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SECRETARY OF THE AIR FORCE**

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***Aerospace Medicine***

**OCCUPATIONAL & ENVIRONMENTAL  
HEALTH PROGRAM MANAGEMENT**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This manual implements requirements of AFD 48-1, Aerospace Medicine Enterprise and AFI 48-145, Occupational and Environmental Health Program and describes procedures essential for successful management and operation of an Air Force installation Occupational and Environmental Health (OEH) program. This manual applies to all Air Force (AF) personnel (Regular Air Force, civilian federal employees (CFE) and reserve components). This manual does not apply to employees working under government contract or private contractors performing work under government contracts, and it does not apply to state employees of Air National Guard organizations. Contractors are solely responsible for compliance with Occupational Safety and Health Administration (OSHA) standards and the protection of their employees unless otherwise specified in their contract. This does not prohibit AF personnel from providing sampling and survey information to contractors and State employees based on local arrangements or ensuring government furnished facilities and equipment are meeting OSHA standards. This instruction follows guidelines for exposure health strategies as described in the American Industrial Hygiene Association's A Strategy for Assessing and Managing Occupational Exposures (4th Edition). It also incorporates Risk Management (RM) principles into the OEH program. Additionally, it now specifies the exposure limits and hierarchy of controls that will be used in AF workplaces.

Refer recommended changes and questions to the Office of Primary Responsibility (Air Force Medical Support Agency/OEH Division, 7700 Arlington Blvd, Falls Church, VA 22042) using the AF Form 847, Recommendation for Change of Publication; route AF Form 847s through the

appropriate functional chain of command. This instruction may be supplemented with additional or more stringent criteria. 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 Air Force instruction (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. Supplements must be routed to the OPR of this publication for coordination prior to certification and approval. Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, Management of Records, and disposed of in accordance with the AF Records Disposition Schedule located at <https://afrims.amc.af.mil/>. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the AF.

## ***SUMMARY OF CHANGES***

This publication has been revised and must be completely reviewed. Major changes include: Incorporating exposure health strategies according to guidance from the American Industrial Hygiene Association; outlining specific, detailed procedures to conduct occupational and environmental exposure assessment to include timelines and frequency requirements; aligning occupational and environmental health programs with AFI 90-201, The Air Force Inspection System; and updating all references and terminology. Additionally, supporting attachments have been added to supplement this manual with more detailed information.

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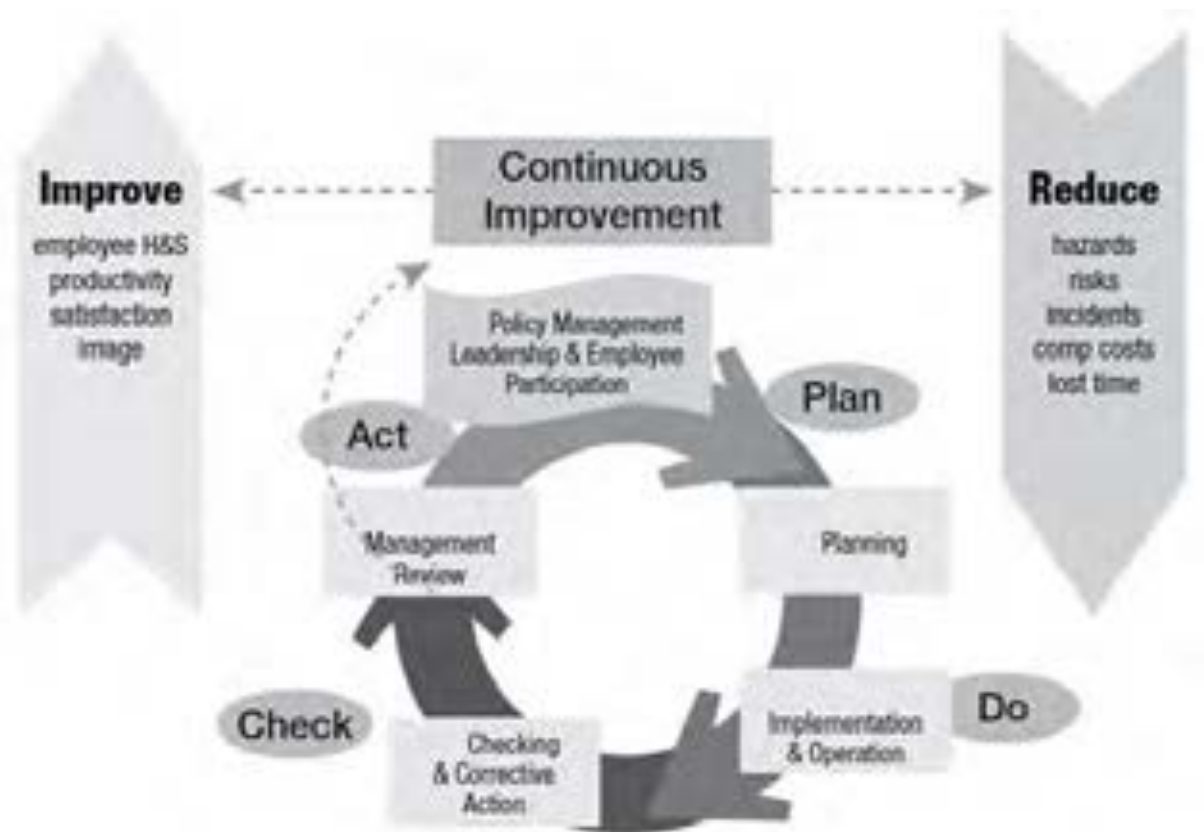
## Chapter 1

### INTRODUCTION

#### 1.1. AF Occupational and Environmental Health (OEH) Management System.

1.1.1. AFI 48-145, Occupational and Environmental Health Program defines the roles and responsibilities and basic concepts for execution of the Air Force OEH program. The program incorporates the American Industrial Hygiene Association approach to continuous improvement in the OEH management system: the Plan, Do, Check, Act cycle, as found in the American National Standards Institute (ANSI) Z10 publication Occupational Health and Safety Management Systems ([Figure 1.1](#)).

**Figure 1.1. The ANSI Z10/AIHA (American Industrial Hygiene Association) Plan, Do, Check, Act cycle for continuous Occupational Health and Safety Management System improvement.**



1.1.1.1. The Air Force has adjusted this diagram to add specific program elements under each piece of the Plan, Do, Check, Act cycle, as depicted in [Figure 1.2](#).

**Figure 1.2. The Air Force adaptation of the AIHA Plan, Do, Check, Act cycle for continuous OEH program improvement with program elements included.**



1.1.1.2. This common sense approach to program management emphasizing continuous improvement should be used at all levels (installation, Major Command (MAJCOM), Headquarters Air Force (HAF)) to guide the flow of OEH operations while enabling a mechanism to identify problems and affect solutions. While most of AFI 48-145 describes the AF OEH program from a policy (the “plan” portion of the management system cycle) and programmatic (the “check” and “act” portions of the management system cycle) level, this manual’s primary purpose is to inform OEH program management at the installation (the “do” portion of the management system cycle) level.

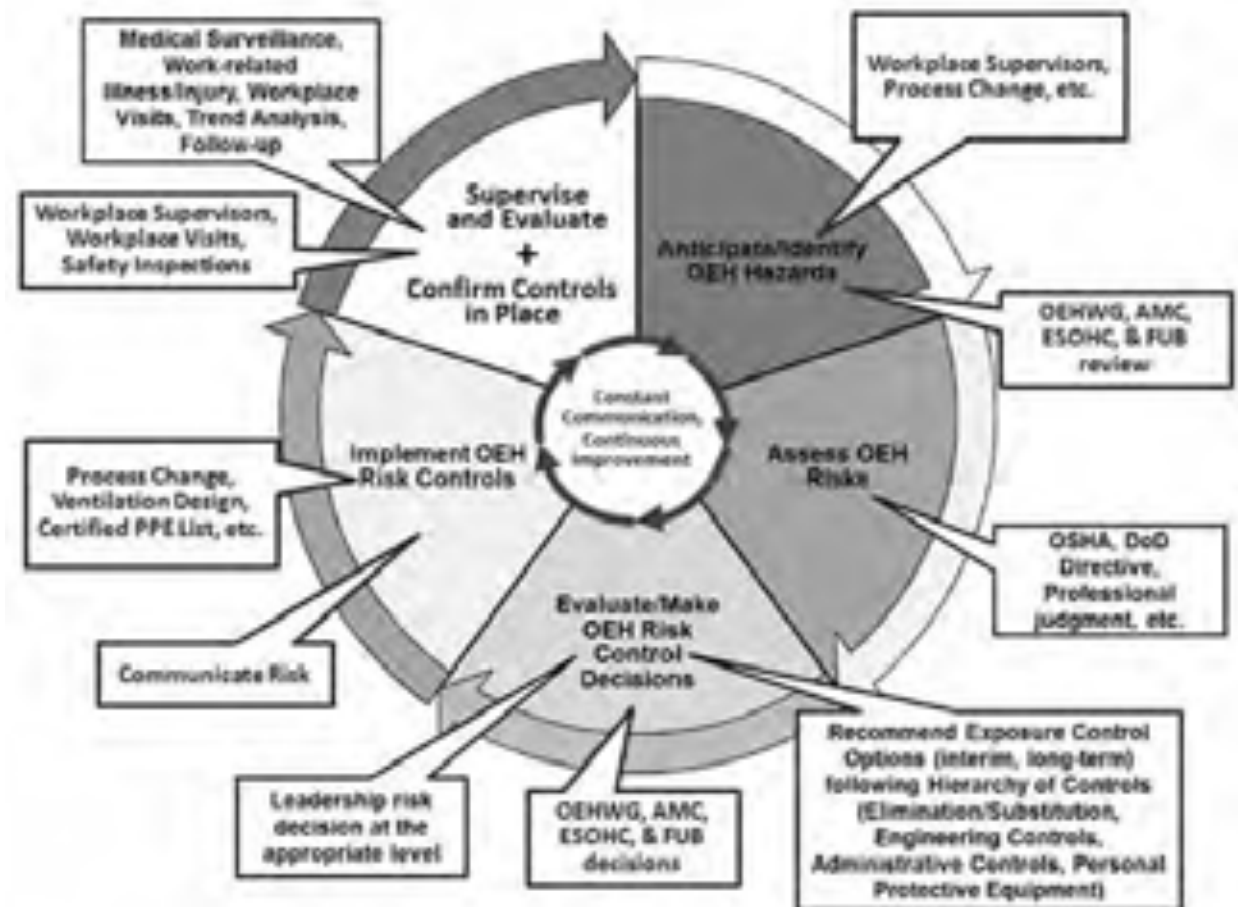
1.1.2. Installation Bioenvironmental Engineering (BE), Public Health (PH), and Base Operational Medicine Clinic (BOMC) programs make up the core of the OEH program; however, Occupational Safety, Fire, and Civil Engineering (CE) Environmental all play a part in an installation’s larger Environment, Safety, and Occupational Health (ESOH) program. While they all have separate and distinct functions, each piece must be integrated in order for the OEH program to function properly. For example, a Medical Surveillance Examination (MSE) by itself will not be very informative if there is no associated occupational health assessment to quantify potential exposures that could lead to specific medical outcomes.

## **1.2. The Role of OEH Risk Management at the Installation Level.**

1.2.1. As stated in AFI 48-145, OEH risks are communicated through the Risk Management (RM) process to engage installation leadership in OEH hazard reduction and resource

prioritization. The overall OEH Program contribution to the supported organization's RM process is depicted in [Figure 1.3](#).

**Figure 1.3. The OEH Risk Management Cycle.**



1.2.2. Risk management, in the traditional sense, is described in detail in AFI 90-802, Risk Management. OEH risk management is essentially the same, except that Team Aerospace (FM, BE, PH) takes a targeted approach to preventing and managing risks from potentially hazardous exposures (both occupational and environmental). Aspects of the OEH risk management cycle form the core of the “do” portion of the Plan, Do, Check, Act management system cycle. It is important to distinguish between the Plan, Do, Check, Act cycle and the OEH cycle and how they are related because the Plan, Do, Check, Act cycle primarily depicts how headquarters Air Force (HAF) and MAJCOMs execute the OEH program. The OEH risk management cycle is primarily driven at the installation level.

1.2.3. Everyone on an AF installation participates in the OEH program in some form or another and their actions (or inaction) inform the OEH leaders of the program's health. For example, if a group of maintenance personnel are treated in the clinic over a period of time for a similar respiratory issue, they have just become indicators of a potential exposure issue in the workplace. The flight medicine clinic (or local equivalent for bases without a flight medicine section) should inform BE to investigate possible hazards while PH should begin



performing an epidemiological analysis. However, the ultimate goal in the OEH program is to identify exposure potential and eliminate and/or control the risk before individuals are exposed or experience any health effects.

1.2.4. The first step in the OEH risk management cycle is to anticipate or identify OEH hazards in the workplace (or in the installation environment). Workplace supervisors should identify potential and new hazards that may affect their workplace and notify the appropriate OEH personnel (most likely BE). As an example, if a shop supervisor knows they will be applying for the use of a new type of chemical, they should consult with the BE section for potential health hazards and appropriate types of control prior to starting the acquisition process. For Team Aerospace, the Occupational and Environmental Health Working Group (OEHWG) serves as the initial means to anticipate/identify OEH hazards.

1.2.5. Workplace supervisors and OEHWG members will not anticipate or recognize every potential OEH hazard. Therefore, routine or special OEH assessments should capture any unidentified hazards. Routine and Special OEH assessments are described in more detail in [chapters 2 and 3](#).

1.2.5.1. Air Force Instruction 48-145, defines routine OEH assessment as "...a **qualitative** assessment that includes collecting and organizing basic information needed to characterize the workplace, work force, and environmental agents. " Special OEH assessment is defined as, "preferably a **quantitative** assessment that focuses resources on OEH-related hazards that require additional evaluation or classification." Assessments will include the entire workforce as defined by local support agreements. (T-3)

1.2.5.2. The primary purpose of an OEH assessment is to enhance overall mission effectiveness by protecting AF workers from OEH hazards that may be present in garrison and deployed environments. The concept of Total Exposure Health (TEH) is introduced in AFI 48-145, and it integrates the identification, assessment, and documentation of workplace, environment, and lifestyle exposures to improve Health Situational Awareness and advance the health and well-being of all AF beneficiaries.

1.2.5.3. OEH assessments provide BE with an opportunity to update administrative data, review previous OEH assessment information, and document changes to an associated health risk assessment (HRA).

1.2.5.4. OEH assessments rely on firsthand observation, previously collected information/data, and professional judgment (fully qualified Bioenvironmental Engineer (BEE) or BE Craftsman (4B071), or civilian equivalent). BE should invite the Installation Occupational & Environmental Medicine Consultant (IOEMC), PH and other OEH-related specialists to participate in the routine OEH assessment process.

1.2.5.5. During routine OEH assessments, BE may verify previous conclusions using point-in-time exposure measurements collected using direct reading instruments and apply the information to prioritize and schedule special assessment(s).

1.2.5.6. During emergency response assessments, BE will follow local written procedures for response to all types of emergencies (fire, chemical spill, accident, natural disaster, etc.). BE will provide technical expertise to sample, identify, quantify, monitor, and document hazards such as toxic industrial chemicals/toxic industrial materials (TIC/TIM) and chemical, biological, radiological and nuclear (CBRN) material, as well as approve

personal protective equipment (PPE) used by AF emergency responders before procurement and use. During emergency response assessments, refer to AFI 10-2501, Air Force Emergency Management Program for additional guidance.

1.2.5.7. BE will perform OEH assessments for newly identified processes within 3 months of identification or before the process has been performed three times, whichever is longer (this is to allow BE to conduct OEH assessments on non-recurring, infrequent processes). (T-3) The workplace categories and assessment frequencies established under AFI 48-145 generate minimum requirements for assessment; this does not preclude more frequent assessment activity or invalidate assessment timelines required by OSHA regulations.

1.2.5.8. In a deployed setting, a routine OEH assessment of a Category-1 workplace shall be performed during each Air Expeditionary Force (AEF) rotation; Category-2 workplaces shall be performed annually. (T-0)

1.2.5.9. During weapon system acquisition, the primary purpose of an OEH assessment is to identify, assess and/or eliminate/control health hazards associated with day-to-day operations across the full life-cycle acquisition, sustainment and support for weapons systems, munitions, and other materiel systems. Team Aerospace personnel should work closely with 711th Human Performance Wing and Air Force Human Systems Integration Office subject matter experts to ensure OEH and other related assessments are available to support these critical processes. Refer to AFD 48-1 and AFI 48-101, Aerospace Medicine Enterprise.

### **1.3. The Defense Occupational & Environmental Health Readiness System (DOEHRS)**

**Required Use.** All OEH exposure data will be entered into DOEHRS IAW business practices established in US Air Force School of Aerospace Medicine (USAFSAM) guidance documents for both garrison and deployed settings (classified areas exempt). (T-1) Routine and special survey letters shall be uploaded to DOEHRS to maintain continuity. (T-1). Use of other management information systems for OEH assessments in lieu of DOEHRS is strictly prohibited. (T-1) In accordance with DoDD 6490.02E, Comprehensive Health Surveillance, other AF-approved management systems are used for documenting and tracking OEH medical exams, injuries and illnesses, and other OEH patient interactions.

**1.4. Review Process.** A qualified reviewer will verify the accuracy and completeness of all exposure assessment data entered in DOEHRS (when practicable at deployed locations) according to Flight/Element Quality Assurance (QA) procedures. (T-1) A qualified reviewer is a fully qualified BEE (43E3X/43E4X), BE Craftsman (4B071), or civilian equivalent. (T-1) If a qualified reviewer is not available, place a request to the MAJCOM BEE to have reviews performed.

**1.5. DOEHRS Training.** The USAF School of Aerospace Medicine (USAFSAM) Department of Occupational and Environmental Health (USAFSAM/OE) shall provide training on DOEHRS and the DOEHRS Data Warehouse during BE enlisted and officer technical school training programs. (T-1) Training shall include basic data entry, overview training, advanced user training, and system administrator training. (T-1)

**1.6. OEH Reports and Surveys.** OEH reports and surveys shall be retained in accordance with AFMAN 33-363, Management of Records. (T-0). Records and the Occupational Environmental Health Exposure Data (OEHD) for similar exposure groups (SEG) in Category 1 and Category 2 workplaces that identify employees by name must be filed in the employee's medical record in

accordance with AFI 41-210, TRICARE Operations and Patient Administration Functions and AFI 48-145. (T-1) Employee exposure records are maintained in DOEHRS in accordance with AFI 48-145, and must be preserved, maintained, and readily accessible for data retrieval and analysis for a minimum of 30-years beyond employment. DoDI 6055.05, Occupational and Environmental Health, 29 CFR 1910.1020, Access to Employee Exposure and Medical Records, and 29 CFR 1910.1096, Toxic and Hazardous Substances: Ionizing Radiation, prescribe procedures for access to employee exposure and medical records. Employee exposure records include the following minimum information according to 29 CFR 1910.1020(c)(5):

- 1.6.1. Monitoring results, including personal, area, grab, wipe, and/or other samples and related information.
- 1.6.2. Hazardous Material (HAZMAT) information pertaining to OEH hazards.
- 1.6.3. Biological monitoring results.

## Chapter 2

### ROLES AND RESPONSIBILITIES

#### 2.1. Installation Commander.

2.1.1. Provides a safe and healthful workplace and community environment for all military and civilian personnel IAW DoD Environment, Safety and Occupational Health (ESOH) requirements (T-0)

2.1.2. Provide Occupational and Environmental Health personnel clearance and access to occupational workspaces governed by this instruction. (T-1)

#### 2.2. Military Treatment Facility Commander (CC).

2.2.1. Directs the installation OEH Program and ensures it is supported with adequate resources and staffing to implement the responsibilities outlined in this AFMAN. (T-1)

#### 2.3. Chief of Aerospace Medicine (SGP).

2.3.1. Manages the OEH program. (T-1)

#### 2.4. Flight and Operational Medicine Flight Commander (or local equivalent).

2.4.1. Ensure execution of medical exams IAW [chapter 7](#) of this AFMAN. (T-1)

#### 2.5. Bioenvironmental Engineering Flight Commander (or local equivalent).

2.5.1. Conduct routine assessment IAW [chapter 3](#). (T-1)

2.5.2. Categorize shops IAW [Table 3.2](#) (T-1)

2.5.3. Use the 8-hr lognormal 95th percentile Time Weighted Average (TWA) in airborne exposure assessments unless an exposure determination can be made in accordance with the AF Exposure Assessment Strategy (EAS) ([Attachment 10](#)). (T-1)

2.5.4. Calculate Exposure Assessment Priorities (EAP) IAW Appendix 2 and Appendix 3 for all health risk assessments that require additional information. (T-1)

2.5.5. Conduct special assessments IAW [chapter 4](#). (T-1)

2.5.6. BE shall utilize the applicable routine survey letter template and include at a minimum the Occupational and Environmental Health Routine Letter Attachment. (T-1)

2.5.7. Conduct environmental health assessment IAW [chapter 5](#). (T-1)

#### 2.6. Public Health (PH) Flight Commander (or local equivalent).

2.6.1. Ensure the workplace receives the required training (T-0)

2.6.2. Assists in creation of Combined Occupational Health Exam Requirement (COHER) by researching requirements and proposing protocol content. (T-2)

2.6.3. Provide a copy of new COHER exam requirements to the Similar Exposure Group (SEG) supervisor. (T-0)

2.6.4. Report SEGs with less than 90% Medical Surveillance Exams (MSE) currency to the Squadron/Directorate CC and SEG leader. (T-2)

**2.7. Installation Occupational and Environmental Medicine Consultant (IOEMC).**

- 2.7.1. Shall ensure medical examinations are performed IAW **chapter 7** of this AFMAN. (T-1)
- 2.7.2. Shall sign and date COHER used to conduct Medical Surveillance Exams (MSE). (T-2)

**2.8. Occupational and Environmental Health Working Group (OEHWG).**

- 2.8.1. Approve the SEG specific COHER (T-2)
- 2.8.2. Shall address special assessments that result in a significant change to the health risk and exposure pathways, including plans for additional evaluations and recommendations to reduce risk. (T-3)

## Chapter 3

### ROUTINE OEH ASSESSMENT

**3.1. General Information.** The main objective of a routine OEH assessment is to identify, assess and evaluate process hazards in the occupational workplace and exposure pathways in the workplace and areas outside the workplace (ambient environment), and determine if control recommendations are needed and/or adequately implemented. New processes or operations should be reviewed at the earliest feasible stage to prevent or control potential OEH hazards. The reviews shall include: identification of tasks; recognition of hazards including those associated with human factors and human errors caused by design deficiencies; review of applicable standards and guidelines; application of control measures (hierarchy of controls); and worker input and participation when applicable. The reviews should take into consideration all applicable life-cycle phases of a process and/or equipment item including installation and decommissioning. OEH reassessments shall be conducted at the frequency specified in AFI 48-145, Table 4.1. (T-1). These reassessments shall, when needed, update exposure groups and exposure profiles, identify changes that may influence exposures, identify unacceptable exposures for control, and identify uncertain exposures for further information gathering. (T-1) Procedures and guidance for conducting routine OEH assessment activities are outlined in the following paragraphs.

3.1.1. OEH Assessments are divided into two categories: occupational health risk assessment (OHRA) and environmental health risk assessment (EHRA) which is covered in [Chapter 4](#).

3.1.1.1. OHRAs are conducted in workplaces. OHRAs result in the evaluation of representative exposures to a similar exposure group (SEG) and should be documented in the industrial hygiene module in DOEHRs. Ideally, through the concept of Total Exposure Health, the BE would be able to obtain personal exposure sampling for each individual, thus making a SEG of  $n = 1$  (instead of 1 ambient or personal sample being attributed to an entire work section, making  $n =$  the whole group). However, with current technology BE will often be limited to capturing a traditional SEG.

3.1.1.2. Examples of how to document OHRAs and EHRAs in the DOEHRs are presented in [Table 3.1](#).

3.1.2. When accomplishing a routine or special workplace assessment, also review the workplace's Occupational Health self-assessment communicators (SACs), which are part of the AF inspection system (AFIS) and explained in AFI 90-201.

**Table 3.1. How to Document Actual or Potential OEH Exposures in DOEHRs.**

OEH Hazard	Source	Type of Hazard/ Assessment	Area of Impact (SEG/PAR)	DOEHRs Details	DOEHRs Module
Chromates	Arcft Sanding Process	OH / OHRA	Structural Maintenance Shop	Shop, Process, SEG	IH Module
Hydrazine	Maintenance Facility	OH / OHRA	F-16 Hydrazine Response Team	Shop, Process, SEG	IH Module
		OH / EHRA	MPF (adjacent to facility)	Subordinate Location – MPF Building	EH Module
Noise		OH / OHRA	NDI Shop	Shop, Process, SEG	IH Module

	Arcft Riveting from Structural Maintenance Shop	OH / EHRA	Wing Headquarters Building (Admin)	Subordinate Location – HDQTRs Building	EH Module
Arsenic / various VOC contamination in Drinking Water	Cross-connection failure	EH / EHRA	Entire Installation	Primary Location - Installation	EH Module
Diesel Exhaust	Generator Farm	OH / EHRA	Tent City (Deployed)	Subordinate Location – Sector	EH Module
Fuel Vapor Intrusion	AAFES Gas Station IRP	EH / EHRA	Elementary School	Subordinate Location – School Building	EH Module
		OH / EHRA	Support Group	Subordinate Location – SUPGRP Building	EH Module
PM <sub>2.5/10</sub>	Ambient	EH / EHRA	Entire Installation	Primary Location – Installation	EH Module
Metals in Soil	Historical Training Site	EH / EHRA	All Central Housing	Subordinate Location – Sector	EH Module
Lead	Ambient	EH / EHRA	Entire Installation	Primary Location – Installation	EH Module
Pesticides and VOCs	Civilian Pesticide Plant	EH / EHRA	Central Housing	Subordinate Location – Sector	EH Module
Trihalomethanes	Water Distribution Lines	EH / EHRA	North Flight line Sector	Subordinate Location – Sector	EH Module
Asbestos	Unauthorized Renovation Project	EH / EHRA	Arts & Crafts Building	Subordinate Location – Arts & Crafts Building	EH Module or IR Module
VOCs	2010 Gulf Oil Spill	EH / EHRA	Entire Installation	Primary Location – Installation	EH Module or IR Module
Forest Fire Contaminates	2008 Summer Event	EH / EHRA	Entire Installation	Primary Location – Installation	EH Module or IR Module

**3.2. Identify and Establish Occupational Workplace.** A workplace is defined as any occupational environment where a potential OEH exposure may occur. A workplace may be administrative, industrial, or both; it also includes non-traditional workplaces, such as the flight line, inside of an aircraft, or other service vehicles. Additionally, a workplace may not be located on the installation; for example a workplace may be located at a geographically separated unit or at a test/training range that is separate from the main installation. In some instances, the surrounding environment may pose an environmental health exposure risk that must be assessed and documented, such as in the case of vapor intrusion into a workplace as an occupational hazard. The workplace shall be evaluated for occupational and environmental health hazards in order to effectively use DOEHRs to build a comprehensive Longitudinal Exposure Record (LER) for each military member. (T-0)

3.2.1. At a minimum, specific OEH hazards must be linked to a workplace or a location, as well as personnel potentially affected or exposed to the hazard. (T-0) BE personnel should capture occupational and environmental health exposures that lie outside of the typical work environment. This is in line with the concept of Total Exposure Health and helps build a complete longitudinal exposure record.

3.2.2. Occupational Health Risk Assessments (OHRA): The industrial workplace is generally a location where the OHRA is performed. Workplace names should be in line with their career field designation or applicable Technical Orders. Examples of workplaces where occupational health exposures may occur are provided in the examples below:

3.2.2.1. Aircraft Structural Maintenance (ASM): ASM may consist of corrosion control, fiberglass, sheet metal, composite material, and welding processes. If the corrosion control process has a dedicated supervisor, office symbol, funding account, etc., and dedicated personnel are assigned, it may be appropriate to establish corrosion control as a separate workplace in DOEHS, with its own workplace identification code (WIC). However, if personnel assigned to ASM collectively perform corrosion control, fiberglass, sheet metal, composite material, and welding processes, ASM should be designated as the workplace. The listed processes (priming, painting, composite core repair, fiberglass repair, etc.) would be separated out in DOEHS, including their appropriate SEGs. Ensure personnel are assigned to the appropriate SEG as opposed to assigning all personnel to all SEGs within the workplace (T-0).

3.2.2.2. HAZMAT Response Team: A single organization on an installation is typically responsible for overall HAZMAT response; however, personnel from different organizations, e.g., Fire and Emergency Services, Liquid Fuels, Aircraft Maintenance, etc., may be assembled for the HAZMAT Response Team. For the purpose of conducting a health risk assessment, HAZMAT response typically comprises a workplace/shop, since the team may maintain common equipment, staged at a common facility, and has a dedicated supervisor with associated organizational authority/accountability.

**3.3. Basic OEH Characterization.** Personnel shall follow and utilize the most recent technical guides and common operating practices (COPs) that are located on the BEE Hive, or ESOH Service Center for detailed instructions on how to perform health risk assessments. (T-1) Reference [Chapter 3](#) of A Strategy of Assessing and Managing Occupational Exposures for additional information on basic characterization and information gathering.

3.3.1. Pre-planning Activity.

3.3.1.1. During a scheduled OEH assessment, a qualified reviewer ([paragraph 1.4](#)) should audit previous OEH assessment activities to determine an appropriate strategy for the pending assessment (e.g. ventilation, noise and air sampling strategies).

3.3.1.2. During a crisis response, the qualified response-lead should focus activities to determine the appropriate surveillance strategy based on all the available information pertaining to the potential hazards.

3.3.1.3. The pre-assessment audit provides a good background and foundational knowledge regarding workplace locations, processes, potential hazardous exposures, and existing hazard controls. Furthermore, health-based outcome data (from OEHWG analyses and results, or injury/illness investigations) may provide insight on the adequacy of current



OEH hazard characterization and effectiveness of associated controls. The OEHWG can provide BE with OEH illness trends related to a specific workplace during scheduled meetings. Outside of the scheduled OEHWG meetings, BE should collaborate with flight medicine and PH to ascertain any potential OEH-related illnesses or injuries. Note: Hazards may be present even in the absence of trends.

3.3.1.4. Information related to unit mission, operational tempo, and OEH impacts/concerns for assigned personnel is used to determine the scope of required OEH support. This is especially critical when new workplaces/processes are identified. Minimum information that should be collected during pre-planning includes, as applicable: organization name, parent command/headquarters, mission description, description of operations performed, name of workplace supervisor (or equivalent), contact information, location, and potential exposure locations, e.g. subordinate units, area on installation.

### 3.3.2. Identify Processes.

3.3.2.1. Contact the workplace supervisor (or equivalent), as appropriate, to explain the purpose of the OEH risk assessment and identify any workplace processes that need to be evaluated. This should be accomplished at least a week prior to the month of the scheduled assessment. This will ensure the shop supervisor has sufficient time to schedule and prepare for the visit.. Minimum information to be conveyed includes:

3.3.2.1.1. The scope of and schedule for completing routine OEH assessment.

3.3.2.1.2. Status of previously identified findings.

3.3.2.1.3. Adverse trends in clinical surveillance or OEH-related illnesses.

### 3.3.3. Associate OEH Hazards with Processes.

3.3.3.1. A process is the lowest level of work that may pose a risk, and may require evaluation and control to ensure human health is adequately protected. The terms activity and process are synonymous. All processes are associated with a physical location, but it does not necessarily have to correlate with the facility that the shop resides (for example, a maintenance shop might have processes indoors in the maintenance hangar, but working in a non-specific location, such as on the flight line, may constitute a process in the maintenance assessment). Examples of some OEH processes are provided below:

3.3.3.1.1. Aircraft painting is divided into distinct processes such as: , primer application, top-coat application, and stenciling operations. It may be beneficial to identify location of each specific process, e.g. priming specific aircraft part in paint booth/flight line.

3.3.3.1.2. A single “painting” process established under ASM is inappropriate due to the unique health hazards and PPE requirements associated with clearly distinct processes, e.g., pneumatic sanding, spray priming, roll-on painting, applying top-coat, etc. A better convention would be to name each specific process.

3.3.3.1.3. Multiple plating tanks in a workplace create potential exposures for personnel who move between tanks to accomplish work. This may be defined as a single process, unless there are significant exposure differences or PPE/control requirements among the tanks.

3.3.3.2. Assign an appropriate name to each process or exposure pathway, and provide a clear description. USAFSAM/OE created a standardized process listing that can be accessed through the ESOH Service Center.

3.3.3.2.1. The workplace supervisor (or equivalent) or the OEH hazard source owner can aid in effectively naming and describing each process or pathway. Guidance on exposure pathways can be found in the OEHS Tech Guide. For processes not already under the standard naming convention for DOEHRs, examples of how to name a process are included below.

3.3.3.2.2. “Riveting” is too general as a description to identify the scope of this process; “removing and replacing B-52 rivets” is a better and more descriptive choice.

3.3.3.2.3. Separating a process into multiple sub tasks that the workers think of as a single process is inappropriate.

3.3.3.2.4. Weapon system processes and description shall be based upon Technical Order (TO) verbiage (usually the -1 (“dash one”) that is determined by system operators and maintainers). (T-3)

#### 3.3.4. Establishing Similar Exposure Groups (SEG).

3.3.4.1. SEGs establish a link between a group of individuals and OEH exposures. Exposure data recorded in the SEG locations in DOEHRs is the data that will populate a service member’s longitudinal exposure record. It is very important to record accurate and representative data. The future state of OEH monitoring enables Total Exposure Health to be accomplished, and it will aim to reduce the traditional workplace SEG to the individual level (a SEG where  $n = 1$ ), through individual exposure monitoring. Representative and/or individual exposure assessment data are applied to personnel assigned to SEGs. A SEG can be established by: (1) observing work practices, (2) accomplishing OEH hazard characterization/assessment and using exposure monitoring data to define the SEG, or (3) a combination of both activities. Reference [Chapter 4](#) of The American Industrial Hygiene Association’s A Strategy of Assessing and Managing Occupational Exposures, 4th edition 2015 for additional information on establishing SEGs.

3.3.4.2. A single SEG is adequate if all individuals assigned to a workplace encounter the same OEH hazards and have the same exposure potential. Multiple SEGs are necessary to accurately reflect “representative” exposures for workers assigned to the same workplace, but who are exposed to different hazards and/or potential exposures. For example, if within the Bioenvironmental Engineering flight there is a subset of personnel that perform asbestos sampling, it would be appropriate to establish an additional SEG to capture asbestos processes separate from the main Bioenvironmental Engineering SEG.

3.3.4.3. Personnel may be assigned to multiple SEGs and/or assigned to a SEG outside their assigned unit. For example, an individual may be assigned to a HAZMAT response team, which is composed of individuals from various workplaces, such as Fire Department, CE Readiness, Explosive Ordnance Disposal (EOD), and Bioenvironmental Engineering.

3.3.4.4. SEG rosters shall be collected and documented in DOEHRs for both home station and deployed locations, to ensure an accurate LER is maintained for all AF personnel. (T-

0) Upon arrival in theater, individuals must be assigned to the appropriate deployed SEG(s). (T-1)

3.3.5. Workplace Categorization. Establishing SEGs is a critical step since the SEG reports provide details to define the overall workplace prioritization category. After SEGs have been identified, DOEHRs shops then must be categorized as a High (Cat 1), Medium (Cat 2), or Low (Cat 3) priority. (T-1).

3.3.5.1. Guidance on proper categorization can be found in [Table 3.2](#).

**Table 3.2. Workplace Categorization.**

Considerations	Workplace Categorization		
	1 - High	2 - Medium	3 - Low
OSHA Expanded Standard Hazards / Controls Assessed	Routine OSHA expanded standard requirements	Minimal potential for OES hazards to go out of control or create significant risk	OES hazards are insignificant or non-existent; deliberate efforts required to generate health risks for OES hazards
Medical Exams Considered	Requirement for special purpose occupational exams (other than audiograms)	Required annual audiograms	No exams required
Hazards Assessed & Controlled	Hazards poorly defined or poorly controlled	Hazards well defined and controlled	No hazards, or minor hazards are well defined and controlled
Processes and Environment Stability	Work environment or processes unstable	Work environment and processes stable	Work environment and processes stable
Inherent OEH Risks Evaluated	Inherent OEH risk present with medium to high hazard potential	Inherent OEH risk present with relatively low hazard potential	Non-existent or negligible sources of OEH risk present
OEH Regulatory Compliance Feasibility (OSHA, EPA, etc.)	Potential for significant OEH regulatory non-compliance	Potential for minor OEH regulatory non-compliance	No or very low risk for any OEH regulatory non-compliance

3.3.5.2. Purely administrative workplaces should be categorized as Low risk only if specific OEH issues have been encountered (e.g. ergonomic evaluations, Indoor Air Quality (IAQ) complaints, vapor intrusion issues, radon) to allow for better tracking and trending. Keep in mind, risk categorization is based on the OEH hazard (i.e. the type of hazard drives workplace categorization, not the type of workplace). If no OEH hazard exists, the administrative workplace should not be put into DOEHRs.

3.3.6. Identifying OEH Hazard Controls. BE assesses the adequacy of existing controls and provides OEH hazard control recommendations to workplace supervisors (or equivalent) if required. [Figure 3.1](#) displays the strategy for managing and controlling OEH exposures, and as shown in [Figure 3.2](#), the following is the preferred order of controls (hierarchy of controls): elimination; substitution of less hazardous materials, processes, operations, or equipment; engineering controls; administrative controls; and personal protective equipment. Feasible application of this hierarchy of controls shall take into account: the nature and extent of the risks being controlled; degree of risk reduction desired; requirements of applicable statutes, standards and regulations; recognized best practices; available technology; and cost effectiveness. A combination of controls may be necessary to reduce exposure to an acceptable

level, especially while engineering controls are being designed/installed, or are not feasible. (T-0)

3.3.6.1. BE will annotate the process to assess the hierarchy of controls, as well as the outcome, in the control requirement comments field within DOEHRS. (T-3) (Example: “All levels of control were assessed for feasibility, but due to fiscal and operational constraints, the use of PPE was the only viable option”).

3.3.6.2. If BE determines technical order control requirements are not adequate or appropriate, BE can submit a change request based on exposure data and recommend appropriate control requirements in accordance with TO 00-5-1, AF Technical Order System.

3.3.6.3. BE associates OEH hazard control information to a specific process or location, as well as the hazard, and documents this information in DOEHRS under the appropriate section (such as the PPE tab). (T-3)

3.3.6.3.1. Engineering Controls. Engineering controls eliminate or reduce exposure to risk factors and may include, but are not limited to, physical changes to workstations (install local exhaust ventilation), new tools or equipment (such as sanders with incorporated HEPA filtered vacuums), materials, processes (wet methods, automation, isolation and enclosure), process elimination or substitution with less hazardous materials. BE must advocate engineering controls to the greatest extent feasible/practical; clearly communicate courses of action to the commanders regarding engineering control solutions and assign risk assessment codes where applicable. BE should consult with local leadership and MAJCOM personnel to conduct a Cost-Benefit Analysis or Return on Investment when making final determinations on the feasibility of certain engineering controls. (T-0)

3.3.6.3.2. Administrative Controls. Administrative controls, which manage potential exposure to an acceptable level, include but are not limited to: job rotation, job transfer, limiting exposure time, housekeeping, personal hygiene, and education and training. Regulatory requirements prohibit job rotation as a means for controlling exposure to certain contaminants, e.g., asbestos in 29 CFR 1910.1001. Administrative controls should be prioritized to maximize effectiveness. At a minimum, ensure that: workers are aware of applicable OEH hazards and control measures including the proper wear of PPE; training is ongoing and provided in a timely fashion; and, trainers are competent to train workers. In accordance with 29 CFR 1910, exposure to certain chemicals within the workplace drives training requirements for the particular chemicals. Coordinate with PH to ensure the workplace receives the required training. (T-0)

3.3.6.3.3. Personal Protective Equipment. PPE is used when other control options are not feasible or adequate, e.g., during emergency response operations. With the exception of uniquely military situations, PPE requirements will be assessed in accordance with 29 CFR 1910, Subpart I, Personal Protective Equipment, to ensure appropriate equipment is selected and used. (T-0)

Figure 3.1. Strategy for Assessing and Managing OEH Exposures.

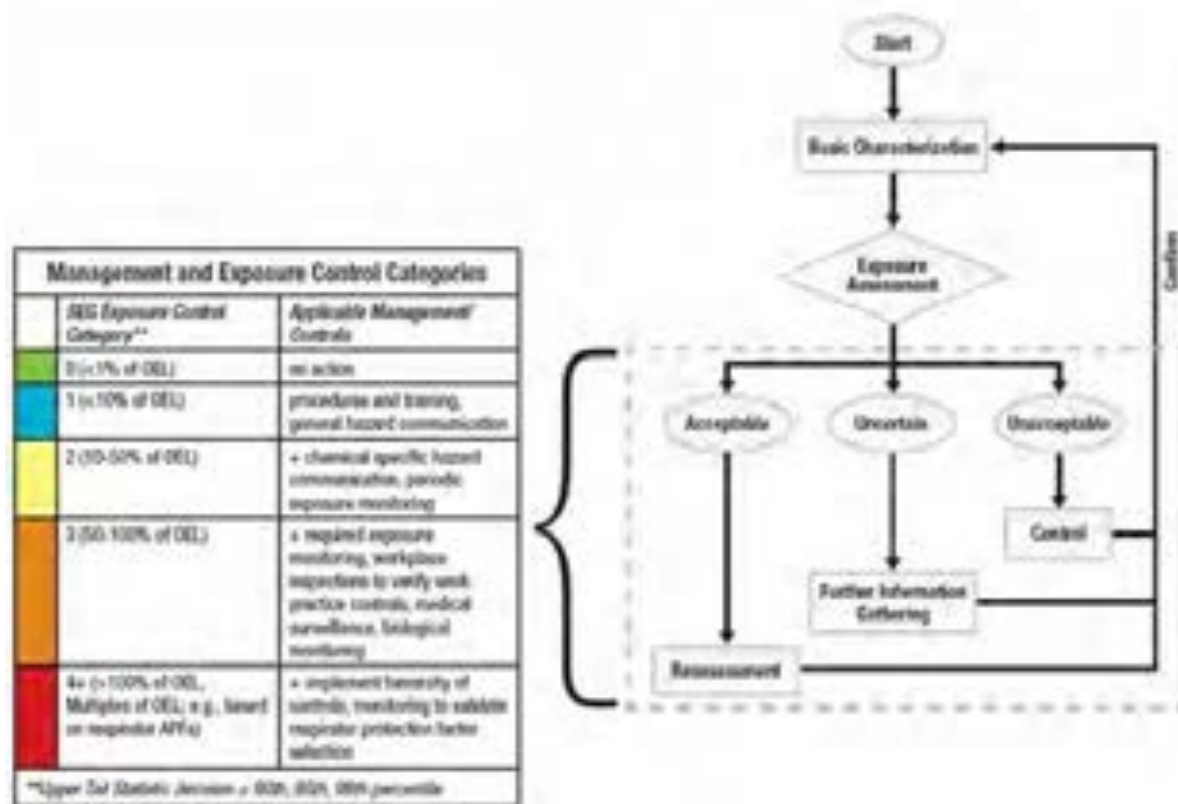
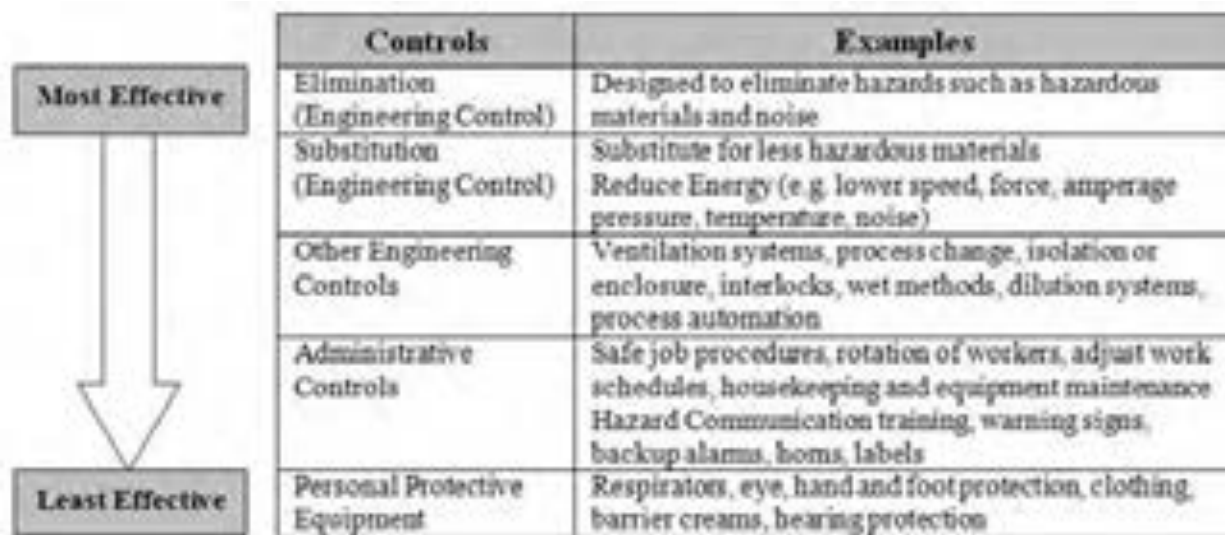


Figure 3.2. Hierarchy of Controls.



**3.4. Exposure Assessment.** As part of the routine survey, an initial exposure assessment of the hazard is required. (T-1) This assessment will often be quantitative in nature using existing data and observations and shall be documented in DOEHS-IH. Furthermore, detailed assessments are conducted as part of special surveillance. See [Chapter 3](#).

### 3.4.1. Exposure Level

3.4.1.1. An Occupational Exposure Limits (OEL) that is the most conservative of the OSHA Permissible Exposure Limit (PEL) or American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) shall be used unless a specific OEL is designated by the BE Associate Corps Chief on the BE Hive and ESOH Service Center. (T-1)

3.4.1.2. The 8-hr lognormal 95th percentile Time Weighted Average (TWA) shall be used in airborne exposure assessments unless an exposure determination can be made in accordance with the AF Exposure Assessment Strategy (EAS) ([Attachment 10](#)). (T-1) In DOEHRS, six samples are required to calculate the lognormal 95th percentile. If six samples are not available, the highest TWA value available will be used. (T-1)

3.4.1.3. DOEHRS-IH TWA values shall be used when available for all exposure levels. (T-1) Hand typed values should be avoided.

3.4.1.4. Modeled values from the AIHA IHMOD spreadsheet can be typed in if the completed IHMOD sheet is attached to the assessment. (T-1)

3.4.2. Start and Stop Dates. The first date of applicability shall be used as the start date for all assessments, to include start dates prior to the sampling event. (T-1) Changes in applicability are determined by significant changes in determinants of exposure (e.g. equipment/airframe, chemicals, engineering controls). A change in PPE would not constitute a change in applicability due to no modification of underlying exposure potential. Accurate assessment dates are critical to tracking exposure in each worker's longitudinal exposure record.

3.4.3. Exposure Acceptability. Determine exposure acceptability in accordance with DoDI 6055.05 once available information is gathered and characterized, and the Exposure Assessment Priority (EAP) is completed. (T-0).

3.4.3.1. If workers are exposed above the applicable OEL, regardless of PPE, an exposure is unacceptable and shall be marked as such in DOEHRS. (T-1) Common examples include workers with noise exposure above the OEL but controlled with hearing protection devices; corrosion control workers with air sampling results where the calculated lognormal 95th percentile is above the Chromium (VI) OEL but is controlled with respiratory protection; or fire fighters wearing respiratory protection to protect against fire/CBRN hazards.

3.4.3.2. A SEG exposure profile that meets or exceeds the OEL (e.g. 95th percentile) is an unacceptable exposure. (T-1)

3.4.3.3. If knowledge of the process indicates the likelihood of overexposure that results in the workers mandatory use of PPE to prevent overexposure, then it is an unacceptable exposure. (T-1)

3.4.3.4. If dermal absorption hazard is a significant route of exposure (e.g. skin notation) that results in the workers mandatory wear of PPE to prevent overexposure, then it is an unacceptable exposure. (T-1)

3.4.3.5. If hazard exposure measurements are not possible/practicable, but modeling results in a possible overexposure (e.g. lasers, EMF radiation), then it is an unacceptable exposure. (T-1)



3.4.3.6. An exposure would be acceptable if exposures are below the applicable OEL. (T-1) This includes when use of administrative or engineering controls reduces exposure below the applicable OEL.

3.4.4. OEHR Exposure Assessment Priority (EAP). If additional data is needed to assess an exposure as indicated by an unacceptable or uncertain exposure determination (see AF EAS in [Attachment 10](#)), an EAP shall be assigned. (T-1) EAP indicates the assessor's priority for collecting additional information. If BE has collected sufficient information, then the EAP would indicate a low priority for additional data collection even in situations where the RM would indicate high risk. [Figure 3.3](#) illustrates the EAP hazard assessment priority process. DOEHRs calculates the EAP using a 3-step process:

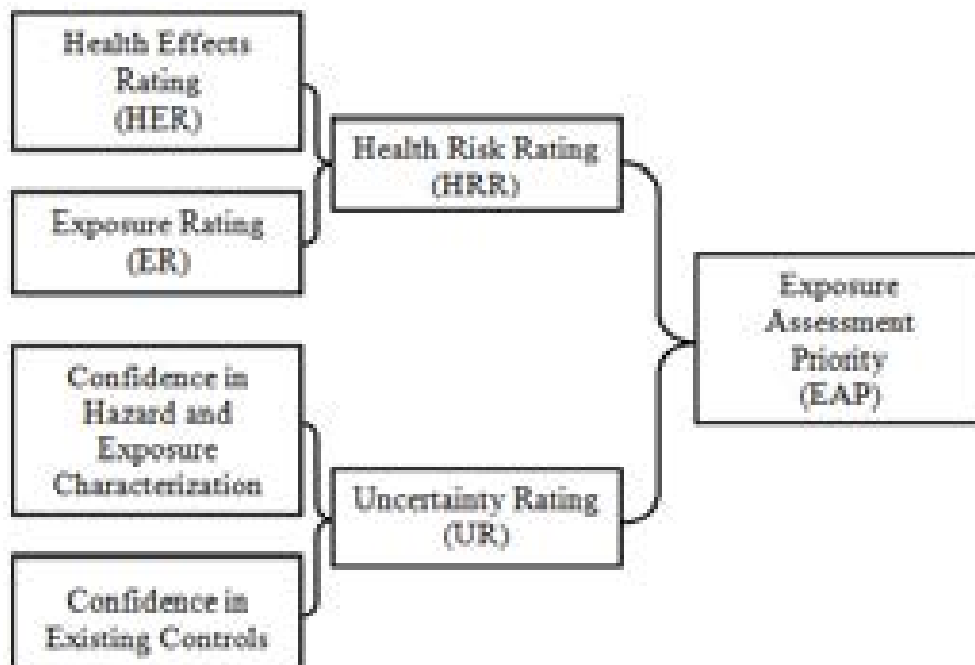
3.4.4.1. Step 1: Select a Health Effect Rating (HER) (aka Severity). See [para 3.4.4.5](#).

3.4.4.2. Step 2: Select the Exposure Rating (ER) (aka Probability). See [para 3.4.4.6](#).

3.4.4.3. Step 3: Determine the Uncertainty Rating (UR). See [para 3.4.4.7](#).

3.4.4.4. Based on the user selections from the above 3-steps, DOEHRs calculates the EAP by multiplying the  $HER * ER * UR$ . EAP values range from 1 to 125: 1 is the lowest priority and 125 is the highest priority ([Table 3.6](#)). **NOTE:** The OEHR hazard risk determination process follows guidance set forth in AFPAM 90-803, Risk Management (RM) Guidelines and Tools. The terms, definitions and process may differ slightly but the process is consistent with established guidance.

**Figure 3.3. OEHR Exposure Assessment Priority (aka Hazard Assessment Process).**



3.4.4.5. Health Effect Rating (HER). The HER is similar to the Severity rating. For any particular hazard, the HER is a measure/estimate of the health effect assuming an individual's exposure is equal to the Occupational Exposure Limit (OEL) without regard to use of administrative controls or PPE ([Table 3.3](#)). The HER is the potential for an

exposure to result in an OEH-related illness/injury. Some chemical hazards in DOEHRs are pre-loaded with an HER based on an exposure level equal to the OEL

**Table 3.3. Health Effects Rating.**

Category	Input Value	Health Effects
Very High	5	Acute life threatening or disabling injury or illness. Immediate hearing loss.
High	4	Chronic irreversible health effects of concern. Noise-induced hearing loss; permanent and temporary threshold shifts, eventually leading to permanent hearing loss.
Moderate	3	Severe, reversible health effects of concern. Irritation of eyes, nose and throat. Acute/short term high risk effects (non-IDLH).
Low	2	Reversible health effects of concern.
Negligible	1	Nuisance/low risk health effects

3.4.4.6. Exposure Rating (ER). The ER considers the frequency of exposure and the likelihood to exceed the OEL. The user will make selections based on the values from [Table 3.4](#), Exposure Rating. Contact USAFSAM ESOH Service Center for assistance selecting the appropriate OEL and action level if needed.

**Table 3.4. Exposure Rating.**

Category	Input Value	Description
Very High	5	Continuously experienced; expected to be above the OEL.
High	4	Likely to be an exposure greater than 50% of OEL or the action level but less than the OEL.
Moderate	3	Exposure frequently less than action level or 50% of OEL and 10% of OEL.
Low	2	Could occur at some time; exposure infrequent; less than 10% of OEL.
Negligible	1	Unlikely; can assume will not occur; no detectable exposure

3.4.4.7. Uncertainty Rating (UR). The UR ([Table 3.5](#)) is computed as a function of the confidence in hazard and exposure characterization and the confidence in existing controls as an intermediate value in the calculation of the EAP. For each OEH hazard requiring an EAP determination, assess the confidence in hazard and exposure characterization ([Attachment 2](#)) and confidence in existing controls ([Attachment 3](#)).



**Table 3.5. Uncertainty Rating.**

		<b>Confidence in Characterization</b>		
		<i>Low</i>	<i>Medium</i>	<i>High</i>
<b>Confidence in Controls</b>	<i>Low</i>	5	4	3
	<i>Medium</i>	4	3	2
	<i>High</i>	3	2	1

3.4.4.8. Record the rationale for assigning the HER, ER and UR in DOEHRs risk assessment rationale comment field to establish a historical record of decisions. This is especially important when the decisions are based primarily on qualitative information or professional judgment (fully qualified BEE, civilian industrial hygienist, or BE Craftsman (4B071)).

3.4.4.9. The EAP can result in a number of priority ratings ([Table 3.6](#)) which impact management decisions. Decisions include but are not limited to 1) No action required, 2) Collect additional exposure data (internal/external projects), or 3) Recommend modifying controls or processes. EAP component choices (HER, ER, and UR) also affect management decisions.

**Table 3.6. Exposure Assessment Priority.**

<b>Priority</b>	<b>EAP Rating</b>	<b>Required Initial Assessment/Sampling</b>
Very High	61-125	Within 30 days of identification
High	30-60	Within 90 days of identification
Medium	16-29	Within 180 days of identification
Low	1-15	Within 365 days of identification

3.4.4.9.1. Sampling Strategies. Processes with associated EAPs typically require additional special surveillance, e.g., personal air sampling, noise dosimetry, laser surveys, etc. Sampling strategies to complete this workload shall be completed as part of the assessment process. (T-3) The DOEHRs-IH Workplace Monitoring Plan/sampling strategy shall include these minimum elements: (T-3)

3.4.4.9.1.1. Sample type

3.4.4.9.1.2. SEG or shop

3.4.4.9.1.3. Process(es)

3.4.4.9.1.4. Hazard (analyte)

3.4.4.9.1.5. Inspirability, e.g. total, inhalable, or respirable fraction, (if applicable)

and analytical method

3.4.4.9.1.6. Task information

**3.5. Compliance Assessment.** During routine surveys a compliance assessment of the work center shall be completed to assess the unit commander's compliance vulnerabilities. (T-3) Deficiencies shall be communicated as part of the routine survey letter to the unit commander and shop supervisor along with recommendations to close each deficiency. (T-3) Additionally, BE routine surveillance documents can assist shop supervisors with their Management Internal Control Toolset (MICT) Self-Assessment Communicators (SAC).

3.5.1. Discrepancies. BE shall use DOEHS to assign Risk Assessment Codes (RAC) in accordance with AFI 91-202, The US Air Force Mishap Prevention Program for identified compliance vulnerabilities and deficiencies. (T-1)

## Chapter 4

### SPECIAL OEH ASSESSMENT

**4.1. Special OEH Assessment.** Special OEH assessments are typically a quantitative assessment of OEH hazards that require additional evaluation based on findings generated during a routine assessment or trigger event. It may include work that is not part of or cannot be completed as part of routine OEH assessment. Examples include, but are not limited to: detailed sampling and analysis of industrial processes, changes in equipment, follow-up activity from OEH illness or injury reports, pregnancy evaluations, assessments of abnormal epidemiological trends, ergonomic assessments ([Attachment 5](#)) and/or review of engineering/facility modifications.

**4.2. Special Assessment.** Some special assessments may be required on a recurring basis (for example, periodic ventilation system evaluations or inspections in a regulated area). All special assessments must be associated with at least one process or exposure pathway documented in DOEHS. Special assessments will be actively managed, scheduled, completed or deferred using the priority established in [Table 3.6](#). In the event special assessments are deferred due to insufficient resources, BE will use the deferred assessment as justification for additional resources. Some situations may identify an immediate health hazard that requires a Risk Assessment Code (RAC) to be assigned. RACs are used to assist with prioritizing abatement plans and mitigating hazards, and are the DoD directed tool to communicate hazards to commanders and the AF leadership.

#### **4.3. Exposure Assessment.**

4.3.1. A special OEH exposure assessment is accomplished to increase confidence in OEH hazard characterization and/or confidence in hazard control performance. Accurate, valid exposure assessment data form the foundation of an effective OEH program. The American Industrial Hygiene Association publication A Strategy for Assessing and Managing Occupational Exposures provides a thorough discussion on numerous tools and methods that shall be used by BE to effectively collect and assess OEH exposure data. (T-1) BE personnel shall use this reference for all aspects of OEH assessments to include but not limited to:

4.3.1.1. Establishing the Exposure Assessment Strategy (T-1)

4.3.1.2. Basic Characterization and Information Gathering (T-1)

4.3.1.3. Establishing Similar Exposure Groups (T-1)

4.3.1.4. Defining and Judging Exposure Profiles (T-1)

4.3.1.5. The Use of Professional Judgement (T-1)

4.3.1.6. Quantitative Exposure Data: Interpreting, Decision-Making, and Statistical Tools (T-1)

4.3.1.7. Reassessments (T-1)

4.3.1.8. Specific Assessments (dermal exposure, noise, ergonomics, radiation, etc.). (T-1)

4.3.2. Exposure determinations. OEH hazard characterizations shall follow the AF exposure assessment strategy (EAS) in [Attachment 10](#) (T-1) and are informed by previous exposure assessments, quantitative measurement data (obtained locally or consolidated from similar

operations from other locations), and estimates of exposure (modeling). Greater confidence in the exposure characterization is garnered by collection and analysis of more data. Exclusive use of professional judgement to make exposure determinations should be avoided.

4.3.2.1. Model/surrogate data/Direct Reading Instrument (DRI). Models, surrogate data, and Direct Reading Instrument data are valuable tools for determining what exposures need further assessment and what exposures can be classified quickly. Care should be taken in applying these tools as their validity is dependent on the assumptions they are built upon.

4.3.2.2. Integrated personal sampling. Full Period personal air sampling is the best assessment of exposure available. Initial collection of three full period personal air samples will provide the ability to make an initial risk assessment. Additional sampling may be required if an exposure determination cannot be made in accordance with the AF EAS ([Attachment 10](#)).

4.3.2.3. The lognormal 95th percentile is the decision statistic that shall be used in airborne exposure assessments, (T-0) unless an exposure determination can be made earlier IAW the AF EAS in [Attachment 10](#). (T-1)

4.3.2.4. Multiple processes may significantly contribute to the overall exposure during a work shift. Overall exposure may be assessed for a single process or a full work shift (more than one process). Make every attempt to sample as much of the work shift as possible and include segments of greatest exposure during the sampling periods. Cumulative exposure for an 8-hour work shift, to include exposures across multiple processes such as chromium VI exposure from sanding and priming processes, must be computed prior to comparing sampling results to an 8-hour time-weighted average (TWA) exposure standard. (T-0) Consecutive partial period samples are considered a single sample when comparing to an 8-hour TWA. (T-1)

4.3.2.5. A conventional work schedule is five consecutive 8-hour workdays, followed by two days off. Most OEH exposure standards are developed based on application of a conventional work schedule. However, standards based on an 8-hour workday may be inappropriate when applied to unconventional work schedules, e.g., under deployment conditions or extended work shifts. In these cases, OELs shall be adjusted. (T-1) Detailed information on a technique that can be used to adjust for non-standard conditions is provided in [Attachment 6](#).

4.3.3. Special assessments require the update of DOEHS process information and exposure assessments. (T-1)

4.3.3.1. Control recommendations shall be updated when new data are available to verify adequacy. (T-3)

4.3.3.2. Exposure values shall be updated to include new data. (T-1)

4.3.3.3. Process EAPs shall be updated to include additional sampling data and control recommendations. (T-1)

4.3.4. Special assessment results shall be documented in DOEHS (T-0) in accordance with the applicable USAFSAM DOEHS Data Entry and Report Guide (DERG). (T-1)

## Chapter 5

### ENVIRONMENTAL HEALTH RISK ASSESSMENTS

**5.1. Occupational and Environmental Health Site Assessment (OEHSA).** Through the OEHSA process (see AFTTP3-2.82 and the OEHSA Tech Guide) BE employs a systematic approach to fully assess a particular site, installation, or area of responsibility (AOR) for all OEH hazards, including those in the ambient environment or from nearby industrial activities. Initial and annual OEHSAs in accordance with the OEHSA Technical Guide are critical for identifying exposure pathways, generating initial/special assessments, and assigning them to a location. When an exposure pathway is identified during an OEHSA, update the health risk assessments associated with the exposure pathway that affect military personnel or civilians working or living on the installation. (T-1) DOEHS will be used to generate an OEHSA report. (T-0)

**5.2. Environmental Health.** At times, the lines can become blurred between what is an environmental compliance concern and an environmental health concern. The primary objectives of BE's environmental data collection activities are to identify environmental health threats and potential adverse effects, inform commanders about health risk minimization options, and update each service member's longitudinal exposure record. If the source-pathway-receiver involves exposures to humans, then BE assessment is warranted.

**5.3. EH Criteria.** In order for BE to become involved in an environmental issue, the following four criteria must be met: (T-1)

5.3.1. The contaminant in question must be currently regulated or 'of concern' for a health reason. Examples include, but are not limited to:

5.3.1.1. EPA Maximum Contaminant Level established.

5.3.1.2. EPA National Ambient Air Quality Standard established.

5.3.1.3. Presence on EPA's Contaminant Candidate List.

5.3.1.4. Presence on EPA's Unregulated Contaminant Monitoring Rule list.

5.3.1.5. Presence on Emerging Contaminants Watch or Action lists in accordance with DoDI. 4715.18, Emerging Contaminants.

5.3.2. The contaminant must be uncontrolled or inadequately controlled in the specific situation where actual/potential exposure to human population is a concern. Examples include, but are not limited to:

5.3.2.1. Detected in groundwater monitoring wells at a level of concern.

5.3.2.2. Detected in drinking water supply at a level of concern.

5.3.2.3. Verified reports of unusual residues, smells, tastes.

5.3.2.4. Permit limits (e.g., CAA, NPDES) have been exceeded.

5.3.2.5. A significant release/spill of the contaminant has occurred.

5.3.2.6. Contaminant is present in excess of the appropriate Exposure Limit.

5.3.3. The contaminant must have a known or suspected complete pathway to direct human exposure within the AF's AOR. Examples include, but are not limited to:

5.3.3.1. Drinking water supply.

5.3.3.2. Soil at a playground on base/in family housing.

5.3.3.3. Natural bathing area associated w/ an installation.

5.3.3.4. Ambient air in a populated area.

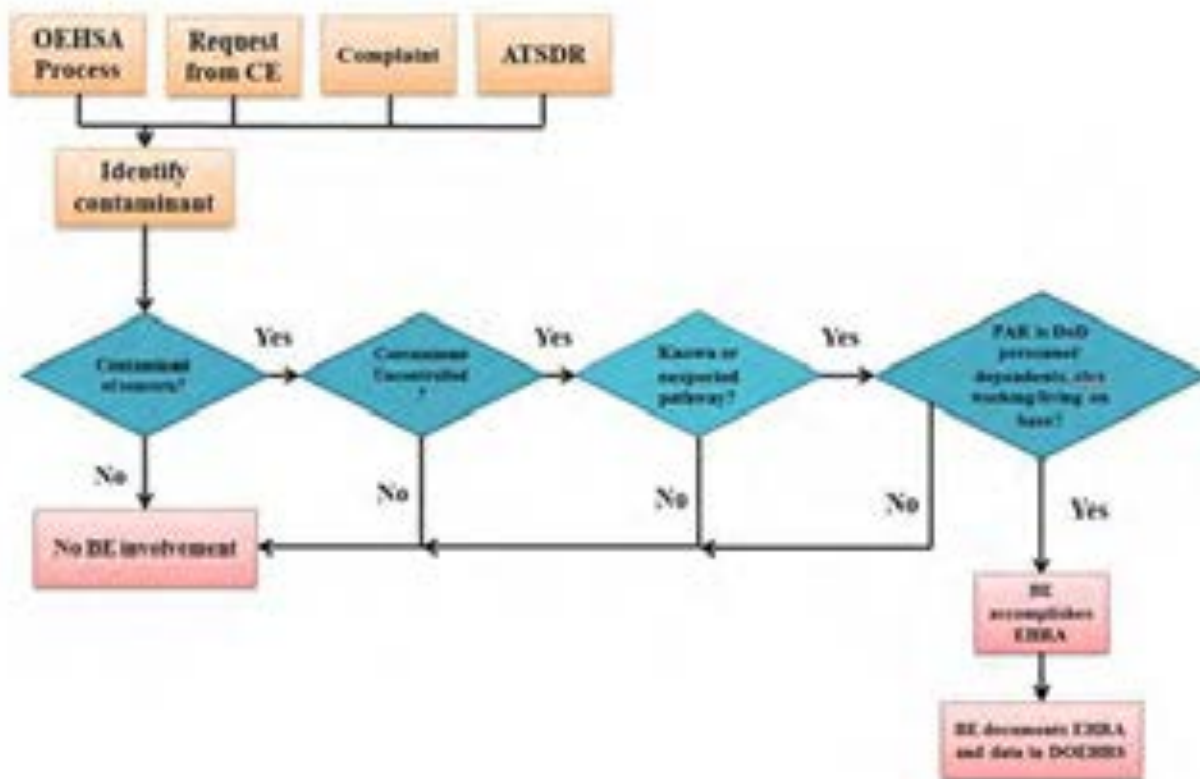
5.3.3.5. Building materials that are currently off-gassing, crumbling, or otherwise directly coming in contact w/ occupants.

5.3.3.6. Vapor intrusion inside an occupied building.

5.3.4. The population at risk (PAR) must be composed of military personnel or civilian individuals living or working on military installations. This includes military members, dependents, and civilians living or working on the installation. (T-0)

**5.4. If criteria in 5.3.1. – 5.3.4. are met, BE should conduct an EHRA. See Figure 5.1.**

**Figure 5.1. When to Conduct an EHRA.**



**5.5. Coordination with Civil Engineers.** It is also critical for BE to partner with base Civil Engineer environmental counterparts and AF Civil Engineer Center counterparts to establish the level of support needed and ensure both parties are fully aware of the others' activities and working toward a common goal.

5.5.1. There are several existing forums for the BE to stay engaged in environmental activities occurring on the installation. To ensure awareness of ongoing potential environmental health

issues, a BE representative shall be appointed as a member of the Restoration Advisory Board (RAB), Technical Review Committees, and other similar advisory groups. (T-3)

5.5.2. Specific focus must be placed on any potential vapor intrusion exposure pathways. Civil Engineering may be required to sample indoor air to assess a potential completed pathway as part of the environmental restoration program. BE must coordinate with Civil Engineering prior to any indoor air quality sampling to ensure the proper workplace risk assessment and risk communication is completed. (T-3)

**5.6. Establishing Populations at Risk (PARs).** EHRAs result in potential exposures to PARs and must be documented in the environmental health module in DOEHRS. (T-0) PARs establish a link between a non-industrial group of individuals and an OEH exposure via a common location or sub-location. EHRAs and exposure data shall be linked to locations (T-1) to include longitude and latitude. (T-1)

5.6.1. Service members are not directly assigned and managed in PARs like SEGs. A PAR is defined by OEH hazard exposure pathways identified and managed through the OEHSAs process. Refer to the OEHSAs Tech Guide for additional guidance on identifying and assessing exposure pathways and PARs and linking OEH hazards to locations. EHRAs can be documented in the OEHSAs module of DOEHRS if it is part of the location OEHSAs. Examples of how to link actual or potential OEH exposures as part of the LER in DOEHRS are shown in [Table 3.1](#) how to Link Actual or Potential OEH Exposures in DOEHRS.

**5.7. EH Controls.** Environmental health hazard controls may include ventilation systems for radon exposure, enclosure for lead-based paint, granular activated carbon filters for drinking water, or an air scrubber for various pollutants.

**5.8. RM Process.** EH uses the RM process, not the EAP process, to assess risk. The RM process gives commanders the tool to make informed risk decisions, but it does not override or supersede compliance with federally mandated OSHA standards (DoDI 6055.01, DoD Safety and Occupational Health Program, Enclosure 3).

## Chapter 6

### OEH RISK COMMUNICATION

**6.1. OEH Assessment.** The OEH assessment process is complete when the risks and results are communicated and the report is sent to the workplace supervisor (or equivalent) via the workplace commander. OEH risk communication is pertinent to SEGs, PARs, OEH hazards outside the workplace, as well as industrial and non-industrial workplaces. Supervisors (or equivalents) are expected to address follow-up/corrective actions by the suspense dates provided and reply in writing to BE. All follow-up/corrective actions require BE follow-up until the discrepancy is corrected. (T-0)

#### **6.2. Immediate Risk Communication.**

6.2.1. Immediately Dangerous to Life or Health (IDLH) Environment. When an environment is determined to be IDLH, BE must recommend immediate cessation of the process, then report the condition to the workplace supervisor, as well as Medical Group chain of command, as soon as possible. (T-0)

6.2.2. Exposures that exceed OEL. When an uncontrolled exposure is suspected to be above a relevant OEL, BE will immediately report that condition to the workplace supervisor (T-0), then report through the Medical Group chain of command as soon as possible.

#### **6.3. OEH Reporting:**

6.3.1. Assessment Reporting. The OEH assessment report identifies significant findings, conclusions and recommendations. BE will determine local requirements for including additional information to address base-specific needs. (T-3)

6.3.1.1. BE shall communicate significant findings to the workplace supervisor (or equivalent) at the conclusion of the OEH assessment no more than 60 days after initial contact with the workplace supervisor or in accordance with OSHA standards when applicable. (T-0)

6.3.1.2. Routine OEH Risk Communication. The applicable USAFSAM Standardized Routine Assessment Letter Template shall be used for all routine survey communication. (T-1) At a minimum, the Occupational and Environmental Health Routine Letter Attachment shall be attached to the routine survey letter. (T-1) These documents and further guidance on their implementation can be found at the BEE Hive (<https://www.milsuite.mil/book/community/spaces/usaf-sg/sgp/sgpb/bee-hive>), or ESOH Service Center website (<https://hpws.afrl.af.mil/dhp/OE/ESOHSCL/>)

#### **6.3.2. Special OEH Risk Communication**

6.3.2.1. A special assessment report will be prepared and distributed to the affected commanders, functional managers, or workplace supervisor (or equivalent). For OSHA expanded standard OEH hazards, BE shall ensure reporting timelines are in accordance with OSHA standards. (T-0)

6.3.2.2. Report format and coordination will be determined by local decision/policy but shall include health risk summary and recommendations/courses of action. (T-1)



6.3.2.3. BE will establish local procedures to ensure affected individuals receive written notification of special assessment results (e.g. air sampling or noise dosimetry results). (T-0) Procedures must include requirements for documenting the date that sample results are received, requirements for a Quality Assurance/Quality Control (QA/QC) review, and steps for tracking special assessment report completion. (T-0)

6.3.2.4. Outcomes from special assessments that result in a significant change to the health risk and exposure pathways must be presented to the OEHWG (or equivalent), including plans for additional evaluations and recommendations to reduce risk. (T-3)

**6.4. OEH Chronological Record.** BE will maintain a chronological record of each contact with a workplace in DOEHS under the “Observations and Notes” section. The record must include the date, individual contacted, type of contact (telephone, email, workplace visit, letter sent/received), reason for the contact, and a brief summary of any relevant information discussed/transmitted. (T-3)

## Chapter 7

### OCCUPATIONAL AND ENVIRONMENTAL MEDICINE (OEM) SERVICES- SURVEILLANCE, QUALIFICATION, CARE AND ADMINISTRATIVE SUPPORT

**7.1. General Information.** Both Occupational Medicine and Environmental Medicine (OEM) are within the scope of Occupational Medicine, a branch of preventive medicine focused on the health and safety of workers in industrial environments and populations exposed to environmental hazards. In the AF, OEM is provided under the oversight and direction of the IOEMC in coordination with PH through the BOMC and, at select bases, by Occupational Medicine Services (OMS) clinics. AF OEM programs, policies and procedures are based on medical science and on agreements, laws, and policies that come from local, state and federal laws and guidelines (e.g. Office of Personnel Management (OPM), Department of Labor (DoL), Office of Workers Compensation Program (OWCP), Division of Longshore and Harbor Workers Compensation (DLHWC), 29 CFR 1910, 5 CFR 339 Medical Qualification Determinations, American College of Governmental Industrial Hygienists, American National Standards Institute, Department of Transportation, AIHA strategy, and union agreements) and on OEM principals. This chapter is primarily a guide to the AF Health Care Provider (HCP) and nurse who may be responsible for supporting OEM at the base level. It also contains sections specifically applicable to PH.

#### **7.2. Eligibility for AF OEM Services (5 CFR 339 and AFI 41-210):**

**7.2.1. Regular Air Force Members.** Regular Air Force members are fully eligible for AF OEM services (typically provided in the BOMC or OMS clinics). They receive care for work related illnesses/injuries in their assigned Medical Treatment Facility (MTF) when the MTF can provide required services or through the TRICARE network as needed.

**7.2.2. Air National Guard (ANG) and USAF Reserve (USAFR) Members.** ANG members receive OEM services through the ANG Medical Group at their assigned wing. USAFR member OEM support is arranged through the Reserve Medical Unit. Reserve component workers can receive OEM services through host units per local support agreements.

**7.2.3. DoD Civilian Federal Employees (CFE) Eligibility for OEM services.**

**7.2.3.1.** CFEs receive AF required medical examinations and assessments from AF designated HCP at no cost to the CFE (5 CFR 339.303; 29 CFR 1910). When an MTF lacks the resources to perform a required examination, specialty consult, study or lab, IOEMC may arrange to send the patient to the civilian community (within 25 miles of the base when possible) upon approval of funding from the unit or organization to whom the CFE belongs (see AFI 41-210 for details on process). The IOEMC is responsible for ensuring results are of adequate quality to protect the CFE and the interests of the USAF.

**7.2.3.2.** DoD CFEs may elect to seek care for work-related illness and injury within the MTF when and where supported at the discretion of the MTF/CC (See 5 CFR 339 and AFI 41-210). If a CFE elects care for a work related condition in an MTF that supports provision of care, the CFE must sign a statement designating the AF health care provider as his or her treating physician for the CFEs' Workers' Compensation claimed condition (See sample form, [Attachment 7](#)). However, if the CFE previously elected care for the same medical condition through OWCP from a non-AF HCP, the CFE must first obtain a written authorization from OWCP to change providers.

7.2.3.3. DLHWC only applies to Nonappropriated Fund (NAF) employees for whom only one-time initial care may be provided (when local policy permits) in an AF MTF prior to being referred by the NAF liaison to care in the civilian community.

7.2.3.4. Some CFEs are covered by insurance other than OWCP and DLHWC (e.g. some Defense Commissary Agency (DECA) members). Specific requirements regarding illness and injury treatment may apply. Contact the local base Civilian Personnel Services to learn if any CFEs on base fall into this category.

7.2.3.5. Where resources permit, CFEs can be assessed by an AF HCP to determine fitness to complete a work shift (when requested by the CFE's supervisor) and may be provided with first aid at no expense to the CFE.

7.2.3.6. When an AF HCP (preferably an IOEMC) determines an illness or injury alleged to be work-related by the CFE was not caused by factors of AF employment, no further care or medical work-up for the condition will be provided by the AF.

7.2.3.7. When emergency stabilization prior to transport is indicated for a non-work related condition, this shall be provided and the clinic will notify the MTF resource management office in order to recover expenses.

7.2.3.8. Dual status employees (CFEs who are eligible for TRICARE benefits) may elect medical care for a work-related condition through their assigned MTF or TRICARE provider.

7.2.4. Eligibility of OEM Services for Contract workers. Contract workers, unless specifically authorized in writing or by official DoD or AF policy, are not eligible for care, Medical Qualification Examinations (MQE) or MSEs in an MTF and shall obtain OEM services through their employer (AFI 41-210). If a contract employee presents to an MTF and requires emergency stabilization prior to transport, this shall be provided and the clinic will notify the MTF resource management office in order to recover costs. (Other rules may apply in a deployed setting or if otherwise covered in an AF or DoD contract).

7.2.5. Eligibility of OEM Services for Supervisors, AF Attorneys, Civilian Personnel Services and AF providers: OEM consultative services may be provided to each of these as required for official AF activities.

**7.3. Required OEM Examinations and Assessments for CFEs that Exceed Local MTF Capability.** Consults, studies, laboratory tests or medical examinations for non-Defense Health Program (DHP) covered medical assessment of CFEs may be ordered when required to support the needs of the AF and when the local Military Treatment Facility (MTF) has the resources to support the required activity (see 5 CFR 339.301-304 and AFI 41-210). When the MTF does not have resources available, these examinations, etc. may also be obtained outside of the MTF at the expense of the CFE's unit or organization per the process described in AFI 41-210. (See [Attachment 9](#) of this manual for a sample of a Commander's Authorization Packet).

7.3.1. AF HCP Request for Outside Examination or Assessment.

7.3.1.1. The AF HCP will order consults, studies, laboratory tests or examinations for a CFE from the civilian medical community only when doing so is required by or for the AF and the local MTF cannot provide support (T-3). When the purpose of the consult, study, laboratory test or examination is solely to secure a benefit sought by the CFE and not to

meet a need or request of the AF, the CFE is responsible for all costs and should make arrangements (T-3). In the absence of written guidance, the AF HCP will first confirm with the CFE's supervisor and Civilian Personnel Services (CPS) that a consult, study, test or examination is required by or for the AF (T-3). Prior to contacting the supervisor and CPS, the AF HCP should consider the following three primary reasons for an AF HCP to order an AF funded civilian sector consult, study or test or examination:

7.3.1.1.1. The outside consult, study, laboratory test, or examination is required by the AF in order to comply with a law or official policy, and the local MTF cannot support internally (e.g. the OSHA Hazardous Noise standard requires interpretation of abnormal audiograms by a qualified HCP but the MTF has no qualified HCP).

7.3.1.1.2. There is evidence to suggest the CFE has a disqualifying medical condition or one that would require work limitations (e.g. post cerebral vascular accident with possible cognitive deficits); the medical information obtainable from the CFE, his or her personal HCP(s) or OWCP treating physician is insufficient to support a defensible medical recommendation to remove or return to extended partial or full duty; and the evaluating AF HCP determines a consult, study, laboratory test or examination is needed to obtain additional information to support a requested medical recommendation to the base CPS or the supervisor.

7.3.1.1.3. The CFE's private physician has provided information in support of a CFE obtaining special treatment or accommodation from a supervisor (e.g. permanently cannot work more than 6-hours a day), but the AF HCP judges the medical assessment or recommendations are inaccurate or inappropriate. However, the AF HCP does not believe he or she can defend a contrasting medical opinion without obtaining a medical consult, study, laboratory test or examination.

7.3.1.2. Tracking the referral process may be facilitated by use of a tracking form (see sample in [Attachment 8](#)).

7.3.1.3. The IOEMC approves or rejects requests for a Line unit or organization funded consult, study, laboratory test or examination. The IOEMC is responsible for ensuring the consult appropriately supports a legitimate AF requirement for clinical assessment and does not authorize medical care or treatment. Unit or organization funding commitment must be obtained prior to sending the consult request (T-2).

7.3.2. Obtaining Funding for Outside Examinations and Assessments. Consults, studies and tests that will be done outside the MTF for a CFE must be approved for full payment before they are ordered following procedures in AFI 41-210 (T-2). Bases with pre-existing agreement between the Line and the MTF that already support execution of required non-DHP consults, studies, laboratory tests and medical examinations for CFEs are not required to replace their agreed to practices in order to comply with this policy (T-1).

**7.4. Occupational Medicine Examinations.** Occupational medicine examinations can be categorized into two main groups: Medical Surveillance Exams (MSEs) and Medical Qualification Examinations (MQEs). The MSE is primarily to determine if similarly exposed CFE and Regular Air Force workers are adequately protected from exposures of concern. The MQE is to determine if workers are medically able to perform in their assigned positions. (DoD 6055.05-M, Occupational Medical Examinations and Surveillance Manual, and AFI 48-145, Occupational

and Environmental Health Program; AFI 48-123, Medical Examinations and Standards; 29 CFR 1910; 5 CFR 339).

#### 7.4.1. Medical Surveillance Exams (MSEs):

7.4.1.1. Medical Surveillance Exams (MSEs) protect the health and safety of individual workers and groups of workers with known potential hazardous exposures (e.g. physical, chemical and biological hazards). Individual workers are protected by early detection of abnormalities associated with exposure, subclinical illness or early clinical illness. Early detection enables intervention through control of exposures and, when appropriate, medical management. Trend analysis of exam findings for similar exposure groups is essential for the identification of adverse trends and preventive intervention. As screening tools, MSEs represent an important part of AF medical surveillance.

7.4.1.2. MSE protocols are SEG specific. The Clinical Occupational Health Exam Requirements (COHER) form is used to identify MSEs protocol content by defining examination, education and training requirements for the workers belonging to each SEG. The COHER for each SEG is approved by the Occupational & Environmental Health Working Group (T-2).

7.4.1.3. Examination requirements are driven by potential workplace exposures identified on the SEG specific Occupational Environmental Health Exposure Data (OEHD) summary document, the most appropriate action level, AF and DoD policy, official standards (e.g. OSHA standards contained in 29 CFR 1910, as well as the ACGIH Biological Exposure Indexes (BEI)), accepted references and union agreements. The COHER must clearly identify requirements for baseline, periodic and termination of exposure surveillance exams and all relevant references (e.g. OSHA standards, AF and DoD policy). The AIHA exposure assessment strategy prescribes medical monitoring for individuals with time weighted average exposures that are greater than or equal to 50% of the OEL (see [figure 1.1](#) in this document). Certain OSHA expanded standards require a separate termination of employment MSE for employees who remain employed by the AF after previously terminating the potential for further exposure to a covered hazardous exposure (e.g. by transferring out of a particular SEG).

7.4.1.4. The IOEMC determines the MSE requirements contained in the COHER. He or she must be medically credentialed to certify occupational exam requirements. The COHER used to conduct an MSE must be signed and dated by the IOEMC (T-2). Guidance for required or recommended immunizations may be included on the COHER.

#### 7.4.1.5. Basis for MSE protocols:

7.4.1.5.1. Preparation of requirements begins with awareness of relevant guidance in OSHA Expanded Standards, DoD 6055.05-M, AFI 48-123, AFI 48-145, the ACGIH BEIs, the AIHA exposure assessment strategy, and this manual.

7.4.1.5.2. PH assists with creation of COHER protocols by researching requirements and proposing protocol content (T-2).

7.4.1.5.3. The IOEMC shall have access to authoritative occupational medicine and toxicology references when reviewing MSE requirements (T-3). The Navy “Medical Matrix” program is another potentially useful source. As recommendations may differ

by source, careful study, interpretation and medical judgment are needed to ensure appropriate exam protocols. When questions arise, the USAFSAM consultant service can provide guidance and assistance.

7.4.1.6. Special actions required.

7.4.1.6.1. Employees must be notified of the results of their examinations for all MSEs. They shall be advised to seek care from their personal health care provider for any incidental, non-work related conditions detected that require further evaluation or care (T-0).

7.4.1.6.2. A number of the OSHA expanded standards (standards containing detailed instruction regarding the management and medical management of hazardous materials, contained in 29 CFR 1910) require specific actions (e.g. removal from an exposure, written letter, testing, etc.) when certain conditions are observed. Notification letters to the supervisor and employee following routine exams are required for a number of exposures (T-0).

7.4.1.6.3. When special requirements exist, the COHER protocol must include an explanation (T-2).

7.4.1.6.4. While letters from the AF HCP to both the employee and supervisor do not have to be sent for all MSEs, this is done at the Air Logistics Centers and has the benefits of ensuring compliance with OSHA standards and of providing a consistent means of ensuring both the employee and supervisor know and understand the results of the MSE. When letters are sent, in addition to any specific OSHA expanded standard requirements, the following content may be appropriate:

7.4.1.6.4.1. Letter to supervisor: the actual results of studies and labs and any medical findings and diagnoses are not included (T-3). The supervisor is informed that the CFE or Regular Air Force member did or did not complete the MSE, does or does not require further work up or return visits, does or does not meet any required certification exam requirements (e.g. respirator use certification), and may or may not return to full or restricted duty (if returned to restricted duty, limitations and duration are specified) (T-3).

7.4.1.6.4.2. Letter to the employee: a summary explanation of the results of the examination, studies, labs (when applicable) along with the information provided to the supervisor (T-3). If the exam revealed a work-related illness for which the CFE or Regular Air Force member was offered and chose to obtain care at the MTF, the illness is mentioned along with a recommendation to follow up in the appropriate clinic (T-3). If a non-work related medical condition requires further work-up and treatment, the Regular Air Force member is advised to seek care at the MTF and the CFE with his or her private physician (T-2). Any relevant lab or study results are provided to the employee to take to his or her provider (T-3). If additional work-up or treatment is needed in the AF MTF, the CFE or Regular Air Force member is informed (T-3).

7.4.1.6.5. Per 5 CFR 339.205, employees must be notified in writing of the reasons why their work position requires inclusion in the MSE program. (T-0)

7.4.1.6.5.1. PH provides a copy of new COHER exam requirements to the SEG supervisor with an explanation of why it applies to the members of the SEG (T-0).

7.4.1.6.5.2. PH requests the supervisor perform the following actions: post both the copy of the current COHER and the explanation; keep copies for employees to access; and require review by new employees during orientation T-2).

7.4.1.6.6. OSHA has provided mandatory medical monitoring guidance for a number of known exposures (e.g. lead, cadmium, noise, etc.); however, many hazardous chemicals are not specifically addressed by OSHA. OSHA regulates these under the general duty clause (sect 5) of the Occupational Safety and Health Act of 1970, Title 29 USC-LABOR, Chapter 15 Occupational Safety and Health, sections 651-678, which requires employers to provide employees “employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm” (29 USC 654).

7.4.1.6.7. Union agreements may dictate some exam content and services provided. CPS at the base level knows who to contact for copies of existing agreements that may impact MSE content. Union agreements are legally binding but are subject to change through the bargaining process.

7.4.1.6.8. Baseline, periodic and termination MSE:

7.4.1.6.8.1. Baseline MSE.

7.4.1.6.8.1.1. Baseline examinations should be performed prior to work in a SEG, but must be performed no later than 60 days after beginning that work (30 days for baseline audiograms per AFI 48-127, Occupational Noise and Hearing Conservation Program) (T-1).

7.4.1.6.8.1.2. Having baseline data can be very useful in determining if (1) the worker can be safely placed in a SEG; (2) pathology not caused by SEG exposures is present; (3) early pathology is beginning to emerge; (4) abnormal findings on later exams represent significant change.

7.4.1.6.8.2. Periodic MSE.

7.4.1.6.8.2.1. Periodic MSEs are typically annual; however, some exposures may require more frequent monitoring per OSHA standard (e.g. lead, organophosphates).

7.4.1.6.8.2.2. MSEs that are required on an annual basis by OSHA must be completed within 12 months of the last MSE (as specified in multiple but not all OSHA expanded standards)(T-0). OSHA does not recognize a grace period for these MSEs .

7.4.1.6.8.3. Termination MSE.

7.4.1.6.8.3.1. Termination MSEs are normally performed when an employee leaves a SEG. Depending on the exposure, there may be allowances for counting the last periodic examination as the termination exam per OSHA, DoD or AF guidance. Where not otherwise required, an MSE accomplished within 180 days of termination may serve as the termination examination (T-2).

7.4.1.6.8.3.2. Some OSHA expanded standards require a termination monitoring examination at the time of termination of employment (e.g. asbestos within 30 days of termination). These must be provided even if the employee had an earlier termination exam at the time of leaving a SEG and has worked away from the exposure for months or years prior to terminating employment. If an employee elects to not complete the offered exam, a note indicating this will be added to the occupational health record. These employees shall be tracked to ensure the requirement is met (T-0).

7.4.1.6.9. Beryllium workers are those currently or who have previously worked in a SEG with documented exposure to beryllium at or above OSHA beryllium permissible exposure limit (PEL). They receive MSEs annually until termination of employment, regardless of removal from potential beryllium exposure. If an employee elects to not complete the offered exam, a note indicating this will be added to the occupational health record. If at the time of termination of employment the worker is within 90 days of the last MSE for beryllium, that exam will serve as the termination surveillance exam for beryllium. Examinations are performed in accordance with OEHWG approved frequencies based on OSHA and DoD regulations (T-0).

#### 7.4.1.6.10. MSE Scheduling.

7.4.1.6.10.1. MSE scheduling is normally arranged by PH in coordination with the clinic providing the examinations and the IOEMC. PH maintains good communication with the supervisors for each SEG to ensure new and existing workers obtain timely baseline, periodic, termination, and when applicable, termination of employment MSEs. PH works with workplace supervisors for each SEG with required MSEs to ensure personnel rosters are updated every six months in Aeromedical Services Information Management System (ASIMS).

7.4.1.6.10.2. The Chief of Aerospace Medicine (SGP) ensures MSE scheduling, administration, reporting, and follow up are accomplished in accordance with AFI 48-145; the local scheduling process will be documented in the OEHWG minutes (T-2).

7.4.1.6.10.3. PH tracks MSE completion and maintains records of no show/cancellation rates for clinical surveillance, and coordinates with supervisors to maximize completion rates and to minimize impact on mission where possible (T-2).

7.4.1.6.10.4. AF primary care managers (providers) document all MSE results in the workers' medical records. AF providers work with PH to communicate results of MSEs to the individual workers, supervisor and OEHWG within time limits specified by OSHA and/or AFIs (e.g. OSHA expanded standard for Lead; AFI 48-127 notification requirement for a permanent threshold shift to hearing). AF providers ensure scheduling of any required follow-ups and monitoring until completion is accomplished in their respective clinics (T-0).

7.4.1.6.10.5. By the fifth work day of each month, AF clinics performing MSEs report to both PH and the IOEMC the number of outstanding MSEs that have not been closed out and completed within 4 weeks of the initial clinic visit (T-2).



7.4.1.6.10.6. For AFRC Host Bases:

7.4.1.6.10.6.1. The PH function in the BE/PH office tracks MSE completion rates; conducts trend analysis on OEM data; trains supervisors and shop representatives on OEM programs; and provides recommended COHER protocols to a credentialed HCP for review and approval (T-2).

7.4.1.6.10.6.2. The Reserve Medical Unit manages the OEM program; schedules MSEs; verifies completeness of MSEs; reports findings of MSEs to members; notifies a member's supervisor of the member's fitness for duty; schedules, coordinates and assesses additional follow up exams, if necessary; identifies and coordinates with PH fitness and risk evaluations; attends the OEHWG; and manages incomplete and overdue MSEs with the Unit Commander, First Sergeant, and Unit Health Monitor (T-1).

7.4.1.6.10.7. There are two systems for scheduling exams, by SEG and by MSE anniversary:

7.4.1.6.10.7.1. When practical, exams are arranged to correspond with the annual review of the COHER, which is in turn tied to the BE's periodic surveillance of a SEG. Ideally, the workplace assessment takes place first; followed by the next scheduled OEHWG and then all SEG members have their annual exam the following month. This system minimizes non-compliance and the need for more frequent examinations for a whole SEG when exposure and regulatory changes are identified as requiring a change to a SEG's COHER (T-3).

7.4.1.6.10.7.2. At some workplaces and bases, employees are frequently moved between SEGs or deployed. It may be more practical to track employees and their monitoring exams by worker MSE anniversary. When appropriate, uniformed members may be scheduled for both a periodic health assessment and an MSE at the same time. However, the two are distinct exams and the requirements of both must be clearly met and documented in the medical record. While there is potential to save time and avoid redundancy, adequate time and attention must be taken to ensure both assessments are properly completed (T-3).

7.4.1.6.10.7.3. Regardless of the scheduling system used for Category 1 and 2 SEGs, the current OEHD summary and the current MSE protocol (COHER) are filed in the employee medical record. The OEHD summary for other category shops can be obtained by employees at their request. For deployed settings, workers who belong to a SEG with an OEHD should have a copy filed in their medical record (hardcopy DD Form 2766 or electronically if resources allow) prior to departure from the deployed location (T-1).

7.4.1.6.11. MSE compliance rates are reviewed at the OEHWG, Aerospace Medicine Council and reported to the installation ESOH Council. Any SEG with less than 90% MSE currency is reported by PH or the BOMC/OMS to the Squadron/Directorate CC and SEG leader (T-2).

7.4.1.6.12. Failure of an employee to submit to a required MSE represents a risk to the health and safety of the worker. When there is no legitimate reason for failure to comply (e.g. extended deployment or other prolonged absence) and after repeated contacts to request compliance by PH or the clinic scheduler, the IOEMC may recommend in writing to both the employee and the employee's supervisor removal of the worker from the SEG's hazardous exposures pending examination compliance. This recommendation is included in the employee's medical record with an explanation that the employee's failure to participate in medical monitoring interferes with protection of the employee's health and safety in the presence of the potential hazardous exposures of concern.

7.4.2. Medical Qualification Exams (MQEs). **Note:** Except where Regular Air Force members are specifically identified, this section only applies to CFEs; medical qualification of Regular Air Force members is covered in AFI 10-203, Duty Limiting Conditions.

7.4.2.1. Background:

7.4.2.1.1. MQEs are used to inform supervisors and CPS personnel, enabling them to make and execute appropriate administrative decisions (e.g. actions to hire, deny, accommodate, remove, restrict or return to duty a CFE with a known or alleged potentially work limiting medical condition). Positions requiring a MQE have essential functions that are safety, security, or both safety and security sensitive. This means that if the worker is unable to perform the assigned tasks properly, safety, security, or both could be compromised. A MQE may be required for positions that have specific medical standards, physical requirements, or are covered by a medical evaluation program.

7.4.2.1.2. CPS requests an AF provider perform a MQE on a CFE either via a formal written request (e.g. a new hire pre-placement examination or a formal fitness for duty examination (FFDE) request ) or through an established policy (e.g. supervisors are provided an AF HCP recommendation for regular duty or restricted duty following an annual firefighter physical or whenever a new medical condition is identified by the AF provider). CPS works with the supervisor to ensure the AF provider is informed of all functional requirements, environmental factors and any applicable medical standards that pertain to the CFE's current or applied for work position.

7.4.2.1.3. When an AF provider performs a MQE, they are acting as the Agency Medical Officer and he or she assesses each identified potentially limiting medical condition relative to the functional requirements and environmental factors of the position. He or she determines what, if any, limitations or restrictions to assigned duties are needed to ensure the worker can safely (i.e. without risk of harm to self or others) accomplish assigned job functions in the work environment. The AF provider does not recommend termination or separation of an employee.

7.4.2.1.4. CPS working with the supervisor, not the AF provider, decides if recommended medical limitations and restrictions can and will be accommodated and whether a worker will be retained or terminated. They determine if a CFE's request for reasonable accommodation will be supported or denied.

7.4.2.1.5. If a CFE attempts to secure a benefit from his or her supervisor or the AF for a medical condition, the CFE should obtain an examination at his or her own expense outside of the AF (5 CFR 339.304).

7.4.2.1.6. An AF provider must not perform a MQE on a CFE for the purpose of determining eligibility for coverage under the Family Medical Leave Act.

7.4.2.1.7. In the event of a mishap or security failure, an investigation may be requested to determine the appropriateness of medical recommendations made by the AF provider. It is important to have the rationale for recommended restrictions or return to unrestricted duty adequately documented in the medical record.

7.4.2.2. Sources of information required to perform MQEs:

7.4.2.2.1. CPS, working with the supervisor, is responsible for identifying the functional requirements, environmental factors and any applicable medical standards on the Optional Form 178, Certificate of Medical Examination (OF 178) or equivalent form. The form can refer to an attached Position Description or cite a specific medical standard. A full copy of an applicable medical standard does not need to be attached, but the AF provider must be provided a means of accessing the medical standard (T-1).

7.4.2.2.2. The CFE is asked to provide the AF provider a relevant medical history appropriate to the requirements of the position. This will often require complete past medical, surgical and social histories. However, a family history is not taken as this would be a violation of the Genetic Information Non-disclosure Act. Additional past medical information may be needed:

7.4.2.2.2.1. When the job involves safety or security sensitive activities, the CFE is asked if he or she has any active Workers' Compensation claims or Veterans Affairs (VA) accepted conditions. If there is an active Workers' Compensation claim, he or she must provide the AF provider a current summary of covered medical conditions and recommended work restrictions from the treating provider or clinic and a copy of the most recent Workers' Compensation letter showing the accepted condition(s) and any prescribed work restrictions. If there is an accepted VA medical condition, a copy of the "VA rating decision" document must be provided to the AF provider for review (T-1).

7.4.2.2.2.2. If the applied for position involves a security clearance or requires continuous alertness, physical coordination, and good judgment in the interest of safety, the CFE is asked to report any history of drug or alcohol dependence and any chronic pain conditions treated regularly with controlled substances. If previously in a rehabilitation program, the CFE is asked to release all discharge summaries for review by the AF provider (review may identify the need for further information release to confirm adequate treatment and compliance). Documentation of the objective portion of the exam includes observed functional abilities and deficits relevant to the CFE's job requirements and work conditions.

7.4.2.2.3. When requesting additional medical documentation from a CFE, it is appropriate to request that the employee arrange to have the information sent directly from the outside clinic, hospital or provider to the AF provider to ensure the integrity

of the information. The CFE is responsible for any costs involved. If a CFE refuses to release requested information that is needed in order to determine if medical restrictions are needed to ensure safety or security, it is appropriate for the AF provider to write a recommendation to CPS and the supervisor recommending restrictions to work activities in the interest of safety (and security when applicable) pending the CFE's release of the requested medical information. If the CFE receives their routine healthcare within the MHS, the same rules regarding access to non-occupational healthcare information apply when additional information is needed for occupational purposes. This means the CFE shall either provide the additional information needed for occupational health purposes to the occupational health provider, or specifically authorize use/disclosure of the information for occupational health purposes.

7.4.2.2.4. The AF provider clinical assessment must include review of any information provided by the CFE from his or her personal provider (T-3).

7.4.2.3. Specific MQEs:

7.4.2.3.1. Formal FFDEs, including New Hire Pre-placement FFDEs:

7.4.2.3.1.1. Requests for Formal FFDEs are made by CPS, in coordination with the supervisor, in writing and are accompanied by an OF 178 or equivalent form and specific medical questions which are to be addressed. As described previously, the request must include all functional requirements, environmental factors and refer to any applicable written medical standards. The AF provider should address questions or concerns about exam intent, requirements, or purpose directly with CPS. These requests are made when (unless otherwise stated in DoD or AF policy): 1. A newly hired CFE is assessed to determine if medically qualified for an applied for position; 2. An existing employee applies for a new position; 3. The supervisor questions the CFE's long term medical capacity to safely perform the essential functions of his or her assigned position; or (4) as required periodically by DoD or AF policy to assess worldwide deployability for identified CFEs. Note: Except when a periodic requirement, a formal FFDE is not typically performed on a CFE who is expected to fully recover from a recent illness or injury or who has a condition requiring accommodations that do not significantly impact performance of essential job functions. (T-2)

7.4.2.3.1.2. The primary purpose for performing a Formal FFDE is to ensure the CFE is medically qualified to safely perform the essential functions of the assigned position (and deployed functions if in such a position) with or without limitations and without risk to the health and safety of the CFE and others. However, the examination may also later serve as a baseline for assessments of whether or not a claimed injury or illness was caused or aggravated by factors of employment. If a job site visit is determined to be necessary to complete the assessment, documenting the visit on AF 1754, Job Capability and Safety Analysis, is appropriate.

7.4.2.3.1.3. Rules regarding the role of occupational medicine in the reasonable accommodation process, as well as for medical documentation and medical confidentiality in the accommodation process, are further addressed in **Chapter 6** of AFI 36-2706, Air Force Equal Opportunity Program, Military and Civilian.

#### 7.4.2.3.2. Security Clearance MQEs and Record Reviews

7.4.2.3.2.1. The Personal Security Program requires initial and periodic review of medical records by an AF medical authority to ensure CFEs do not have a medical or mental condition or are taking a medication that would potentially make a CFE unfit to hold an existing or applied for security clearance (AFI 31-501, Personnel Security Program Management). These reviews may be requested by the employee's servicing security activity.

7.4.2.3.2.2. Disqualifying conditions include those that would be expected to cause defective judgment or reliability (see DoDM 5200.02 Procedures For The DoD Personnel Security Program for examples). A review may reveal the need for additional information in the form of an AF clinical assessment and/or release of outside clinical information (such information is sent directly from the outside clinical source to the evaluating HCP to prevent potential alteration by the CFE).

7.4.2.3.2.3. Additional reasons for conducting such a review include a direct request from leadership or detection of a potentially disqualifying condition by a provider during other clinical activities. A recommendation to suspend a CFE's access to classified materials is made to both the CFE's supervisor and commander (or civilian equivalent). Commanders have the authority to suspend access to classified information. Consults for a psychiatric assessment of a CFE must be done in accordance with the guidance provided elsewhere in this chapter.

7.4.2.3.3. Special Program MQEs. Guidance regarding medical requirements for Presidential Support Program can be found in DoDD 5210.55, Department of Defense Presidential Support Program and DoDI 5210.87, Selection of DoD Military and Civilian Personnel and Contractor Employees for Assignment to Presidential Support Activities (PSAs). Guidance regarding the Personnel Reliability Program (PRP) can be found in DoDM 5210.42 AFMAN 13-501, Nuclear Weapons Personnel Reliability Program, and AFI 31-501, Personnel Security Program Management. The medical portions of these programs are managed under the direction of the local SGP.

#### 7.4.2.3.4. Medical Standard Based MQEs.

##### 7.4.2.3.4.1. Medical standards and medical guidance.

7.4.2.3.4.1.1. A medical standard is a written description of medical requirements for a particular occupation (e.g. firefighter) based on a determination that a certain level of fitness or health status is required for successful performance (5 CFR 339.104).

7.4.2.3.4.1.2. Medical guidance in the form of potentially disqualifying medical conditions and recommended medical considerations is not a set of "requirements," but rather information to assist the AF provider in considering those medical conditions that may interfere with the safe performance of assigned functions in the assigned workplace.

7.4.2.3.4.2. When an AF provider assesses a CFE for medical qualification and applicable medical standards or guidance exist, the AF provider must individually assess each potentially disqualifying medical condition discovered relative to the

functional and environmental requirements of the assigned or proposed position (per 5 CFR 339)(T-0). This requirement applies regardless of what is written in a published medical standard. It also applies to potentially disqualifying medical and psychiatric conditions for which there may be no medical standard, based on the knowledge and judgment of the AF provider. In other words, a CFE is not summarily restricted or disqualified based on a diagnosis or medical history (T-0).

7.4.2.3.4.2.1. The AF provider must provide adequate documentation in the medical record to make it clear he or she assessed each potentially disqualifying medical condition and then determined whether that condition is incompatible with job requirements and safety (T-0). As explained earlier, the AF provider recommends work restrictions when appropriate. When restrictions are recommended, medical qualification or disqualification is accomplished when CPS or the supervisor decides to accommodate or not accommodate the recommended restrictions.

7.4.2.3.4.3. The DoD and AF have published medical standards for various positions and functional requirements. For example, DODM 5200.02, describes psychiatric conditions that may be disqualifying for activities requiring a security clearance. DoD 6055.05-M, Occupational Medical Examinations and Surveillance Manual, and AFI 31-122, Department of AF Civilian Police/Security Guard Program, provides medical standards and guidance for DoD civilian police. The AF has published “Technical Implementation Guide 1582 for 2013 NFPA 1582, Standard on Comprehensive Occupational Medical Program for Fire Departments” (available on the Occupational Medicine AFMS Knowledge Exchange)

7.4.2.3.4.4. Medical standards can change on a schedule independent from this publication and can be found on the AF and DoD electronic publication web pages or the Occupational Medicine webpage on the AF Knowledge Exchange. The AF typically adheres to the OSHA expanded standards which may direct questions to ask when assessing a CFE’s fitness to participate in certain activities (e.g. OSHA Respirator Medical Evaluation Questionnaire (Mandatory) 29 CFR 1910.134 App C). OSHA standards are updated quarterly and can be found at <http://www.osha.gov/>. In some cases, the DoD has more restrictive standards (e.g. Lead).

7.4.2.3.4.5. Development of any AF specific occupational health medical standard will be coordinated by SG3PF. Guidance regarding potentially disqualifying occupational medical findings and conditions can be obtained by contacting the Occupational Medicine Field Consultant at USAFSAM/OE..

7.4.2.3.4.6. Published medical standards may have modifications that have been bargained with a labor union. The local CPS normally has a labor relations representative who is aware of local union agreements that may pertain to an AF or DoD medical standard. (For example, medical exam requirements for firefighters have been bargained locally).

#### 7.4.2.3.5. Disability Retirement Package Reviews and MQEs.

7.4.2.3.5.1. When a CFE applies for disability retirement or when it appears the

AF must make the application on behalf of a CFE, CPS may request an AF provider review application materials and make a written statement back to CPS commenting on whether or not the materials provided support OPM medical requirements for disability retirement. It is the employee's responsibility (when capable) to obtain and submit required medical information in support of his or her application.

7.4.2.3.5.2. The OPM criteria for disability retirement that pertain to the AF provider review include: sufficient medical documentation to support the conclusions that the employee has a medical condition that precludes useful and efficient service; the condition must be expected to continue for at least 1-year; and the employee cannot be retained through reasonable accommodation and/or reassignment to a vacant position.

7.4.2.3.5.3. The diagnostic or clinical impressions must be justified in accordance with established diagnostic criteria and the conclusions and recommendations must be consistent with generally accepted medical principles and practice, (and the Federal Employees Retirement System (FERS) Handbook (T-0)).

7.4.2.3.5.4. If the reviewing AF provider determines he or she needs to perform a direct clinical assessment, he or she may recommend CPS make a written offer to the employee (or the employee's guardian) to have the AF provider perform that assessment in support of the disability retirement application at no cost to the employee. If the employee accepts, CPS sends a written notification to the AF provider requesting the examination and explaining the offer was accepted by the employee or guardian (T-2).

#### 7.4.2.3.6. Pregnancy and Fetal Protection Assessments.

7.4.2.3.6.1. Fetal Protection/Reproductive Risk Program. All workers, to include CFE, Regular Air Force, and traditional reservists, both male and female, are made aware of reproductive risks and protective measures in the workplace through the appropriate occupational health program (e.g. Hazard Communication, Hearing Conservation Program, and Radiation Protection). All reproductive hazards must be assessed for males and females during OHRAs and EHRAs. A pregnant CFE may request an individual workplace reproductive health hazard exposure assessment and, if potential hazards are identified, a medical consultation. Those desiring these services should make an appointment to be seen in PH for assessment. The fact that the AF makes available individual workplace reproductive health hazard exposure assessments and medical consultations does not confer a right on the employee to have assigned duties altered. Such workplace alterations will be made in accordance with the needs of the AF and with legal requirements. Pregnancy is not a disability and, absent complications, does not entitle the employee to a reasonable accommodation. Additionally, providers refer all pregnant Regular Air Force members to PH. (The Pregnancy Discrimination Act of 1978 (Public Law 95-555, 92 Stat. 2076))

#### 7.4.2.3.6.2. Pregnant Regular Air Force and TR members.

7.4.2.3.6.2.1. AF providers managing a pregnancy must notify PH at onset and

recommend limitations on an AF Form 469 in accordance with AFI 44-102, Medical Care Management. If the pregnancy is being managed by a civilian provider, the civilian provider's recommendation is provided to the AF provider who then completes an AF Form 469. (TR Airmen provide the documentation to their medical unit following a similar process as Regular Air Force with civilian provider).

7.4.2.3.6.2.2. When assessing risks to the fetus, BE must objectively evaluate each potential hazard and make a determination whether exposures are at a level which may harm the fetus based on the most current science. This assessment shall occur at the process level; a shop level assessment is inappropriate for work placement considerations. In coordination with PH, the AF provider reviews the BE assessment of workplace exposures of concern relative to the pregnancy and then recommends appropriate work restrictions, if applicable, to the supervisor. The provider will make the final decision (T-2).

7.4.2.3.6.2.3. All pregnancy related AF Form 469's are reviewed by an IOEMC appointed physician prior to release of the profile to the member's commander. The reviewing physician ensures recommendations are made that would adequately protect the worker and fetus from work place exposures and that work restrictions are consistently applied where possible (variations are expected given potential maternal health conditions, different workplace factors and the individual medical recommendations of the obstetrics provider). See AFI 10-203 and AFI 44-102 for additional guidance.

7.4.2.3.6.3. Pregnant Civilian Federal Employee Voluntary Assessment.

7.4.2.3.6.3.1. Pregnant CFEs who elect to undergo an exposure assessment and medical consultation are interviewed by PH. If they work in an industrial environment, PH sends BE a request for a workplace exposure assessment (the same process as for Regular Air Force members). PH drafts a letter for the worker listing any recommended changes to the worker's duties in a potentially hazardous environment and forwards the electronic copy to the IOEMC appointed physician. The CFE is then scheduled to see the same IOEMC appointed physician. (Employee is asked to bring any recommended work limitations previously provided by her obstetrics provider.)

7.4.2.3.6.3.2. After review of the BE, PH and obstetrics HCP materials and examination of the CFE, the IOEMC appointed provider makes any necessary changes to the PH draft letter, ensuring it clearly identifies any recommended changes to the worker's duties and their duration (T-2).

7.4.2.3.6.3.3. The IOEMC appointed provider signs and dates the letter, sends it to the employee only, and places a copy in the medical record (T-2). The corresponding medical record entry is subject to medical confidentiality rules. Should the employee wish to seek alteration of job duties based on the recommendations, the employee may provide a copy of the letter to the supervisor.

7.4.2.3.6.3.4. The provider will send work limitation recommendations



directly to the pregnant CFE's supervisor only if those recommendations are based on a direct threat to the health or safety of the worker or co-workers (i.e., not based on fetal protection) (T-0).

#### 7.4.2.3.7. Breast feeding.

7.4.2.3.7.1. A number of industrial chemicals and medications are potentially transmitted in breast milk. A small number of known chemicals are concentrated in breast milk at levels higher than are found in the mother's blood. However, medical literature on the risk to breastfed children of industrial working mothers is very limited.

7.4.2.3.7.2. Shop supervisors should remind Regular Air Force and civilian workers returning from maternity leave who plan to continue breastfeeding and to resume work in a SEG with hazardous chemical exposures of the option to see PH for an assessment.

7.4.2.3.7.3. After interviewing a breastfeeding worker, PH consults with BE and then the IOEMC appointed provider who will determine what (if any) work limitations are recommended. These recommendations are provided in a written letter to the employee only, and a copy placed in the medical record. These recommendations are subject to medical confidentiality rules. Should the employee wish to seek alteration of job duties based on the recommendations, the worker may provide a copy of the letter to the supervisor.

#### 7.4.2.3.8. Psychiatric MQEs.

##### 7.4.2.3.8.1. Psychiatric Consults:

7.4.2.3.8.1.1. Before ordering the psychiatric consult, the medical record entry should clearly show if the consult is being ordered or offered and for what reason.

7.4.2.3.8.1.1.1. Ordered psychiatric assessment. The AF may order a psychiatric consult on a CFE only when (1) the CFE has already undergone a general medical examination and it is found that there is no physical explanation for actions which may affect the safe and efficient performance of work by the CFE or others; or (2) a psychiatric examination is specifically required for medical qualification for a position according to written medical standards (T-1).

7.4.2.3.8.1.1.2. Offering a psychiatric assessment. When a CFE does not meet the criteria to order a psychiatric examination, the AF may only offer one to a CFE in order to make an informed management decision. This may be appropriate when a CFE requests a change in duty status, assignment, work conditions or any other benefit or special treatment for an alleged psychiatric condition or when the individual has a performance or conduct problem which may require AF action.

7.4.2.3.8.1.2. The consult will only be used to inquire into a person's mental fitness to successfully and safely perform the duties of his or her position without undue hazard to the CFE or others (5 CFR 339.301) (T-0).

7.4.2.3.8.1.3. A CFE who claims he or she has a psychiatric condition that caused a behavior at work or necessitates a special accommodation is responsible for providing supportive medical evidence; the CFE is asked to have all relevant medical information sent directly to the AF provider from the CFE's treating HCP.

7.4.2.3.8.1.4. If, after review of the CFE's outside medical information, the AF provider determines an additional AF funded consult is needed in order to properly further assess the case and adequately advise the supervisor; or when a CFE is exhibiting behavior that warrants psychiatric assessment, but the CFE is unwilling to pay for an evaluation because he or she thinks there is nothing wrong with him or herself and is willing to submit to a psychiatric evaluation; then the AF provider may order or offer (see above) a psychiatric consult (see additional criteria below). Psychiatric functional tests alone (without an assessment by a psychologist or psychiatrist) are inadequate evidence upon which to determine fitness for duty.

7.4.2.3.8.1.4.1. Before offering or ordering a psychiatric assessment, the AF provider must confirm this can be provided in the local MTF or confirm the CFE's unit or organization will fund sending the CFE to an outside mental health care provider. The AF provider will not tell the unit or organization the diagnosis or type of provider required.

7.4.2.3.8.1.4.2. If the assessment is offered, the CFE's choice to submit to or decline the exam is clearly documented in the medical record.

7.4.2.3.8.1.4.3. When applicable, the CFE is asked by the AF provider ordering the consult to arrange for medical summaries to be sent by their private psychiatric provider (s) to the mental health consultant well in advance of the scheduled appointment.

7.4.2.3.8.1.4.4. The AF provider consult request states very clearly that the consult is for the purpose of assessment only. The consult request does not ask for or authorize treatment.

7.4.2.3.8.1.4.5. The work requirements and environmental factors (e.g. OF 178 and position description) are sent with the request.

7.4.2.3.8.1.4.6. The quality of the evaluation can be greatly enhanced by giving the consulting psychiatric provider approval to conduct psychological testing if needed. If the assessment is being done in the local MTF, the AF provider can grant approval. If the assessment is being done by an outside mental health care provider, the CFE's unit or organization is the approval authority.

7.4.2.3.8.1.4.7. The consult request should contain an explanation of precipitating events (e.g. CFE reports receiving special messages from an inanimate object in the workplace).

7.4.2.3.8.1.4.8. The consulted psychiatric provider must not be the CFE's treating provider and preferably has no direct ties or obligations to the treating

psychiatric HCP (T-1).

7.4.2.3.8.1.4.9. The following questions are recommended for inclusion in the consult: Has the CFE been and is he or she responsible for his or her words and deeds? Is the CFE capable of consistently and safely performing assigned duties with or without specific limitations (if limitations, what are these and of what duration)? Has the CFE complied with recommended treatment? Has the CFE adequately cooperated to allow performance of a thorough assessment? Did the CFE release all relevant medical information from personal treating HCPs and programs that was needed for this psychiatric assessment? Did the CFE authorize the evaluating mental health care provider to talk to his or her supervisor? What is the diagnosis and prognosis? If medications have been prescribed, please explain. Has the CFE reached maximal medical improvement? If the CFE has a security clearance, the request asks if the CFE has the judgment and ability to consistently safeguard classified information. If the CFE carries a weapon, works in a hazardous environment, or performs other safety sensitive tasks, the request should include questions regarding the CFE's safety to participate in these activities.

#### 7.4.2.3.9. Workers' Compensation Case Assessment MQEs.

7.4.2.3.9.1. The AF can require that a CFE undergo a formal FFDE by an Independent Medical Examiner (IME) for the purpose of determining appropriate work limitations that may affect placement decisions when the employee has applied for OWCP coverage of work related illness or injury. OWCP must be notified when a CFE fails to show for the examination (T-0).

7.4.2.3.9.2. When a CFE has an OWCP recognized treating physician for a work related condition other than the AF provider for an OWCP accepted medical condition, work limitations specified by the treating physician must be adhered to and less restrictive limitations must not be recommended directly by the AF provider. However, the AF provider may recommend to the supervisor and to CPS additional or more restrictive work limitations (T-0).

7.4.2.3.9.3. In accordance with 20 CFR 10.506, the AF cannot phone the OWCP treating provider to discuss or ask for information related to an OWCP case, but may do so in writing or electronically (ensure the CFE has signed an approved release of information both for the content of the letter written and for the treating physician's reply). The AF has a right to request and obtain copies of the treatment records in a compensation case without a release from the patient (AF providers make such requests through the Injury Compensation (IC) Program at Air Force Personnel Center (AFPC) or through the OWCP district office). Refusal on the part of an employee to release OWCP related information or to submit to an AF ordered examination may adversely impact the CFE's future employment with the AF (T-0).

7.4.2.3.9.4. The AF is authorized to require a CFE who has an active OWCP claim to submit to a medical assessment performed by an AF provider. The supervisor typically makes this request in writing. Refusal on the part of an employee to

release OWCP related information or to submit to an AF ordered examination may adversely impact the CFE's OWCP claim and future employment with the AF.

7.4.2.3.9.5. If an AF provider determines the OWCP treating physician limitations are inappropriately restrictive, he or she can send a written explanation to the treating provider regarding the ability of the unit/organization to potentially accommodate the worker. He or she can also make a written request to the regional OWCP district office asking for review of the case by the District Medical Advisor. The request would summarize the clinical information and the rationale for calling the treating physician's recommendations into question. These requests should be routed through and approved by IC program who in turn may contact the CFE's supervisor. The local CPS has contact information for the IC program.

7.4.2.3.9.6. NAF employees fall under the DLHWC at most locations, but at some locations are under a separate insurance arrangement. For NAF employees, seek counsel both from the local CPS authority and the Base Legal Office (JA) and ensure there is a written request from CPS before assessing the legitimacy of a NAF employee's compensation case restrictions.

#### 7.4.2.3.10. Non-work Related Medical Condition Assessment MQEs.

7.4.2.3.10.1. A supervisor or CPS may obtain medical advice from the AF provider to assist in determining what work limitations are needed for a CFE with or returning from an absence due to a non-work related illness, injury or recent surgical procedure. A supervisor or CPS may request an assessment by an AF provider when either believes the CFE may be medically unfit to safely perform assigned duties and the employee agrees to the assessment.

7.4.2.3.10.1.1. Non-OEM physicians in civilian communities may have a limited understanding of the principals of OEM. Most are not as familiar as the AF provider with the work requirements and work environment of AF CFEs. Some will not call the CFE's supervisor to ask about work requirements, conditions and accommodation of recommended work limitations. They may not be concerned with expediting the return of the CFE to productivity.

7.4.2.3.10.1.2. When an AF provider evaluates a CFE's ability to return to duty, he or she makes an independent medical assessment and provides appropriate recommendations to the CFE and CFE's supervisor. It is not appropriate to simply endorse the outside provider's recommended limitations without making a medical judgment as to whether or not the outside recommendation is appropriate.

7.4.2.3.10.1.3. The AF provider provides the CFE's supervisor or CPS the information needed to make a well informed decision about a CFE's fitness to safely perform assigned duties with or without accommodation of recommended work restrictions.

7.4.2.3.10.1.4. Returning CFEs safely and expeditiously to productive work not only benefits the AF but protects CFEs. Workers subjected to prolonged sick leave are at risk for developing long lasting illness behaviors such as ignoring normal social roles and responsibilities, not taking responsibility for

their condition, not wanting to get better, and not cooperating with competent help.

7.4.2.3.10.1.5. Disagreement with local providers may sometimes be avoided by notifying them early on of the AF's ability to accommodate work limitations and providing copies of documents showing employee functional requirements and environmental factors.

7.4.2.3.10.2. AF provider requests for medical information from CFEs' private physicians.

7.4.2.3.10.2.1. If a CFE claims to have a medical condition or to have recently undergone a medical procedure, and has been referred by CPS or the supervisor to a AF provider for assessment of return to for duty, the CFE is required to provide the AF provider with a note from the treating provider containing: the date written, the treating HCP's signature and printed name with contact information, the diagnosis, recommended work limitations and their duration (or a recommendation to return to regular duty).

7.4.2.3.10.2.2. The evaluating AF provider reviews the private physician's diagnosis and recommended work limitations, performs a focused outpatient clinical assessment of the CFE's alleged medical condition, reviews the job requirements and conditions, and then determines if the outside provider's recommended limitations are appropriate or if different recommendations should be made to the supervisor prior to making a recommendation to both the employee and the supervisor.

7.4.2.3.10.2.3. If there is a question regarding the duration of the recommended limitations, the AF provider may consult an authoritative source (such as the DoD-provided access to [www.mdguidelines.com](http://www.mdguidelines.com)) that describes the range of time expected following injuries and procedures. The AF provider may need to see additional information in order to determine appropriate work limitations (e.g. a cardiac ultrasound report to determine the ejection fraction and a cardiac stress test report prior to returning a post myocardial infarction case to a heat stress environment or strenuous activity) and may ask a CFE to have the private physician send relevant existing medical information to the AF provider at the CFE's expense. The AF cannot require medical tests of a CFE unless it pays for those tests (5 CFR 339).

7.4.2.3.10.2.4. The AF provider may request a written release from the CFE (on a form approved by the MTF consulting JA or a DD Form 2870, *AUTHORIZATION FOR DISCLOSURE OF MEDICAL OR DENTAL INFORMATION*, per local procedure) to allow the AF provider to send a letter or talk directly to the outside provider in order to explain work requirements and potential accommodations. The AF provider does not need a release to have support staff call to confirm a CFE provided note was truly sent from the private physician's office or to send a copy of the work requirements in the OF 178 and position description or a memo summarizing these requirements. If an AF provider fills out or AF support staff fill out a records release request for the CFE to sign, the request must specify "A family medical history and other

genetic information is not requested.”

7.4.2.3.10.3. Supervisor requests for treating physician medical information.

7.4.2.3.10.3.1. A supervisor or CPS may consult with an AF provider prior to requesting a formal FFDE when a CFE claims a non-work related medical condition that necessitates reasonable accommodation of specific work limitations (e.g. inability to work night shift, to work in a particular area due to a phobia, etc.) for an indefinite or prolonged period.

7.4.2.3.10.3.2. If the AF provider determines outside medical information is required in order to advise the supervisor or CPS, he or she may ask the supervisor or CPS to inform the employee in writing of the need to have the following information sent directly by the treating provider to the evaluating AF provider (with a signed release):

7.4.2.3.10.3.2.1. Copies of relevant medical records (to include summary reports of specialty consultations, studies, labs, and record entries.

7.4.2.3.10.3.2.2. A note identifying the relevant medical diagnosis or diagnoses, including the current clinical status, the patient's past and present compliance with recommended treatment, the prognosis (including plans for future treatment), an estimate of the expected date of maximal medical improvement, a list of all recommended work limitations and their duration; and a narrative explaining the basis for the conclusion that the accommodations are medically necessary.

7.4.2.3.10.3.2.3. The written request from the supervisor or CPS to the employee must state, “A family medical history and other genetic information are not requested” and a statement explaining that all documentation must be obtained at the CFE's expense (T-0).

7.4.2.3.10.4. Upon review of the CFE's medical information, the AF provider determines if further medical or psychiatric assessment is needed in order to provide the supervisor or CPS adequate information to allow for a well informed decision. If so, the AF provider may advise the supervisor or CPS to commit unit funds to pay for the assessment. An AF provider must not order such an evaluation unless he or she has confirmation of unit funding. Psychiatric assessments must only be ordered in accordance with guidance found elsewhere in this chapter (T-1).

7.4.2.3.10.5. A request from a supervisor or CPS for a medical assessment may be inappropriate if the issue is primarily administrative in nature (e.g. a CFE who is angry, argumentative, abusive, bullies others, exhibits a personality disorder, or exhibits other behavior most appropriately managed by administrative action). Such requests should be denied. Questions and guidance on individual cases can be provided by the Occupational Medicine Field Consultant and USAFSAM/OE.

7.4.2.3.11. Medical qualification assessment during other clinic visits. In a broad sense, all employee medical examinations (including MSE) are MQE assessments: if findings from any clinical examination are incompatible with unrestricted duty

performance, the AF provider recommends appropriate duty restrictions to the worker's supervisor (or commander).

## **7.5. OEM Medical Care for work related illnesses and injuries:**

7.5.1. Regular Air Force members obtain medical care for occupational injuries and illnesses through their assigned providers who take care of their day-to-day health care needs. MSEs for these members are typically accomplished in the BOMC or OMS clinic). A regular Air Force member can be referred to or sent for a consult from an AF OEM provider where this service is available. Occupational illnesses are brought to PH's attention for investigation and reporting.

7.5.2. AF CFE medical care for occupational injuries and illnesses. There are three systems covering work related medical care for CFEs: OWCP under the Federal Employees Compensation Act of 1971 (5 USC Chapter 81) (FECA) which covers the majority of AF CFEs; Division of Longshore and Harbor Workers Compensation (DLHWC) which covers Non-Appropriated Fund (NAF) employees; and those covered by other forms of insurance. Knowing the CFE's form of coverage is essential as there are differences in eligibility, means of applying for and obtaining reimbursement, and other applicable rules and procedures.

### **7.5.2.1. Injury vs. Illness, OWCP definitions:**

7.5.2.1.1. An occupational injury is a medical condition that evolves over the period of no more than a single workday or shift (e.g. a laceration). (CA-810, Injury Compensation for Federal Employees, 2009 Revised)

7.5.2.1.2. An occupational illness is a medical condition that evolves over more than one work shift (e.g. carpal tunnel syndrome). (CA-810, Injury Compensation for Federal Employees, 2009 Revised)

7.5.3. If an eligible CFE seeks definitive and ongoing care for a work related condition at an AF clinic capable of providing that care, the CFE must make a written, signed and dated decision to either choose the AF clinic or a private provider as his or her OWCP treating provider. This statement is placed in the medical record. The CFE has the right under FECA to choose to seek care from a non-AF provider (T-0).

7.5.4. If an employee has elected care for a work related condition through workers' compensation from a private provider and a claim is pending or accepted, the AF provider must not treat the CFE for the claimed condition and must not recommend to the employee or employee supervisor work limitations that are less restrictive than those recommended by the treating provider. The AF provider must not phone the private provider to discuss an OWCP case, but may communicate by other means while adhering to appropriate release requirements.

7.5.5. Once the CFE has chosen a treating provider and has notified OWCP, the CFE cannot change his or her OWCP treating provider until he or she obtains written approval from OWCP.

7.5.6. The AF may not delay authorizing required care in order to obtain an independent medical assessment of a CFE who has claimed a work related illness or injury and has elected to obtain care outside of the AF MTF (T-0).

7.5.7. An AF provider must not provide medical care to a CFE for a claimed medical condition when the CFE has chosen a private provider to treat that condition. An AF provider may

review work limitations recommended by the private provider, but as discussed earlier in this chapter, must not provide less restrictive limitations than the treating provider. If the claim is denied by OWCP, the AF provider may provide medical care, if the CFE is otherwise authorized, and work limitations as appropriate (T-0).

7.5.8. OWCP Forms. An acutely injured non-NAF CFE requiring emergency care outside the AF MTF obtains an authorization for payment in the form of a CA-16 from his or her supervisor. Application for a claim is made by the CFE on a CA-1 for injuries, on a CA-2 for illnesses, and on a CA-2A for a recurrence of an illness or injury.

7.5.9. An AF provider who has been chosen by an injured CFE as his or her OWCP treating provider should complete and submit a CA-20 to support the CFE's claim. If needed, an AF provider can refer a case to a specialist; relinquishing his or her control as the treating provider (the CFE is provided a choice of specialists who accept OWCP coverage).

7.5.10. Illnesses are not initially covered by OWCP. If a CFE has a potential industrial illness that cannot be worked up or cared for within the MTF, he or she must seek care at his or her own expense. Further assessment at the expense of the employee's unit may be appropriate when conditions described under section 5.2 are met (T-0).

7.5.11. For both injuries and illnesses, OWCP determines if the condition is work related or not and decides to accept or to reject the claim (this can take many months for an illness). An AF HCP who determines a condition is or is not work related in opposition to an OWCP determination, may write to the OWCP claims representative who owns the case and request review of the case by the OWCP District Medical Advisor. This should be coordinated with AFPC IC (CPS can assist) (T-0).

7.5.12. The AF provider can also request OWCP assign a nurse case manager to a case. AF providers are not to counsel CFEs on their rights and coverage under OWCP and shall refer patients to the CPS OWCP representative for assistance and guidance regarding filing a claim, forms completion, and how to work with private insurance companies to obtain care prior to OWCP acceptance or rejection of an illness claim (T-0).

7.5.13. Emergency conditions requiring expeditious medical care may require the worker to postpone discussion with CPS until the condition or conditions are stabilized.

7.5.14. Division of Longshore and Harbor Workers Compensation (DLHWC).

7.5.14.1. NAF employees with an initial work related injury or illness typically obtains care in the civilian medical community; they may be seen in an MTF if resources allow for a one time initial evaluation and treatment. A DoL form LS-1 Request for Examination and/or Treatment must be filled out as part of the visit.

7.5.14.2. A NAF employee with a work related injury or illness typically obtains care outside the local AF MTF. If seen in the MTF for the initial assessment and treatment, the NAF employee should be referred to the CPS specialist who will assist in their transition for follow-up care to a civilian provider. NAF employees may receive MQEs, including pre-placement and formal FFDE's from an AF provider when requested by CPS in writing and the MTF resources are sufficient to support (AF1 41-210).



7.5.15. Other workers' compensation insurance for CFEs. If a CFE requests care for a work related medical condition and is not covered by either OWCP or DLHWC, contact the local CPS for assistance.

## **7.6. Occupational injury and illness reporting requirements.**

### **7.6.1. Medical record entry.**

7.6.1.1. The medical record entry for the initial presentation of an alleged work related illness or injury not only documents assessment of the medical condition and appropriate medical response, but provides information necessary to support both OSHA reporting and OWCP claims determinations.

7.6.1.2. The medical history includes the time of injury or illness detection; location; CFE activity at the time of event; mechanism of injury; use or failure to use PPE and protective measures; contributing factors (e.g. slippery ground); prior health status; earlier evaluation and treatment (if occurred); delays in reporting; current medications; any relevant pre-existing or past injuries, surgeries and illnesses; whether or not the event was witnessed; and duty title.

7.6.1.3. If the CFE reports to the clinic shortly after the incident and appears to be intoxicated, the history and examination attempts to determine the level of intoxication and potential impairment that may have contributed. Performance of a toxicology screen may be subject to local policy (e.g. for cause) or may be necessary in order to determine if it is safe and/or legal for the employee to drive on base if he or she drove to work or the clinic).

7.6.1.4. The physical exam thoroughly documents objective findings and may include non-physiological findings (e.g. Waddell's Signs), medical treatment provided and planned, further planned investigation (e.g. if an alleged chemical or ergonomic exposure awaiting PH and BE assessment), and the CFE choice of treating physician for OWCP claim purposes (either AF provider /Clinic or private provider).

7.6.1.5. When determining causality, the AF provider must be aware that OSHA and OWCP criteria for determining work relatedness are not equivalent. OSHA criteria for work relatedness are beyond the scope of this publication and can be found in 29 CFR 1904.5 (<http://www.osha.gov/>). These OSHA criteria must be applied when the AF provider determines work relatedness in the AF Safety Automation System (AFSAS). However, when determining causation in the medical record, the AF provider uses the criteria outlined in the DoL FECA publication CA-810 Injury Compensation for Federal Employees; 2009 (<http://www.dol.gov/>).

7.6.1.6. If an investigation is still pending and causality is not as yet conclusive, or if there is reason to doubt work relatedness, this is documented in the record entry. As PH and BE investigate illnesses in AFSAS, additional information may be forthcoming that may impact the determination of causality.

7.6.1.7. If a condition is considered or determined to be not work related, the AF provider documents the determination in the medical record and refers the CFE to his or her private provider for further care and does not continue to treat the condition.

7.6.1.8. For an illness, if the AF provider determines it is work related, he or she documents this determination in the medical record and may treat the condition if MTF

resources are available to support. Until the case is accepted by OWCP, any outside referral for care is at the patient's expense. If a claim is disallowed by OWCP but the AF provider is certain the claim should be allowed, the AF provider may write a letter to the district OWCP office providing an explanation and requesting review by the OWCP physician consultant. Again, this should be coordinated through the AFPC IC.

7.6.1.9. For an injury, once a CA-16 or equivalent is completed, payment for treatment outside of the MTF is covered by OWCP for up to 60 days pending an OWCP decision regarding claim acceptance. If the CFE elects care within the MTF, this coverage would apply to referral out to specialty care. (CA-810)

#### 7.6.2. Occupational Safety and Health Administration (OSHA) Reporting.

7.6.2.1. In accordance with 29 CFR 1960.8(b) and 29 CFR 1904.39, the AF reports all civilian work related illnesses and injuries to the DoL. Base Safety (SE) is the POC for this purpose and is supported by the local MTF (T-0).

7.6.2.2. Unless otherwise specified by local or MAJCOM policy, supervisors are responsible for completing the OSHA 301A or equivalent form for all work related injuries and submitting the completed form through appropriate channels (T-2).

7.6.2.3. All work related industrial illnesses presenting to the MTF are entered into the Air Force Safety Automated System (AFSAS) by PH with a workplace evaluation entered by BE, and a final determination of work relatedness entered by the IOEMC designated AF provider; SE accesses this information from AFSAS to meet the OSHA 300 log requirement. OSHA criteria for work relatedness are beyond the scope of this publication and can be found in 29 CFR 1904.5 (<http://www.osha.gov>).

7.6.2.4. OSHA does not require the OSHA 301A form or its equivalent to be completed by a medical person (OSHA Recordkeeping Handbook, OSHA 3245-01R, 2005), but this does not relieve the AF providers of the responsibility to do so when required by their governing policy.

7.6.2.5. When the OSHA 301A form or equivalent is completed in clinic, a copy is placed in the AF medical record (T-0).

7.6.2.6. Privacy. Under the below circumstances, the clinic must coordinate with the local Occupational Safety office to ensure CFE names are not placed on the OSHA 301A or equivalent form. A separate, confidential list of the case numbers and employee names must be maintained to allow for updating the cases and in order to provide information if necessary and appropriately authorized. The circumstances include:

7.6.2.6.1. An injury or illness to an intimate body part or the reproductive system.

7.6.2.6.2. An injury or illness resulting from a sexual assault.

7.6.2.6.3. Mental illnesses.

7.6.2.6.4. HIV infection, hepatitis, or tuberculosis.

7.6.2.6.5. Needle stick injuries and cuts from sharp objects that are contaminated with another person's blood or other potentially infectious material (see Section 29 CFR 1904.8 for definitions).

7.6.2.6.6. Other illnesses, if the employee independently and voluntarily requests that his or her name not be entered on the log.

## **7.7. Investigating alleged workplace illness or injury.**

7.7.1. Providers may consult directly with BE, PH, and SE when investigating an alleged workplace illness or injury. However, PH is notified of all illness investigations and provided copies of any relevant written information to avoid duplication of effort and potential contradiction.

7.7.2. The IOEMC or their appointee has authority to determine what is/is not appropriate to an investigation and is the local medical authority who determines occupational injury and illness causality.

**7.8. Equal Opportunity Program, Military and Civilian, AFI 36-2706.** It is unlawful for the AF to fail or refuse to refer for employment or otherwise discriminate against an individual (CFE or applicant) based on genetic information (i.e. family medical history (FMH) and genetic test results of the individual or up to fourth degree relatives). AF providers must not ask for or take a FMH when performing MQEs. For CFE, an FMH may only be taken and recorded as per the below exceptions:

7.8.1. Medical care assessment. A focused FMH can be taken when used for the specific purpose of assessing a medical condition for the purpose of determining appropriate medical care and disposition. For example, a patient presenting to the clinic for assessment and treatment of chest pain could be asked if he or she has a family history of heart disease or diabetes but would not be asked if he or she has a family history of cancer or history of “chronic medical conditions.” Prior to the AF provider requesting the focused FMH, the CFE must sign a statement for inclusion in the medical record that verifies the CFE knowingly and voluntarily agrees to provide the focused FMH. For example: “I, [John Doe], knowingly and voluntarily choose to release genetic information for permanent inclusion in my medical record for the purpose of enabling [Dr. XXXX] to assess the medical or potential medical condition(s) for which I am being assessed today. I have not been coerced to provide this release. This information is protected from disclosure to my supervisory chain and may not be used to influence employment related decisions.”

7.8.2. Wellness programs: genetic information collection (including FMH) collected in support of wellness programs must meet the same criteria as described for “Medical care assessment” above. This information should be kept separate from the OEM medical record and should not be shared with the AF provider.

7.8.3. Genetic monitoring of the biological effects of toxic substances in the workplace can be performed only if the following are accomplished.

7.8.3.1. The employer provides written notice of the genetic monitoring to the employee.

7.8.3.2. The employee knowingly and voluntarily provides written authorization for monitoring before it begins.

7.8.3.3. The genetic monitoring is required by Federal or State law and is compliant with Federal and State laws.

7.8.3.4. The employee is informed of individual monitoring results.

7.8.3.5. Only aggregate information that cannot identify specific individuals can be shared with AF leadership.

7.8.4. AF OEM Medical Records:

7.8.4.1. FMH information (1) provided by the patient without solicitation is recorded in the AF OEM medical record; (2) if taken and recorded prior to publication of this AF interpretation may remain in the AF OEM medical record; (3) must not be used to influence employment related decisions.

7.8.4.2. When making a clinical encounter entry into the employee's electronic health record and when a FMH is not included, the following or similar text is entered in place of a FMH, "No family history taken in accordance with AF policy."

7.8.4.3. Outside medical records released to the AF provider which contain a family medical history are filed in the AF medical record. AF providers requesting a consult in support of an OEM assessment do not ask for genetic information to include FMH; the following text is included on the release form, "A family medical history and other genetic information is not requested." (T-0)

7.8.4.4. Specimen collection for the purposes of identification by the Armed Forces Repository of Specimen Samples for the Identification of Remains is exempted from this policy for both Regular Air Force and CFE.

**7.9. Rehabilitation Act of 1973 definitions and requirements to consider when making work limitation recommendations:**

7.9.1. A "qualified individual with a disability" means a person who satisfies the job-related requirements of the employment position he or she holds or is applying for, and who, with or without reasonable accommodation, can perform the essential job functions of that position.

7.9.2. The AF must make reasonable accommodations for the known physical or mental limitations of employees and applicants for employment with disabilities, unless providing an accommodation would create an undue hardship (T-0). **Note:** The decision to accommodate AF provider recommendations/limitation is determined by the supervisor, not the provider.

7.9.3. Details about medical conditions are not communicated to leadership or CPS. For example, if a CFE is unable to perform essential job functions because of a heart condition, the supervisor may be told the CFE is not fit to perform specific duties, but the actual diagnosis and medications are not disclosed by the AF provider without consent of and written authorization from the CFE (Reference DoDI 6055.05-M, AFI 48-123, AFI 48-145). Per Health Insurance Portability and Accountability Act (HIPAA), the minimum amount of protected health information necessary should be disclosed (45 CFR 164.502(b), 164.514(d)) (T-0).

7.9.3.1. If the CFE wishes to be accommodated in the position, he or she will have to disclose sufficient medical information to establish that he or she has a disability and that the disability necessitates a reasonable accommodation. In most cases, complete medical records cannot be requested because such records may reveal information that is not relevant to determining whether the employee has a disability or needs an accommodation. Requests for medical information should be narrowly tailored to answer specific questions

to help determine if the individual has a disability and/or if reasonable accommodation is needed (and if so, what specifically is required as a reasonable accommodation).

7.9.3.2. The CFE must cooperate with the supervisor/manager: (a) providing the specifics of the accommodation requested and how the requested accommodation will allow the individual to perform the essential functions of the job; and (b) providing the requested medical documentation and medical releases. Failure to provide the information necessary to evaluate the validity of the requested accommodation will result in the denial of the request (T-0).

7.9.4. Unrelated or incidental medical diagnoses are not disclosed to the CPS or supervisor. However, if a condition is discovered that is expected to prevent a CFE from safely performing the essential functions of his or her job on a permanent basis or for the foreseeable future, the AF provider makes a recommendation to the supervisor that there is a need for a formal FFDE (without disclosing the diagnosis) (T-1).

**7.10. Family Medical Leave Act of 1993 (29 USC 2601 – 2619), (FMLA).** AF CFE's applying for coverage under the FMLA (or similar local, state or federal law) in order to care for a family member with a serious health condition, provide FMH information as part of the application. However, this information is not placed in the AF OEM medical record of the applicant and is not maintained by the MTF. This information must be placed in a separate medical file where it must be treated as a confidential medical record by the appropriate CPS specialist who is responsible for its protected access, maintenance and eventual disposal. The AF provider is not allowed to serve as a second or third medical opinion in these cases as is explained in 29 CFR 825.307.

**7.11. Medical Information Access.** Medical information (medical records, forms, letters, diagnoses, medications, etc.) for AF CFEs in general (as per the Rehabilitation Act of 1973 and HIPAA) must be protected and, unless specifically allowed by official policy or a signed CFE release, access is denied to CPS by: inquiring labor attorneys, supervisors, commanders and leadership.

7.11.1. Medical personnel may release recommended work limitations to supervisors and commanders without permission from the CFE but shall safeguard other information (DODD 1020.1, Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of Defense).

7.11.1.1. First aid and safety personnel may be made aware if a medical condition is known to potentially require emergency treatment, but a HIPAA compliant release shall be accomplished (29 CFR 1614.203; 29 CFR 1630.14).

7.11.1.2. Application by the CFE for OWCP, Longshore and Harbor Worker Act, and FERS disability retirement requires the CFE to sign a medical release (T-0).

7.11.1.3. In all consultations, CFE privacy must be maintained in accordance with federal law, OPM, DoD, and AF policy (T-0).

## **7.12. Administrative Activities.**

7.12.1. OEM Consult Services. AF supervisors, unit commanders, and other installation organizations may require OEM consultative services in order to make informed decisions. Support for these services involving CFEs exists at bases with OMS clinics and to the extent resources permit at other BOMCs. Internal customers include MTF leadership, AF providers,

PH, and BE. External customers include SE, base leadership, Public Affairs, JA, CPS, base supervisors of civilian employees and others.

7.12.1.1. The IOEMC guides the uniform and consistent application of occupational and environmental medical decisions and policies at the base level.

7.12.1.2. The IOEMC ensures the MTF professional staff are briefed at least annually on the industrial hazards and potential illnesses/injuries experienced by the population that may be seen in the MTF (T-2).

7.12.1.3. Where resources permit, the IOEMC can also provide the following advisory and consultative services:

7.12.1.3.1. Current and complete medical and technical information regarding specific medical and physical conditions or medical examination procedures relevant to existing or proposed physical requirements or health-related personnel management programs for base AF employees.

7.12.1.3.2. Technical assistance includes advisory opinions in medical and OEH areas (i.e., ergonomics; risk communication; emergency response/disaster preparedness; workers' compensation; disability retirement; medical standards; Equal Employment Opportunity Commission cases; civil lawsuits, Merit System Protection Board challenges) to ensure compliance with AF/DoD policy and local/state/federal requirements. The IOEMC participates in base level ESOH council meetings.

7.12.1.3.3. Expert review and analysis of medical documentation and other materials submitted by the AF in support of medical/physical disqualifications of applicants; employees' restoration rights under 5 U.S.C. 8151 following full or partial recovery from compensable on-the-job injuries; and requests for job accommodations or other special benefits related to accommodation of documented health conditions.

7.12.1.3.4. Written reports on medical standards, medical policy issues, or individual medical documentation reviews as requested.

7.12.1.3.5. Guidance for resolving complex medical/personnel management issues where there are no established guidelines or precedents, including, but not limited to the following:

7.12.1.3.5.1. Advisory opinions clarifying medical/psychiatric issues on the continued eligibility for access to classified information of Federal employees who hold top security clearances.

7.12.1.3.5.2. Guidance regarding new and experimental procedures relating to such issues as vision correction procedures, surgical implants, or prosthetic devices, as a means of satisfying medical or physical qualification requirements.

7.12.1.3.5.3. Reports to condense findings, analyses, conclusions and recommendations of AF evaluation and clearance processes.

7.12.1.3.5.4. Research and analysis of complex legal and medical issues in coordination with AF labor attorneys.

7.12.1.3.5.5. Research and analysis of technical, scientific and medical data in support of local policy development and program management.

7.12.1.3.5.6. Research and analysis of materials, devices, tools, systems prior to acquisition in order to advise leadership on compatibility with human systems integration.

7.12.2. FECA Working Group or equivalent.

7.12.2.1. An AFPC IC program representative or CPS appointed liaison runs the FECA Working Group and administers the program.

7.12.2.2. The IOEMC or appointed AF provider prepares to participate in the FECA Working Group or equivalent by reviewing medical cases at the request of the AFPC IC program representative or CPS appointed liaison.

7.12.2.3. The IOEMC or AF provider provides medical advice regarding what the CFE can and cannot do; whether or not the OWCP assessment of causality and recommended work limitations appear appropriate; whether the condition appears to have reached maximal medical improvement, is expected to improve, resolve or deteriorate; whether or not the case should be challenged based on a determination that it is not due to factors of employment or does not otherwise qualify; and whether or not an OWCP case manager should be requested if not already assigned to move the case forward.

7.12.2.4. If the review reveals the treating physician may be inappropriately limiting work activities, the IOEMC or AF provider may need to contact OWCP as discussed elsewhere in this chapter (AFI 48-145; DoDI 1400.25-V810, Injury Compensation).

7.12.3. Case Management.

7.12.3.1. Effective case management of CFEs with work related illnesses and injuries can greatly reduce lost productivity, compensation costs, and patient morbidity by helping the CFE get to appropriate care expeditiously. Where a nurse case manager or Certified Occupational Health Nurse (COHN) is not available, OWCP can be contacted to request assignment of an OWCP nurse case manager (for accepted OWCP claims cases).

7.12.3.2. Communication with OWCP is arranged when performing local case management to avoid conflicts with OWCP nurse case management activities. An AF case manager should not interfere with the activities of the OWCP case manager.

7.12.4. Workplace Visits by AF providers. Visits to the workplace are invaluable to AF providers to acquaint them with the work demands and hazards of their patient population. All Category-1 workplaces are visited annually by an AF provider (T-2). Knowledge gained visiting the workplace is extremely valuable as it enables appropriate determination of work limitations, surveillance exam protocols and illness/injury mechanism/causality.

7.12.4.1. Workplace Visit Preparation. The provider contacts the workplace supervisor to schedule the workplace visit. A joint visit with the BE technician is ideal but not mandatory. The provider visit is best performed soon after the periodic BE assessment. Prior to the visit, the following information is reviewed by the AF provider:

7.12.4.1.1. The BE SEG summary to identify exposures of concern.

7.12.4.1.2. Past OEM visit reports and any ongoing assessments.

7.12.4.1.3. Toxicology and pathology associated with the exposures of concern (this information can be found in a number of online sources and toxicology texts; many are familiar to BE).

7.12.4.1.4. The most recent surveillance exam protocol (COHER).

7.12.4.1.5. PH trend analysis.

7.12.4.1.5.1. If not readily available, ask PH to look for adverse clinical and surveillance information trends within the SEG.

7.12.4.1.5.2. If adverse trends are identified, medical records may need to be reviewed to better identify what is happening (e.g. elevated liver functions might suggest exposure to solvents, several cumulative trauma illnesses may suggest an ergonomic problem).

7.12.4.2. Conducting the workplace visit.

7.12.4.2.1. The visit begins and ends with the workplace supervisor. Explain to the supervisor the purpose of the visit (to ensure medical monitoring and medical care are appropriate based on workplace hazards and controls, to assist the supervisor in compliance with OSHA requirements) and to ask the supervisor if he or she has any questions or concerns with exposures in the workplace or services provided by the MTF. Permission is asked to interview CFEs privately about any exposure concerns they may have. Confirm beforehand with CPS if the base has any union agreements that require Union notification prior to talking to civilian workers about their working conditions.

7.12.4.2.2. An essential element of the evaluation is validating identified physical, biological, chemical and/or radiological hazards, effectiveness of OEH controls and assessment of work practices. It is particularly helpful to have a summary of the recommended OEH controls (e.g. PPE, ventilation controls, worker rotation) from the most recent BE HRA to ascertain whether controls are used. Better still is for the AF provider or nurse to bring a BE technician along who can point out the hazards and the controls and identify potential weaknesses in the controls. If possible, take two or three employees aside individually and ask them if they have any concerns about work place exposures and protective measures (assuming verification of notification requirements has been properly addressed as per the preceding paragraph).

7.12.4.2.3. If the visit is conducted in response to a particular employee complaint, the specific circumstances surrounding that complaint are thoroughly evaluated.

7.12.4.2.4. At the close, the supervisor is informed of any significant findings, recommendations, or the need for additional research or assessment. He or she is reminded that PH depends on the workplace supervisor to notify PH of employees who start or terminate work in the SEG in order to schedule initial and termination MSE. A copy of the final report is supplied to the supervisor within 5-duty days of the visit.

7.12.4.3. Workplace Visit Documentation.

7.12.4.3.1. Thorough and timely documentation of the visit is important. The provider creates a written report including the name and phone number of the workplace supervisor, the date and who conducted the visit, the amount of time spent at the



workplace, a description of the work operations and work practices, the PPE used, any findings of concern, the number of workers interviewed, what concerns if any were voiced and any required actions.

7.12.4.3.2. Safety concerns are communicated to SE and exposures of concern are shared with BE. Illness and injury clusters or trends are shared with PH. All findings, conclusions and actions are included in the final written report and are presented in the next OEHWG. The original report is sent to the workplace supervisor and a copy is placed in the shop folder and attached to or a summary included in the next OEHWG minutes.

7.12.5. Workplace visits by PH. PH will conduct workplace visits on all Category-1 and Category-2 shops as specified by AFI 48-145 based on a schedule approved by OEHWG and as needed to investigate adverse trend results based on OEH surveillance and epidemiological findings (T-1).

7.12.5.1. Workplace visits may be done in conjunction with BE and/or the AF provider or nurse. However, it is often beneficial to accompany the BE personnel on their routine assessment shop visit.

7.12.5.2. PH personnel conducting the visit. Workplace visits must be conducted by at least a 5-level PH technician (T-1). For upgrade training purposes, 3-level PH technicians must be accompanied by a 5-level PH technician or a higher trained member (T-1). Workplace visits should be conducted using the PH OEH Workplace Visit Checklist (T-3).

7.12.5.3. Workplace visits will primarily be an opportunity for PH personnel to learn processes and hazards in the industrial environment. In addition, these visits are an opportunity to offer assistance to the supervisor in their OEH training/education program by reviewing training materials with the supervisor and reviewing documentation of worker training. They are also an opportunity for PH to fit personnel for ear plugs, verify compliance with hearing protection devices and other PPE, update workplace rosters, and inform the supervisor and other personnel on their medical surveillance requirements, responsibilities for reporting injuries/illnesses and referring pregnant females to PH.

7.12.5.3.1. Prior to the visit, PH will thoroughly review the most recent BE routine assessment, pertinent Safety Data Sheets (SDS), MSE compliance and trend analysis findings (based on a records review and audiogram reports), and occupational illness reports (T-2).

7.12.5.3.2. PH will generate a report with MSE compliance and trend analysis findings and provide this report to the supervisor (T-2).

7.12.5.4. Workplace visits will be documented in the OEHWG minutes and in ASIMS, when possible (T-2).

### **7.13. DoD Expeditionary Civilian Workforce (DoD-EC).**

7.13.1. DoD-EC employees are required to pass a medical examination prior to deployment (see DoDI 6490.07, *Deployment-Limiting Medical Conditions for Service Members and DoD Civilian Employees*, DTM-17-004, *DoD Expeditionary Civilian Workforce*, and AFI 48-122, *Deployment Health for guidance and criteria*).

7.13.1.1. AF or DoD policy may also require periodic assessment of DoD-EC personnel in specified deployable positions and who are Capability Based Volunteers. Assessments shall be conducted utilizing requirements identified by the career field, supervisor, CPS, or DoD-EC program as applicable on an OF 178 in addition to the standards identified in DoDI 6490.07.

7.13.2. Pre- and post-deployment questionnaires and deployment monitoring of DoD-EC civilians is conducted through PH as required in DoDI 6490.03, Deployment Health and AFI 48-122.

7.13.3. As per DTM-17-004, DoD-EC employees who become ill, contract diseases, or who are injured or wounded while deployed in support of U.S. military forces engaged in hostilities are eligible for medical evacuation and health care treatment and services in MTFs at no cost to the civilian employee and at the same level and scope provided to military personnel. Upon return to the home base, DoD-EC CFEs treated in theater continue to be eligible for treatment in an MTF or civilian medical facility for deployment related illnesses, diseases, wounds, or injuries (at no cost to the CFE) pending claim adjudication by OWCP. (See AFI 41-210 for a more detailed explanation of beneficiary status)

7.13.4. CFEs who have returned from deployment and are subsequently determined to have a deployment related compensable illness, disease, wound, or injury are also eligible for treatment in an MTF at no cost to the CFE pending adjudication by OWCP. (See AFI 41-210)

7.13.5. Immediately after an employee is injured (at the deployed location), he/she should complete a claim form for workers' compensation benefits. The supervisor in country should assist the employee with electronic claim filing and should then contact AFPC IC for additional assistance and instructions. AFPC IC should notify the DoD Liaison once a claim has been filed. The liaison has direct access to the Cleveland OWCP office and can assist with gathering documentation. The Post Combat Case Coordinator should work directly with AFPC IC and the DoD Liaison to ensure that the claim is filed quickly and that all documentation is submitted promptly.

**7.14. Travel Medicine.** AF CFE's scheduled for official TDY to foreign countries with known health hazards necessitating prophylactic vaccination or chemoprophylaxis, medical assessments and education may obtain these free of charge from an AF provider. PH assists by providing travel medicine information and recommendations to the provider.

**7.15. Education and Training for AF providers, nurses and technicians.** The IOEMC and full time OEM providers attend CME conferences on a regular basis to maintain currency and appropriate licensure and/or certifications. COHNs have continuing medical education requirements. Physicians, nurses and technicians who perform spirometry in support of MSE and MQEs may be considered qualified to perform these duties after completing certification training by National Institute for Occupational Safety and Health (NIOSH) or equivalent. Refer to the NIOSH web site for a list of approved courses and dates (T-0).

**7.16. OEH Surveillance and Epidemiology.**

7.16.1. PH collects and conducts trend analysis on OEH data to support OEHWG workplace review/worksites visits, and metrics for OEH program effectiveness and compliance (hearing conservation, pregnancy profiles, occupational illnesses), or as need arises.

7.16.2. Trend Analysis shall be conducted on:

7.16.2.1. Medical Records (for MSE). For category 1 workplaces, a medical records review of MSE findings is conducted using the following sampling plan:

**Table 7.1. Records Review Matrix.**

# Personnel in Workplace	# of Records Reviewed
$\leq 100$	10
101-200	20
201-300	30
301-400	40
401-500	50
$\geq 501$	50

7.16.2.2. Each record shall be reviewed for compliance with MSE requirements (frequency, content of MSE) and associated abnormal findings, and occupational injuries and illnesses (T-2). In addition, visits to a provider by workers enrolled in a MSE program should be reviewed for the past year looking for potentially undiagnosed OEH-related illnesses (i.e., unexplained rashes possibly related to chemical solvents/JP-8, nose bleeds possibly related to hexavalent chrome exposure, musculoskeletal injuries possibly related to workplace ergonomic issues, etc.) (T-2).

7.16.2.3. Trends of MSE completeness (# of records reviewed, % of records with all MSE requirements met) and % of records indicating abnormal findings shall be documented (T-1).

7.16.2.4. Occupational Illnesses/Injuries (non-Hearing Conservation Program): among assigned workers by workplace, calculate the # and % of workers with occupational illnesses (and injuries if available).

7.16.2.5. Audiograms for the Hearing Conservation Program: By workplace, for # annual audiograms conducted within a one year period (or other specific time period), calculate the # and % of significant and permanent threshold shifts (STS/PTS).

7.16.3. The OEHWG shall evaluate findings in the context of known workplace hazards, BE recommendations, PPE, training, and available historic workplace-specific data and trends. Where adverse trends are identified, the OEHWG will identify a plan for further investigation, determine underlying cause(s) (if any), document findings in the OEHWG minutes, and communicate findings and recommendations with the workplace supervisor or SEG leader and the unit commander (T-1).

7.16.4. Program effectiveness: Trends will be evaluated for the installation as a whole, as well as by unit and workplace (T-1). Analysis might include stratification on other available factors

(e.g., AFSC), in order to assist in targeting prevention/education efforts. Historic data, if available, should be used as a comparison when evaluating adverse/advantageous trends.

7.16.5. Compliance metrics for the OEH program include MSE compliance rates, audiogram follow-up rates, and average pregnancy profile completion times. Other metrics may be added to the annual Program Management Review (PRM) template provided by AFMSA. PH will track and document the metrics on the PMR and forward the completed annual report to MAJCOM PH Functional (T-1).

**7.17. Documentation of PH Activities: PH will maintain OEH program documentation electronically whenever possible.** Pertinent information will also be annotated in the OEHWG minutes whenever a shop/SEG is discussed at the OEHWG (e.g., OEHD, MSE approval, trend analysis). All other OEH documentation will be maintained in the appropriate electronic database/format. Protected health information will be maintained and protected IAW AFI 41-200 Health Insurance Portability and Accountability Act, 25 July 2017. Additional documentation maintained by PH will be up to local discretion (T-1).

DOROTHY A. HOGG  
Lieutenant General, USAF, MC, SFS  
Surgeon General

## Attachment 1

## GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

*References*

29 U.S.C. Labor, Chapter 15, *Occupational Safety and Health*, sections 651-678)

29 CFR 1904 et seq., *Recording and Reporting Occupational Injuries and Illnesses*

29 CFR 1910.1020, *Access to Employee Exposure and Medical Records*

29 CFR 1910, *Subpart I, Personal Protective Equipment*

29 CFR 1910, *Subpart Z, Toxic and Hazardous Substances*

5 CFR 339, *Medical Qualification Determinations*

29 CFR 1960 et seq., *Basic Program Elements for Federal Employee Occupational Safety and Health Program and Related Matters*

CJCSI 3170.01I, *Joint Capabilities Integration and Development System*

AFPD 48-1, *Aerospace Medicine Enterprise*

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

AFPD 91-2, *Safety Programs*

AFI 10-203, *Duty Limiting Conditions*

AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*

AFI 31-122, *Department of AF Civilian Police/Security Guard Program*

AFI 31-501, *Personnel Security Program Management*

AFI 33-360, *Publications and Forms Management*

AFI 33-364, *Records Disposition – Procedures and Responsibilities*

AFI 36-2706, *Equal Opportunity Program, Military and Civilian*

AFI 41-210, *TRICARE Operations and Patient Administration Functions*

AFI 44-102, *Medical Care Management*

AFI 48-101, *Aerospace Medicine Enterprise*

AFI 48-122, *Deployment Health*

AFI 48-123, *Medical Examination and Standards*

AFI 48-127, *Occupational Noise and Hearing Conservation Program*

AFI 48-145, *Occupational and Environmental Health Program*

AFI 90-201, *The Air Force Inspection System*

AFI 90-802, *Risk Management*

AFI 91-202, *The US Air Force Mishap Prevention Program*

AFMAN 33-363, *Management of Records*

AFPAM 90-803, *Risk Management (RM) Guidelines and Tools*

AFTTP 3-2.82\_IP, *Occupational and Environmental Health Site Assessment*

*Base Operational Medicine Clinic Implementation Plan*

AIHA Publication, *A Strategy for Assessing and Managing Occupational Exposures*

DODD 1020.1, *Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of Defense*

DoDD 4715.1E, *Environment, Safety, and Occupational Health (ESOH)*

DoDD 5210.55, *Department of Defense Presidential Support Program*

DoDD 6490.02E, *Comprehensive Health Surveillance*

DoDI 1400.25-V810, *Injury Compensation*

DoDI 5200.02, *DoD Personnel Security Program (PSP)*

DoDI 5210.42, *Nuclear Weapons Personnel Reliability Program (PRP)*

DoDI 6055.01, *Safety and Occupational Health (SOH) Program*

DoDI 6055.05, *Occupational and Environmental Health*

DoDI 6490.03, *Deployment Health*

DoDI 6490.07, *Deployment-Limiting Medical Conditions for Service Members and DoD Civilian Employees*

DoDI 1400.25, *DoD Civilian Personnel Management System, Vol 810, Injury Compensation*

DoDM 5200.02, *Procedures For the DoD Personnel Security Program (PSP)*

DoDM 5210.42\_AFMAN 13-501, *Nuclear Weapons Personnel Reliability Program*

DoDI 5210.87, *Selection of DoD Military and Civilian Personnel and Contractor Employees for Assignment to Presidential Support Activities (PSAs)*

DoDI 6055.05-M, *Occupational Medical Examinations and Surveillance Manual*

DTM-17-004, *DoD Expeditionary Civilian Workforce*

New OSHA Injury and Illness Recordkeeping and Reporting Requirements webpage:

[www.osha.gov/recordkeeping/index.html](http://www.osha.gov/recordkeeping/index.html)

NIOSH Publication 79-116, *A Guide to the Work Relatedness of Disease*, January 1979

AFRL-SA-WP-SR-2014-0012, *Technical Guide for Indoor Air Quality Surveys*

*CSCRS and FERS Handbook*, Chapter 60

*USAFSAM Occupational and Environmental Health Site Assessment (OEHSA) Technical Guide*  
*A Strategy for Assessing and Managing Occupational Exposures*

*Toxicology Principles for the Industrial Hygienist*

DoL publication CA-810, *Injury Compensation for Federal Employees*

Technical Implementation Guide 1582-07 for NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*

TO 00-5-1, *AF Technical Order System*

### ***Adopted Forms***

AF Form 469, *Duty Limiting Condition Report*

AF Form 190, *Occupational Illness/Injury Report*

AF Form 847, *Recommendation for Change of Publication*

AF Form 978, *Supervisor Mishap Report*

AF 1754, *Job Capability and Safety Analysis*

DD Form 2766, *Adult Preventive and Chronic Care Flowsheet*

DD Form 2870, *Authorization for Disclosure of Medical or Dental Information*

Optional Form 178, *Certificate of Medical Examination (OF 178)*

SF 513, *Medical Record Consultation Sheet*

### ***Abbreviations and Acronyms***

**ACGIH**—American Conference of Governmental Industrial Hygienist

**AEF**—Air Expeditionary Force

**AF**—Air Force

**AFI**—Air Force Instruction

**AFIS**—Air Force Inspection System

**AFMAN**—Air Force Manual

**AFMS**—Air Force Medical Service

**AFPAM**—Air Force Pamphlet

**AFPC**—Air Force Personnel Center

**AFSAS**—Air Force Safety Automated System

**AFPD**—Air Force Policy Document

**AFRC**—Air Force Reserve Command

**AHLTA**—Armed Forces Health Longitudinal Technology Application

**AIHA**—American Industrial Hygiene Association

**AL**—Action Level

**AOR**—Area of Responsibility

**ANG**—Air National Guard

**ANSI**—American National Standards Institute

**ASIMS**—Aeromedical Services Information Management System  
**ASM**—Aircraft Structural Maintenance  
**BE**—Bioenvironmental Engineering  
**BEI**—Biological Exposure Indexes  
**BEE**—Bioenvironmental Engineer  
**BOMC**—Base Operational Medicine Clinic  
**CAA**—Clean Air Act  
**CBRN**—Chemical, Biological, Radiological and Nuclear  
**CFE**—Civilian Federal Employee  
**CFR**—Code of Federal Regulation  
**COHER**—Clinical Occupational Health Exam Requirements  
**COHN**—Certified Occupational Health Nurse  
**CPS**—Civilian Personnel Services  
**DECA**—Defense Commissary Agency  
**DHP**—Defense Health Program  
**DLHWC**—Division of Longshore and Harbor Workers Compensation  
**DoD**—Department of Defense  
**DoD-EC**—Department of Defense Expeditionary Civilian  
**DoDD**—Department of Defense Directive  
**DoDI**—Department of Defense Instruction  
**DOEHRS**—Defense Occupational & Environmental Health Readiness System  
**DoL**—Department of Labor  
**EH**—Environmental Health  
**EAS**—Exposure Assessment Strategy  
**EAP**—Exposure Assessment Priority  
**EHRA**—Environmental Health Risk Assessment  
**EOD**—Explosive Ordnance Disposal  
**ER**—Exposure Rating  
**ESOH**—Environment, Safety and Occupational Health  
**ESOHC**—Environment, Safety and Occupational Health Council  
**FECA**—Federal Employee Compensation Act  
**FERS**—Federal Employees Retirement System



**FFDE**—Fitness for Duty Examination  
**FMH**—Family Medical History  
**FMLA**—Family Medical Leave Act  
**HAZMAT**—Hazardous Material  
**HCP**—Health Care Provider  
**HER**—Health Effects Rating  
**HIPAA**—Health Insurance Portability and Accountability Act  
**HRA**—Health Risk Assessment  
**HRR**—Health Risk Rating  
**IAQ**—Indoor Air Quality  
**IAW**—In Accordance With  
**IC**—Injury Compensation  
**IDLH**—Immediately Dangerous to Life or Health  
**IOEMC**—Installation Occupational & Environmental Medicine Consultant  
**JAG**—Judge Advocate General  
**LER**—Longitudinal Exposure Record  
**MAJCOM**—Major Command  
**MICT**—Management Internal Control Toolset  
**MQE**—Medical Qualification Examination  
**MSE**—Medical Surveillance Examination  
**MTF**—Military Treatment Facility  
**NAF**—Nonappropriated Fund  
**NFPA**—National Fire Protection Association  
**NIOSH**—National Institute for Occupational Safety and Health  
**NPDES**—National Pollutant Discharge Elimination System  
**OEL**—Occupational Exposure Limit  
**OEH**—Occupational & Environmental Health  
**OEHD**—Occupational & Environmental Health Exposure Data  
**OEHSA**—Occupational & Environmental Health Site Assessment  
**OEHWG**—Occupational & Environmental Health Working Group  
**OEM**—Occupational & Environmental Medicine  
**OH**—Occupational Health

**OHRA**—Occupational Health Risk Assessment  
**OMS**—Occupational Medicine Services  
**OSHA**—Occupational Safety and Health Administration  
**OWCP**—Office of Workers Compensation Program  
**PAR**—Population at Risk  
**PEL**—Permissible Exposure Limit  
**PH**—Public Health  
**PPE**—Personal Protective Equipment  
**QA**—Quality Assurance  
**QC**—Quality Control  
**RAB**—Restoration Advisory Board  
**RAC**—Risk Assessment Code  
**RM**—Risk Management  
**SAC**—Self-Assessment Communicator  
**SEG**—Similar Exposure Group  
**SF**—Standard Form  
**STS/PTS**—Standard threshold shift/Permanent threshold shift  
**TEH**—Total Exposure Health  
**TIC**—Toxic Industrial Chemical  
**TIM**—Toxic Industrial Material  
**TO**—Technical Order  
**TLV**—Threshold Limit Value  
**TWA**—Time Weighted Average  
**UR**—Uncertainty Rating  
**USAF**—United States Air Force  
**USAFSAM**—United States Air Force School of Aerospace Medicine  
**WIC**—Workplace Identification Code

### ***Terms***

**Action Level (AL)**—An exposure level that dictates active air monitoring, medical monitoring, and employee training. The AL for airborne exposures is typically one-half the OEL for TWA exposures, except where 29 CFR 1910 Subpart Z designates a different concentration or where the statistical variability of sample results indicates that a lower fraction of the OEL should be used as the AL. (Source: AFMAN 48-155)

**Activity**—See Process

**Administrative Controls**—Any procedure that significantly limits exposure by controlling or manipulating the work schedule or manner in which the work is performed. (Source: DoDI 6055.01)

**Assessment**—Application of professional judgment (fully qualified BEE, civilian industrial hygienist, or BE Craftsman (4B071)) based on qualitative and quantitative information such as exposure measurements and estimates, mathematical modeling, and/or observations of work practices. Also refers to the application of professional medical judgement, education, and training in the evaluation of employees through an understanding of working conditions, collecting a personal and occupational health history, conducting a physical exam and making qualification, safety, and occupationally relatedness determinations.

**Characterization**—The collection and organization of information needed to describe the workplace, workforce and OEH hazards.

**Confidence in Controls**—A qualitative and/or quantitative determination of how well and how consistently an OEH hazard is being controlled. (Source: AFI 48-145)

**Confidence in Hazard Characterization**—A qualitative and/or quantitative determination of the adequacy of OEH hazard data for reaching sound conclusions regarding exposure (Source: AFI 48-145)

**Control**—Action taken to eliminate hazards or reduce their risk. (Source: DoDI 6055.01)

**Contractor**—A non-Federal employer performing work under a DoD contract, whether as prime contractor or subcontractor. (Source: DoDI 6055.01)

**Department of Defense Personnel Civilian On—Duty**—Civil Service employees of the DoD Components (including Reserve Component military Reserve technicians and Reserve technicians, unless in a military duty status); non-appropriated fund (NAF) employees (excluding military personnel working part-time to avoid dual reporting); Corps of Engineers Civil Works employees; Youth or Student Assistance Program employees; foreign nationals employed by the DoD Components; Navy Civil Service Mariners with the Military Sealift Command, and Army-Air Force Exchange Service employees. (Source: DoDI 6055.01)

**Department of Defense Personnel—Military**—All U.S. military personnel on active duty, Reserve or National Guard personnel on active duty or performing inactive duty training, Service Academy cadets, Officer Candidates in Officer Candidates School and AOCS, Reserve Officer Training Corps cadets when engaged in directed training processes, and foreign national military personnel assigned to the DoD Components. (Source: DoDI 6055.01)

**Engineering Controls**—Eliminate or reduce exposure: process elimination, substitution of less toxic material, process changes (automation, isolation, and enclosure), design changes (tools, workstations, and equipment), and ventilation (dilution and local exhaust). (Source: DoDI 6055.05)

**Environmental Health**—Assessing, understanding and controlling the impacts of people on their environment (air, water, soil) and the impacts of the environment on the people.

**Evaluation**—Process of ascertaining or judging the value or adequacy of an action or an outcome by careful appraisal of previously specified data in light of the particular situation and the goals or objectives previously established. (Source: DoDI 6055.01)

**Exposure**—Concentration, frequency and duration to which personnel are subjected to a hazard.

**Exposure Profile**—A representation of how an exposure varies over time. Considered during exposure characterization and takes into account an estimate of the exposure and its variability as well as the accuracy of the estimate.

**Exposure to Hazard**—Expression of personnel exposure that considers the number of persons exposed and the frequency or duration of the exposure. (Source: DoDI 6055.01)

**Hazard**—Real or potential condition or agent (stressor) that can cause injury, illness, or death to personnel or damage to or loss of equipment or property, mission degradation, or damage to the environment. (Source: DoDI 6055.01)

**Longitudinal Exposure Record**—A comprehensive record of all OEH exposures for a full working lifetime; applies to all DoD personnel. (Source: AFI 48-145)

**Occupational Environmental Health (OEH) Hazard Characterization**—Process for assessing individual OEH hazards, taking into accounts factors such as route of exposure, severity of OEH-related illness that may result from exposure, length of exposure, or duration of exposure.

**Occupational Exposure Limit (OEL)**—The OEL in the Air Force is the most conservative limit between the OSHA PEL or ACGIH TLV unless a specific OEL is designated by the BE Associate Corps Chief on the BE Hive and EOSH Service Center.

**OEH Clinical Surveillance**—The process by which workers receive MSEs, which are designed and conducted based on an assessment of workers' identified OEH risks. The results of these examinations are analyzed to determine if AF operations adversely affect the health of the workers. OEH clinical surveillance is also required in specific instances to meet OSHA requirements for medical monitoring. Additionally, clinical surveillance can be used to assess the adequacy of protective measures. The process by which workers receive Occupational & Environmental Health Medical Examinations, which are designed and conducted based on an assessment of workers' identified OEH risks. The results of these examinations are analyzed to determine if Air Force operations are adversely affecting the health of the workers. OEH clinical surveillance is also required in specific instances to meet OSHA requirements for medical monitoring. Additionally, clinical surveillance can be used to assess the adequacy of protective measures.

**Personal Protective Equipment (PPE)**—Use of PPE shall be considered last in the control hierarchy unless other methods are not feasible. This may be the case while engineering controls are being designed and installed, or during non-routine operations including maintenance and emergency response. For non-military unique workplaces, PPE requirements shall be assessed in accordance with 29 CFR 1910.132 to identify tasks where PPE is required and to ensure that the proper equipment is selected and used. (Source: DoDI 6055.05)

**Physical Hazards**—OEH hazards that may include: noise, vibration, ergonomic (excessive force, excessive repetition, awkward position), ionizing radiation, lasers, radiofrequency radiation, light (infrared, visible, ultraviolet), cold, heat, hyperbaric and hypobaric.

**Process**—Any work task or situation that may pose a risk, and may require evaluation and control or the lowest level of work that may require evaluation to assess exposure and associated controls.

Not all processes are associated with a physical location, e.g., working near the flight line may constitute a process. The terms activity and process are synonymous.

**Risk**—Chance of adverse outcome or bad consequence; such as injury, illness, or loss. The risk level is expressed in terms of hazard probability and severity. (Source: DoDI 6055.01)

**Risk Assessment**—A structured process to identify and assess hazards. An expression of potential harm, described in terms of severity, accident probability, and exposure to hazard. (Source: DoDI 6055.01)

**Risk Communication**—The process of adequately and accurately communicating the magnitude and nature of potential environmental and occupational health risks to commanders and to Service members. (Source: DoDI 6490.03)

**Risk Management**—A process that assists organizations and individuals in making informed risk decisions in order to reduce or offset risk; thereby increasing operational effectiveness and the probability of mission success. It is a systematic, cyclical process of identifying hazards and assessing and controlling the associated risks. The process is applicable across the spectrum of operations and tasks, both on and off-duty.

**Routine OEH Assessment**—A qualitative assessment that includes collecting and organizing basic information needed to characterize the workplace, work force, and environmental agents. Information is gathered that will be used to understand the tasks being performed, materials being used, processes being run, and controls in place so that a picture of exposure conditions can be made. (Source: AFI 48-145)

**Severity**—An assessment of the expected consequence, defined by degree of injury or occupational illness that could occur from exposure to a hazard. (Source: DoDI 6055.01)

**Similar Exposure Group (SEG)**—A group of individuals for whom representative exposure of any member of the group is predictive of exposures of all members of the group. The term “SEG” is formally defined in the AIHA publication, “A Strategy for Assessing and Managing Occupational Exposures.”

**Special OEH Assessment**—A special assessment is preferably a quantitative assessment that focuses resources on OEH-related hazards that require evaluation or classification and involves all components of AIHA’s exposure assessment. (Source: AFI 48-145)

**Time Weighted Average (TWA)**—An average exposure over a defined time period; also referred to as time weighted average concentration.

**Total Exposure Health (TEH)**—The Air Force Medical Service's initiative to capture workplace, environmental & lifestyle exposures to the individual (e.g., N=1, genome) using advances in science, technology & informatics to prevent disease and improve the health and readiness for all Air Force members and the well-being of their beneficiaries.

**Unacceptable Exposure**—A condition for which the probability of adverse health effects is significant, or there is evidence of adverse health effects associated with a specific OEH hazard. It can drive actions such as product substitution, implementation of new controls or the enhancement of existing controls to attain an acceptable exposure.

**Uncertain Exposure**—When the exposure level/profile of a hazard is not well characterized and the acceptability or unacceptability of a SEG’s exposure assessment cannot be rendered. It may

be due to the lack of accurate and/or reliable data as well as an uncontrolled environment. Will typically result in a need to capture more data to better understand an exposure and decide acceptability or unacceptability.

**Uniquely Military**—Equipment, Systems and Operations unique to the national defense mission, such as military aircraft, ships, submarines, missiles, and missile sites, early warning systems, military space systems, artillery, tanks, and tactical vehicles; and excludes operations that are uniquely military such as field maneuvers, naval operations, military flight operations, associated research test and development activities, and actions required under emergency conditions.

**Workplace**—Any environment where a potential OEH exposure may occur. A workplace may be administrative, industrial, or all encompassing, e.g., any setting where an OEH exposure may occur while deployed. (Source: AFI 48-145)

**Workplace Supervisor**—An individual with the authority to implement controls to eliminate, minimize, or reduce OEH-related risk associated with a hazard in a workplace.

## Attachment 2

### DETERMINING CONFIDENCE IN OEH EXPOSURE CHARACTERIZATION

**A2.1.** All criteria for a given category must be achieved in order to apply a given level of confidence in hazard characterization. Begin with low confidence and move toward high confidence in characterization as more data is obtained.

A2.1.1. LOW: Low confidence means potential health outcome based solely upon a qualitative review of the workplace. No quantitative data available for this or similar processes. The source of the hazard has the potential to generate exposures above the action level.

A2.1.1.1. Quantitative data does not exist, or is insufficient to draw a conclusion regarding exposure.

A2.1.1.2. The hazard has not been fully characterized.

A2.1.1.3. Qualitative assessment alone was used to initially characterize a medium/high risk hazard, i.e., skin absorption, significant ergonomic stress, exposure to carcinogens.

A2.1.2. MEDIUM: Medium confidence means potential health outcome based solely on a detailed administrative and onsite review of processes within the workplace and application of professional judgment supported by application of objective based engineering principles. Screening samples or initial air sampling results are within acceptable limits, but not able to draw an acceptable or unacceptable conclusion via the exposure assessment strategy.

A2.1.2.1. Additional monitoring is required to increase confidence in the conclusion.

A2.1.2.2. Surrogate data from similar DoD and or private sector operations (qualitative or quantitative) was used to evaluate the exposure.

A2.1.2.3. Qualitative methods were used to characterize a low risk hazard, i.e., infrequent, insignificant contact with a mild skin irritant or low heat stress during mild work.

A2.1.3. HIGH: High confidence means the “medium” rating supported by sufficient quantitative evaluation, or detailed technical reports where environmental factors do not influence exposure. Further quantification is not required or the source of hazard does not have potential to generate significant exposures.

A2.1.3.1. Sufficient quantitative data has been collected to draw a conclusion about exposure acceptability. Conclusions with high confidence based on sampling results should have a sufficient number of random measurements (ideally 6 samples or more) to use statistics (i.e., 95% confident that the 95th percentile is less than the OEL).

A2.1.3.2. Valid monitoring, e.g., air sampling, swipe sampling, scatter radiation measurements, has been performed and no additional monitoring is required (other than periodic monitoring). Professional judgment has been correctly applied to associate quantitative monitoring results to fully characterize the hazard being assessed.

### Attachment 3

#### DETERMINING CONFIDENCE IN CONTROLS

**A3.1. All criteria for a given category must be achieved to apply a given level of confidence in controls. If all criteria do not apply, move to the next lesser degree of confidence.**

A3.1.1. HIGH: High confidence in controls means that unacceptable exposure is reduced through a combination of effective engineering controls and regulated area enforcement (as applicable). The human element as related to control effectiveness has been almost entirely eliminated. Engineering controls/work practice controls are in place and fully operational. Evaluations have been completed to demonstrate adequate exposure control.

A3.1.1.1. Hazard characterization has led to a high confidence that the exposure is much less than the OEL (or better, less than the action level). Controls are not required.

A3.1.1.2. Chemical Inhalation – Exposure is controlled below the Action Level (AL) by engineering controls that are proven serviceable by periodic evaluation (e.g. periodic ventilation surveys) and air sampling has validated the effectiveness of the control.

A3.1.1.3. Chemical contact and absorption, and physical hazards – Exposure is controlled below exposure limits by engineering controls that are proven serviceable by periodic evaluation.

A3.1.1.4. Administrative controls are in place to prevent access to regulated areas by unprotected, untrained personnel.

A3.1.1.5. Medical surveillance has identified no unacceptable dose, verifying controls are effective.

A3.1.2. MEDIUM: Medium confidence in controls means that exposure potential above the OEL exists, but is controlled by administrative controls or PPE. The human element effects control effectiveness, so unacceptable exposure is possible if appropriate use of controls is not enforced.

A3.1.2.1. Chemical application method controls exposure (e.g., worker uses tongue depressor to apply sealant).

A3.1.2.2. PPE is required to control exposure and workers have been observed using required PPE effectively.

A3.1.2.3. Medical surveillance has identified no unacceptable dose, verifying controls are effective; or, workers have no medically substantiated complaints of symptoms associated with exposure.

A3.1.3. LOW: Low confidence in controls means that the exposure is not adequately controlled, or a reliable conclusion cannot be made regarding the exposure given the information or data available. Controls are in poor a state of repair/non-operational/not actively used. Chemical inhalation exposure controlled by engineering controls that have not been proven effective through air sampling, or have been proven ineffective by air sampling.

A3.1.3.1. PPE is required to control exposure, but workers have been observed not using required PPE effectively, or using inadequate PPE (e.g. wrong type of glove).



A3.1.3.2. Regulated areas are accessible by untrained, unprotected personnel.

A3.1.3.3. Medical surveillance has identified an unacceptable dose; an occupational illness/injury report has been made; or workers complain of symptoms associated with exposure, such as skin irritation or ergonomic strain which has been medically substantiated.

## Attachment 4

### MOLD SPECIAL ASSESSMENT

**A4.1. Responsibilities.** This attachment lists responsibilities of those within the military treatment facility as it relates to mold special assessments.

**A4.2. Military Treatment Facility (MTF) Staff:** Provide health risk assessments and appropriate care to personnel that work or reside in AF facilities.

A4.2.1. MTF Commander: Provide personnel and expertise to evaluate occupant related health complaints. These complaints may or may not be due to the indoor environment within a facility but require medical and occupational health personnel evaluation because of the associated health concerns.

A4.2.2. Providers: Provide medical evaluation and appropriate care to personnel with health complaints that may be environmentally (including mold) related. In addition, providers will work with other members of Team Aerospace when requested to evaluate facilities for potential facility (including mold) related illnesses. Military members seeking initial medical care for suspected facility related illnesses or nonspecific indoor-related symptom complaints will notify their supervisor and schedule an appointment with their primary care provider. If the medical provider believes the symptoms are related to the facility, then they should send an AF Form 190, Occupational Illness/Injury Report, or SF-513, Medical Record - Consultation Sheet through Public Health (PH). Civilian members seeking initial medical care for suspected facility related illnesses or nonspecific indoor-related symptom complaints will notify their supervisor and should then seek medical care from their primary care provider. If after consulting with their medical provider the provider believes the symptoms are related to the facility, then they should contact civilian personnel for completion of a US Department of Labor CA-2 Notice of Occupational Disease and Claim for Compensation.

A4.2.3. Bioenvironmental Engineering (BE). BE will work with CE to apply Risk Management (RM) principles in conducting health risk assessments to investigate/identify potential causes of facility-related illness. BE will work with other Team Aerospace members to determine the best approach for conducting a health risk evaluation in response to a provider-identified illness that may be facility related. When remediation of mold-damaged areas is required, BE will recommend appropriate PPE, review/validate the remediation plan, and coordinate with CE. If remediation is conducted, BE will work with CE to evaluate and visually verify the facility is suitable for reoccupancy.

A4.2.3.1. Use flow chart within the Technical Guide for Indoor Air Quality Surveys, AFRL-SA-WP-SR-2014-0012 or subsequent technical report updates when assessing mold/water damage. The flow chart provides a thorough process when assessing mold/water damage in facilities or housing units.

A4.2.3.2. Mold sampling should only be accomplished if requested by the health care provider or occupational medicine physician in order to provide information that supports a specific clinical diagnosis or aids in medical treatment.

A4.2.3.3. If sampling is required, BE will perform sampling in accordance with guidance found in the Technical Guide for Indoor Air Quality Surveys, AFRL-SA-WP-SR-2014-0012 or subsequent updates.

A4.2.3.4. Microbial sampling and analysis has significant limitations and may not be a predictor of indoor air related health problems. There are currently no industry or legal standards for acceptable microbial concentrations in facilities.

A4.2.3.5. Recommend appropriate PPE and review remediation plans provided by CE.

A4.2.4. PH: PH will evaluate clusters of occupationally linked illnesses or clusters of potential mold-related illness in AF facilities as identified through the AF Form 190, SF 513, and CA-2. PH will initiate and conduct an occupational illness investigation in AFSAS for each occupationally linked illness in accordance with AFI 48-145.

## Attachment 5

### ERGONOMICS SPECIAL ASSESSMENT

**A5.1. Background:** Musculoskeletal disorders affect the muscles, nerves, blood vessels, ligaments and tendons. Workers in many different industries and occupations can be exposed to risk factors at work, such as lifting heavy items, bending, reaching overhead, pushing and pulling heavy loads, working in awkward body postures and performing the same or similar tasks repetitively. Exposure to these known risk factors for musculoskeletal disorders increases a worker's risk of illness. However, work-related musculoskeletal disorders can be prevented. Ergonomics, fitting a job to a person, helps lessen muscle fatigue, increases productivity and reduces the number and severity of work-related musculoskeletal disorders. Examples of musculoskeletal disorders include:

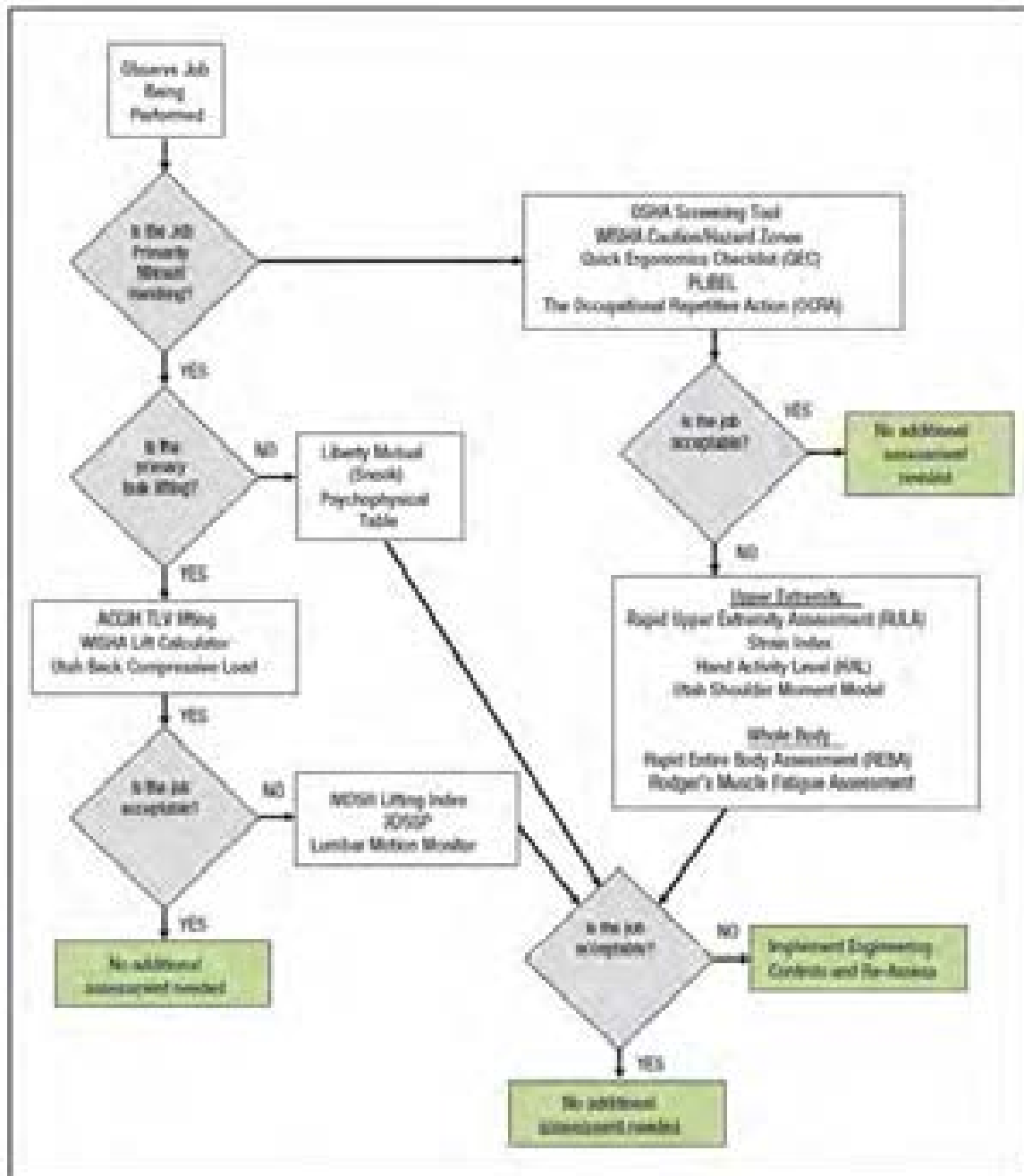
- A5.1.1. Carpal tunnel syndrome
- A5.1.2. Cubital tunnel syndrome
- A5.1.3. Tendinitis
- A5.1.4. Rotator cuff injuries (affects the shoulder)
- A5.1.5. Epicondylitis (affects the elbow)
- A5.1.6. Trigger finger
- A5.1.7. Muscle strains and low back injuries

**A5.2. Workplace Assessments.** Ergonomics hazards are an OEH hazard that should be evaluated, controlled, documented, and managed just as other hazards.

A5.2.1. Ergonomic hazards shall be evaluated as part of routine and special surveillance. (T-0)

A5.2.2. BE evaluation should follow the guidelines in Chapter 15, Ergonomics, of AIHA's A Strategy for Assessing and Managing Occupational Exposures. More details on each subcomponent of the evaluation can be found in Chapter 15 but should include the following steps: Basic Characterization; Identifying Ergonomic Risk Factors (physical, personal, psychosocial, environmental); Exposure Management and Controls; Risk Management Decision Process; and Risk Management Action Implementation and Re-Assessment. BE should use a standardized decision process such as the one in [Figure A5.1](#).

**Figure A5.1. Decision Logic For the Selection of the “Most Appropriate” Ergonomic Assessment Tool.**



A5.2.3. A high, medium, low risk must be assigned to evaluated ergonomic risks and documented in DOEHRs following applicable USAFSAM ergonomics DOEHRs Data Entry Guides. (T-0)

A5.2.4. Ergonomic hazards will be included on OEHD provides to OEHWG. (T-1)

A5.2.5. Ergonomic hazards will be controlled using the hierarchy of controls in [Figure 3.1](#). (T-0)

A5.2.5.1. Engineering controls such as mechanical lifts, adjustable height work surface, or ergonomic tools are the preferred solution.

A5.2.5.2. Administrative controls, such as two-person lifting and task rotation between workers, may not be able to eliminate the hazard but can reduce the severity and potential for future injury.

A5.2.5.3. The OEHWG will update the COHER with any applicable ergonomic training or medical evaluations. (T-1)

### **A5.3. Workplace Injury Investigations.**

#### **A5.3.1. Initial Medical Evaluation**

A5.3.1.1. Regular Air Force: Members will be seen by a local Military Treatment Facility (MTF) provider following the injury. If the provider thinks that the injury is a work-related ergonomic issue, the provider will start the AF Form 190 process by putting two referrals into Armed Forces Health Longitudinal Technology Application (AHLTA). The referrals will be for Physical/Occupational Therapy (PT/OT) to conduct an ergonomic assessment and to PH to initiate an Occupational Health Injury/Illness Investigation.

A5.3.1.2. Civilian Worker (includes retired military): If a civilian is injured due to their assigned job, the civilian has the choice to be seen in the local Military Treatment Facility or by their primary care provider off base. If CFE chooses the local MTF, the process outlined above is followed. If the CFE chooses their primary care provider and the diagnosis is ergonomically related, the employee must relay information to their supervisor.

A5.3.2. Supervisor fills out AF Form 978, Supervisor Mishap Report within 24 hours of knowledge of a workplace injury.

A5.3.2.1. AF Form 978 must be completed for military for both on/off duty status and for DoD civilians when an injury occurs on duty.

A5.3.2.2. Individuals are responsible to report a personal injury to the supervisor as soon as practical, but not to exceed 24 hours; as well as immediately report any physical or mental condition they feel may impact safe job performance.

A5.3.3. If the worker was examined by an off-base civilian provider, the supervisor must contact BE and PT/OT if the diagnosis or provider's notes say an ergonomic evaluation is needed. BE, PT/OT, PH and CPS will be provided the information at the next OEHWG to initiate an ergonomic investigation.

A5.3.3.1. PT/OT Evaluation: Provider will use the information provided by the supervisor and the employee to conduct the ergonomic study. With the employee's consent, the exam will include a review of the medical history related to current and past work related injuries and a work space evaluation. PT/OT provider will provide a copy of the work space evaluation to BE. PT/OT provider will enter the evaluation into AHLTA.

A5.3.3.2. BE Evaluation: BE should conduct a workplace specific ergonomic survey in conjunction with PT/OT whenever possible.

A5.3.4. BE and PH will use the findings from the provider's and BE's workplace specific ergonomic survey results to state the facts in Air Force Safety Automated System (AFSAS). BE and PH have 30 duty days to complete the investigation and document in AFSAS.

A5.3.5. The off base provider, PT/OT, and BE results will be forwarded/presented to the Flight Medicine Clinic providers. The BOMC providers will review all the information and complete the AF Form 190 process.

A5.3.6. The BOMC provider will send a memorandum for record (MFR) of their recommendations to BE, PT/OT provider, work center, and CPS. The MFR will be used by the work center to justify the purchase of new equipment or a process change.

A5.3.6.1. Once the new equipment or process change has been put in place, PT/OT provider will conduct a final work space evaluation, report final findings to OEHWG, and close the employee's ergonomic case.

## Attachment 6

## ADJUSTING 8-HOUR TWA EXPOSURE STANDARDS

**A6.1.** Mathematical models can be used to adjust traditional 8-hours/day, 5 days/week work schedules to non-standard conditions. Adjusting exposure standards to account for non-standard schedules can present challenges and no definitive consensus exists on the best way to adjust standards.

**A6.2.** Exposure standards do not represent a clear boundary between safe and unhealthy exposure. Typically exposure standards are based on health-related data and established with a conservative margin of safety. Additional information regarding unusual work schedules may be found in American Conference of Governmental Industrial Hygienist (ACGIH) TLV® Booklet. An example of one simple model used to adjust exposure standards for non-standard work schedules is the Brief and Scala Model (see [para. A6.3](#)).

**A6.3.** Brief and Scala Model:

A6.3.1. The Brief and Scala Model takes into account the number of hours worked in a 24-hour day and the period of time between exposure events and may not be applicable in all circumstances. This model is designed to ensure the daily dose for the toxicant of concern during the altered work shift is less than the dose for a conventional work shift. This accounts for the decrease in time for biological elimination of the toxicant between exposures.

A6.3.2. Information required: hours worked per 24-hours. The advantages of this method are:

A6.3.2.1. It is a simple calculation.

A6.3.2.2. It generates a conservative estimate of the exposure limit.

A6.3.2.3. It requires no detailed knowledge about the substance being evaluated.

**Figure A6.1. Formula:**

*where  $h$  = hours worked/day*

**Figure A6.2. Example:**

Substance:	Ethyl Alcohol
Exposure Standard:	1000 ppm, 8-hour TWA
Work Shift:	12 hours
Solution:	

)



### SAMPLE ELECTION OF CARE PROVIDER STATEMENT

**Figure A7.1. Sample Election of Care Provider Statement.**

[illegible]

## Attachment 8

## SAMPLE REQUEST TRACKING SHEET

Figure A8.1. Sample Request Tracking Sheet.

**Tracking Worksheet for Civilian Federal Employee Examination Requests Using DD Form 2161  
(For Internal Medical Treatment Facility Use ONLY)**

Disclaimer: This worksheet is used by AF providers when requesting specialty medical consults, studies and laboratory tests for civilian federal employees. It is only used when Unit Funding is required to obtain the consult/study/test (AFM48-146) and is not used for medical care. Inappropriate use of the form may lead to criminal prosecution of responsible parties.

☐ Initial Request OR ☐ Request for additional service(s) (attach original worksheet dated \_\_\_\_\_) (check one)

Employee Name/Phone: \_\_\_\_\_ Date of Request: \_\_\_\_\_

Job title/Position Description(s): \_\_\_\_\_ Unit/Shop: \_\_\_\_\_

Supervisor Name/Phone/Email/Address: \_\_\_\_\_

Purpose of Request (check one): ☐ CDRA required ☐ OWCOP Cardiores ☐ Formal Fitness for Duty Assessment

Requesting Medical Officer Name/Phone/Email/Address: \_\_\_\_\_

Service Requested: (check one)

Medical Specialty Consult:	<input type="checkbox"/> Orthopedics, Hand <input type="checkbox"/> Orthopedics, Spine <input type="checkbox"/> Otolaryngology <input type="checkbox"/> Psychiatry <input type="checkbox"/> Psychology <input type="checkbox"/> Pulmonology <input type="checkbox"/> Rheumatology <input type="checkbox"/> Other: _____	<input type="checkbox"/> Study: <input type="checkbox"/> Magnetic Resonance Imaging <input type="checkbox"/> Cat Scan <input type="checkbox"/> Ultra Sound <input type="checkbox"/> X-ray <input type="checkbox"/> Read of Chest X-ray <input type="checkbox"/> Cardio lab <input type="checkbox"/> Pulmonary lab <input type="checkbox"/> Cardiopulmonary lab <input type="checkbox"/> Other: _____
<input type="checkbox"/> Audiology <input type="checkbox"/> Cardiology <input type="checkbox"/> Dermatology <input type="checkbox"/> Gastroenterology <input type="checkbox"/> General Surgery <input type="checkbox"/> Immunology <input type="checkbox"/> Infectious Disease <input type="checkbox"/> Neurology <input type="checkbox"/> Neuropsychology/Neuropsychiatry <input type="checkbox"/> Oncology <input type="checkbox"/> Ophthalmology <input type="checkbox"/> Optometry <input type="checkbox"/> Orthopedics, General	<input type="checkbox"/> Laboratory (chemistry, culture, cell, tissue) <input type="checkbox"/> Specific lab required: _____	COMMENTS: _____

---

Estimate for consult/study/lab obtained \$ \_\_\_\_\_ (date/initial)

DD 2161 request ☐ approved ☐ rejected by OCMC \_\_\_\_\_ (date/initial)

DD 2161 request ☐ approved ☐ rejected by Resource Management Office \_\_\_\_\_ (date/initial)

Unit approved payment ☐ yes ☐ no; Official contacted \_\_\_\_\_ (date/initial)

Appointment arranged for worker by ordering clinic; set for date/time \_\_\_\_\_ (date/initial)

Supervisor letter to employee sent by ☐ Email ☐ Fax ☐ Mail \_\_\_\_\_ (date/initial)

Confirmed worker attended appointment: \_\_\_\_\_ (date/initial)

- If worker failed to attend, supervisor/requesting provider notified: \_\_\_\_\_ (date/initial)

- Supervisor approved rescheduling of appointment ☐ yes ☐ no ☐ n/a \_\_\_\_\_ (date/initial)

Report Request (1, 2, 3, 4 wks after appt): \_\_\_\_\_ (date/initial)

Report received: \_\_\_\_\_ (date/initial)

Invoice paid \$ \_\_\_\_\_ to \_\_\_\_\_ (date/initial)

Report sent to requesting provider ☐ Email ☐ Mail ☐ Fax ☐ Hand delivered \_\_\_\_\_ (date/initial)

OICM—Occupational Safety & Health Administration, OWCOP—Office of Workers' Compensation Program, OCMC—Civilian Occupational & Environmental Medicine Consultant, CTA—Civilian Consult Administration

## Attachment 9

## SAMPLE MEMORANDUM

Figure A9.1. “Request for Commander’s Authorization of Payment for Civilian Medical Exam” Sample memorandum.

	DATE
MEMORANDUM FOR _____/CC	
FROM: MDG/CC	
SUBJECT: Request for Commander's Authorization of Payment for Civilian Medical Exam	
<p>A civil service employee from your organization, _____, requires an Occupational Health medical exam, consult, study or laboratory test that cannot be provided by the military Medical Treatment Facility (MTF). We will assist the employee in obtaining the required exam in the civilian healthcare sector. Subsequent to receiving the exam results, we will finalize our medical determination. However, we need your assistance to secure payment for the examination prior to appointment scheduling. Please note, payment is for purposes of medical assessment only and does not cover provision of medical care.</p> <p>Subject to 5 CFR § 138.301, individuals who have applied for or occupy positions which have medical standards or physical requirements, or which are part of an established medical evaluation program, may be required to report for medical examinations. Generally, exams are preventive efforts used to screen and monitor the employee's health for hazardous workplace exposures or for task requirements.</p> <p>Per 5 CFR § 139.304, the Air Force must pay for all examinations ordered or offered to the employee, unless the purpose of the exam is to secure a benefit sought by the employee. Costs for these exams are borne by the same appropriation that funds the employee's salary.</p> <p>a. Attachment 1 contains a Commander's Authorization of Payment for Civilian Medical Exam letter for your review and approval signature. The bottom "Payment Information" section should be completed by your unit Resource Advisor (RA).</p> <p>b. Attachment 2 contains payment instructions for your unit RA, along with an estimate of the cost for the employee's exam.</p> <p>The MTF will schedule the exam employee's exam once your approval and method of payment is received. If you have any questions, please contact the pertinent office listed on the RA instruction sheet. Thank you for your prompt attention to this matter.</p> <p style="text-align: right;">MTF Commander's Signature.</p> <p>Attachments</p> <ol style="list-style-type: none"> <li>1. Commander's Authorization of Payment for Civilian Medical Exam</li> <li>2. Instructions to Unit Resource Advisor</li> </ol>	

**Figure A9.2. Attachment 1, “Request for Commander’s Authorization of Payment for Civilian Medical Exam” Example.**

Attachment 1: Request for Commander's Authorization of Payment for Civilian Medical Exam

DATE \_\_\_\_\_

MEMORANDUM FOR MSG 1088 (ATTN: MTF RMO)

FROM: \_\_\_\_\_

SUBJECT: Commander's Authorization of Payment for Civilian Medical Exam

You are authorized to schedule \_\_\_\_\_ for a required medical examination, consult, study, or laboratory test. I authorize my unit's funds to be used to pay for the exam; the method of payment is indicated below. This authorization is for purposes of medical assessment only and does not cover provision of medical care.

I understand that in order to avoid unauthorized disclosure of medical information under the Health Insurance Portability and Accountability Act of 1996, the civilian healthcare provider will send the results of the exam and the associated invoice to the military Medical Treatment Facility (MTF). The MTF will forward the invoice to my unit's Resource Advisor (RA). My RA will ensure payment is promptly remitted to the civilian healthcare provider.

Once the results are received by the MTF, I understand that the military MTF provider will complete the employer's examination and notify me the supervisor of the employee's medical status, if warranted.

UNIT COMMANDER'S SIGNATURE \_\_\_\_\_

PAYMENT INFORMATION  
(Completed by Unit RA – Please review “Instructions to Unit Resource Advisor”)

Method of Payment:

☐ Please reference our certified funding MORD. A copy of the MORD is attached.

☐ We will pay the invoice using our unit Government Purchase Card (GPC). A copy of the approved GPC purchase request is attached.

NOTE: GPC is the preferred method of payment (most cost-effective to the government).

Sample “Instructions to Unit Resource Advisor”

**Figure A9.3. Attachment 2, “Request for Commander’s Authorization of Payment for Civilian Medical Exam” Front Side-Example.**

*Attachment 2: Instructions to Unit Resource Advisor*

For the Request for Commander's Authorization of Payment for Civilian Medical Exam to your unit commander, please follow the steps delineated below in order to pay for an examination for a civilian employee assigned to your unit.

Employee's Name: \_\_\_\_\_

Estimated Cost of the Exam (MOBID Amount): \$ \_\_\_\_\_

MTF Provider Clinic Requesting the Exam: \_\_\_\_\_

Provider Clinic Contact Info: \_\_\_\_\_

MTF Payment POC: Resource Management Office (RMO):

RMO POC: \_\_\_\_\_

E-mail: \_\_\_\_\_

Duty Phone: \_\_\_\_\_ FAX: \_\_\_\_\_

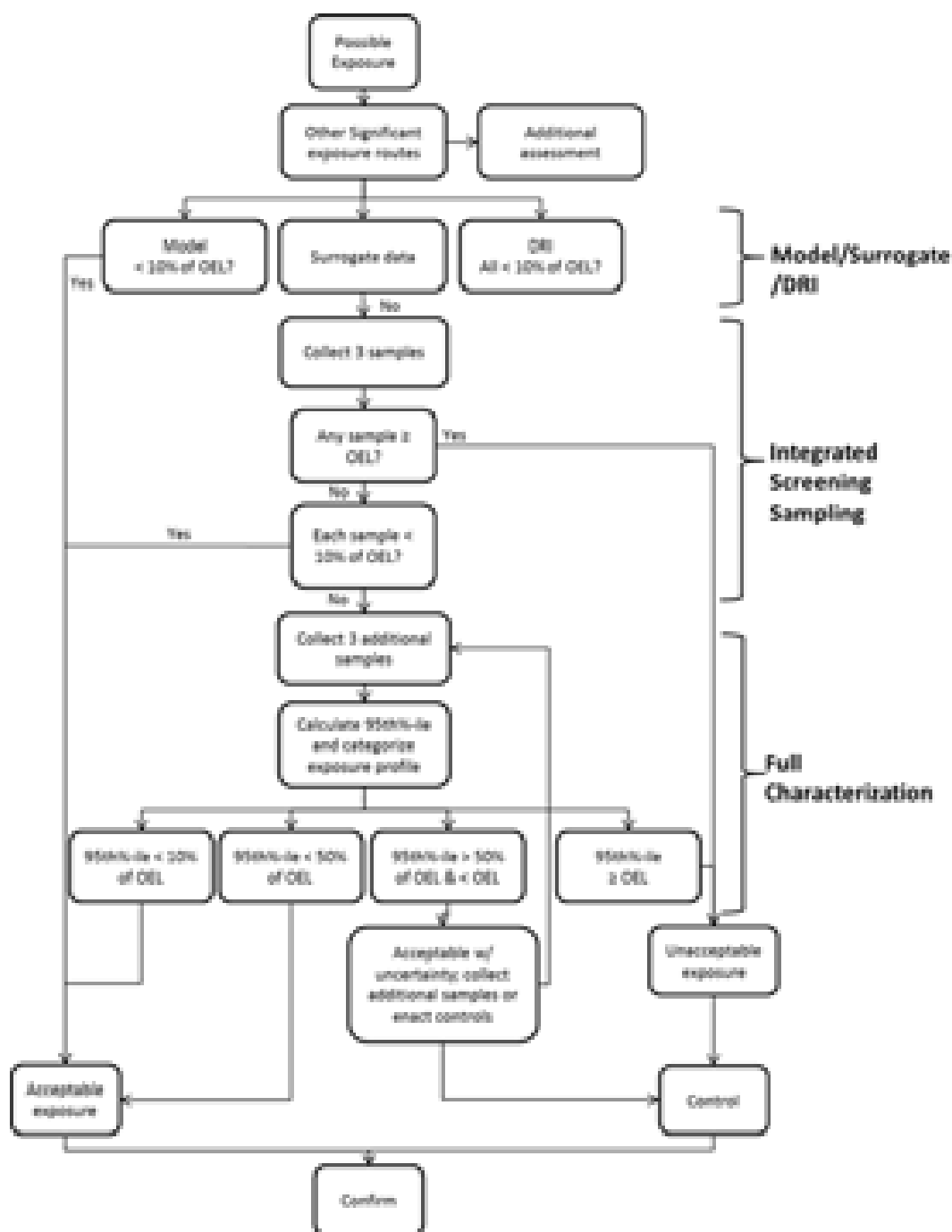
Please review the options for payment from the table on the reverse side of this form, then indicate your selection in the "Payment Information" section of the Commander's Authorization of Payment for Civilian Medical Exam letter.

Reverse Side of Attachment 2: Instructions to Our Business Address	
<p><b>Payment via MORD</b></p> <p><b>STEP 1:</b> Please prepare an AF Form 400, Miscellaneous Obligation Reimbursement Document (MORD), for the estimated cost provided above.</p> <p>In your Line of Accounting, please cite Element of Expense and Investment Code (EIC) 5712EM (Non-TRICARE Civilian Employee/Medical Expense).</p> <p>The funding MORD will be in PC "E" for LAPV input and future payment.</p>	<p><b>Payment via out GPC</b></p> <p><b>STEP 1:</b> Our GPC card holder inputs the service (exam/visit) AUCN.</p>
<p><b>STEP 2:</b> Please send to the MTF POC above—</p> <p>(1) Signed Commander's Authorization for Payment of Civilian Medical Expenses, and</p> <p>(2) Copy of certified MORD.</p>	<p><b>STEP 2:</b> Send a copy of the approved GPC purchase request to the MTF POC.</p>
<p><b>PROCESSING FINAL PAYMENT</b></p>	
<p><b>STEP 3:</b> The civilian provider will submit to the MTF the employee's claim results, and the service for payment.</p> <p><b>NOTE:</b> The MTF will verify that the service states "Full" or "Final" payment. If the service document states that it is for full final payment, then the MTF must contact the civilian provider's billing office(s) in order to receive a revised bill.</p>	
<p><b>STEP 4:</b> The MTF will prepare an SF 1131, Public Voucher for Purchases and Services Other Than Personal, using the AFAPD Miscellaneous Payment Guide located on the AFAPD Community of Practice in the following link:</p> <p><a href="https://mtr.saffhs.mil/afapd/AFAPD%20Documents.aspx?Tab=6&amp;FetchedID=00-FM-AF-01-40&amp;FetchedID=00-FM-AF-01">https://mtr.saffhs.mil/afapd/AFAPD%20Documents.aspx?Tab=6&amp;FetchedID=00-FM-AF-01-40&amp;FetchedID=00-FM-AF-01</a> to reflect the full final amount owed to the civilian provider, and</p>	<p><b>STEP 4:</b> The MTF will provide the out RA with a copy of the service. The Out GPC card holder makes payment.</p> <p><b>NOTES:</b></p> <ul style="list-style-type: none"> <li>- If the GPC transaction is rejected, the MTF will notify the out RA immediately. The out RA will assist the MTF in resolving the GPC payment.</li> </ul>
<p>(1) Associate the standard document number (SDN) of MORD on the SF 1131.</p> <p>(2) Attached a copy of the service to the SF 1131.</p> <p>(3) Forward all documents to the base-level PSA.</p> <p>(4) Send a copy to the out RA.</p> <p><b>NOTES:</b></p> <ul style="list-style-type: none"> <li>- If the final cost exceeds the amount of funding on the MORD, the MTF POC will notify you to increase the MORD amount in order to cover full payment. The payment cannot be forwarded to PSA until the additional funds are loaded on the MORD.</li> <li>- If the final cost is less than the amount on the MORD, you must designate the balance.</li> </ul>	<p><b>STEP 5:</b> In order to capture costs in the proper EIC, you will need to prepare a Journal Voucher in order to transfer the cost of the encounter to your GPC's EIC to EIC 5712EM (Non-TRICARE Civilian Employee/Medical Expense). Using EIC 5712EM enables AF card validity of funds expended on these exams.</p>

**Attachment 10****EXPOSURE ASSESSMENT**

**A10.1. Exposure Assessments.** Exposure Assessments (EA) are the means of determining the nature and severity of hazards experienced by our workers. In this process, specific hazard (chemical, physical, or biological) are evaluated and then the level of risk and adequacy of controls determined. In order to have consistent exposure assessments an overarching Exposure Assessment Strategy (EAS) that is used each time an EA is performed.

Figure A10.1. Exposure Assessment.



**A10.2. Possible Exposure.** The EAS starts with a possible exposure. A decision must be made as to if the exposure in question is even worthy of assessment. Due to limited resources, the American Industrial Hygiene Association (AIHA) recommends that only exposures expected to be over 10% of the OEL should be assessed. (Jahn, Bullock, & Ignacio, 2015, p. 98)

**A10.3. Other significant exposure routes.** Consider if other significant exposure routes besides inhalation exist for the chemical in question. For example, lead within firing ranges or shoot houses presents a significant contamination issue; therefore, ingestion may be an additional route



of entry for lead. Often, solvents present an absorption hazard that must be accounted for when recommending medical exams. At a minimum, the OEHWG should consider using biological exposure indices (BEIs) for chemicals with multiple exposure routes.

#### **A10.4. Model/Surrogate/DRI.**

A10.4.1. The first step in assessing a potential hazard should be to model the exposure if possible. Modeling should be limited to standard Mass/Volume, Well Mixed Room (WMR), or Near Field/Far Field (NF/FF) models as found in AIHA's IHMOD excel sheet. Room Volumes for the Mass/Volume and WMR models should be limited to IHMOD maximum values of 30 m<sup>3</sup>. Near field, Far Field, and air flow between near and far fields should be limited to IHMOD maximum values of 0.92 m<sup>2</sup>, 200 m<sup>2</sup>, and 6.7 m<sup>3</sup>/min, respectively. These upper bounds for input values will ensure reasonable accuracy of the model output values. If modeling is able to show exposure potential less than 10% of the OEL, then further assessment is not necessary. These would be labeled as acceptable exposure with high confidence.

A10.4.2. Surrogate data can be useful in initial exposure evaluations as long as caution is used. Surrogate data is most useful on the upper and lower extremes of exposure. (Jahn, Bullock, & Ignacio, 2015, p. 61) When another similar operation shows exposure values less than 10% of the OEL, a medium confidence can delay the need for local sampling. If surrogate data shows an overexposure, appropriate controls and PPE can be put into place in order to adequately protect workers before conducting local sampling. It is important to note that variability in atmospheric conditions, facilities, and worker habits among units with similar operations may affect the ability to use surrogate data in the long run.

A10.4.3. Direct Reading Instrument (DRI) data can also be useful in screening exposures to determine if traditional integrated sampling needs to be performed. There are too many specific DRIs to be covered here; before you use DRI data, you must understand the limitations and capabilities of the instrument, including the accuracy of the data it gives you. If the upper bound of data is above 10% of the OEL, sampling is recommended.

**A10.5. Integrated Sampling.** If earlier steps were unable to show that exposure was acceptable or unacceptable, integrated sampling is the next step. Collect 3 personal breathing zone samples (i.e. time-weighted averages) of the work being accomplished. Unless otherwise directed by OSHA substance-specific standards, workers should be sampled randomly. To gather the best data, sample as many workers as possible during the operation and then randomly throughout the year, to include different shift operations. Sampling is meant to collect a range of potential exposures; bias toward the most or least exposed workers is not recommended because it will lead to improper assessment and control of exposures. (Jahn, Bullock, & Ignacio, 2015, p. 112) If these 3 TWA values are all less than 10% of the OEL, the risk of overexposure is minimal. Label this as an acceptable exposure with high confidence.

**A10.6. Additional 3 Samples.** Collect 3 more random integrated samples. With a minimum of 6 samples, lognormal statistics can now be calculated. The decision statistics for these is the lognormal 95th percentile. Evaluation will separate these into 4 categories: exposures <10% OEL (to include <1%); exposures <50% OEL; < 100% of the OEL; and > OEL. The first two categories are considered acceptable exposures, barring other information that warrants additional sampling or scrutiny. The third category is considered acceptable but requires additional sampling or controls. The final category (>OEL) is unacceptable exposures that need to be controlled. (Jahn, Bullock, & Ignacio, 2015, p. 57)

**A10.7. Confirm.** Confirmation of previous work is always necessary. (Jahn, Bullock, & Ignacio, 2015, pp. 143-148) At a minimum, routine surveys for Category 1 and Category 2 shops should look at the exposure conditions and work practices to determine if updates to previous exposure assessments are necessary. In some cases, this is as simple as confirming previously gathered information to make sure assumptions and models still represent existing conditions. In other cases, new sampling may be required to verify previous conclusions. Per DoDI 6055.05, if the 95th percentile Upper Tolerance Limit (UTL) is not below the OEL, more monitoring is still needed. (DoDI 6055.05, 2008, pp. 30-31) While confidence in the exposure level in these areas will be high, need for additional sampling requirements should still be input into DOEHRs.

**References:** DoDI 6055.05. (2008, Nov 11). Retrieved from DoDI 6055.05, *Occupational and Environmental Health (OEH)*: <http://www.dtic.mil/whs/directives/corres/pdf/605505p.pdf>  
Jahn, S. D., Bullock, W. H., & Ignacio, J. S. (Eds.). (2015). *A Strategy for Assessing and Managing Occupational Exposures* (4th ed.). AIHA.