify the chemical. The product identifier used shall permit cross-references to be made among the list of hazardous chemicals required in the written HAZCOM program, the label and the SDS.

Produce—To manufacture, process, formulate, blend, extract, generate, emit, or repackage.

Pyrophoric gas—A chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130 degrees F (54.4 degrees C) or below.

Qualified OEH Personnel—Personnel, such as physicians, nurses, industrial hygienists, sanitarians, etc., who by virtue of education, training, and experience have acquired competence in protecting personnel from health hazards by assessing health risks and recommending solutions to minimize these risks. (DoDI 6055.05, *Occupational and Environmental Health*)

Ready access—Information is available to all employees during all work shifts and there are no barriers to access.

Safety data sheet—Written or printed material concerning a hazardous chemical that contains the information listed in 29 CFR 1910.1200(g).

Simple asphyxiant—A substance or mixture that displaces oxygen in the ambient atmosphere, and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

Substance—Chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

Trade secret—Any confidential formula, pattern, process, device, or information or compilation of information that is used in an employer's business and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it.

Use—To package, handle, react, emit, extract, generate as a by-product or transfer.

Work area—A room or defined space in an installation where hazardous chemicals are produced or used, and where employees are present. Note: Employees that often work outside the physically defined work area, such as pest management personnel during pesticide application or aircraft maintainers that take chemicals to the flight line, will have their hazards addressed as part of the work area program.