DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
Washington DC

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MEMORANDUM FOR DISTRIBUTION
MAJCOMs/FLDCOMs/FOAs/DRUs

FROM: HQ USAF/SG
1780 Air Force Pentagon
Washington, DC 20330-1780

SUBJECT: Department of the Air Force Guidance Memorandum (DAFGM) to Department of the Air Force Manual (DAFMAN) 48-146, *Occupational Health Program Management*

By Order of the Secretary of the Air Force, this Department of the Air Force Guidance Memorandum immediately implements changes to DAFMAN 48-146, *Occupational Health Program Management*, to reflect updated American Industrial Hygiene Association software tools to assess potential exposures to Airmen during industrial operations. These changes replace obsolete tools with the current optional software tools. Compliance with this Manual is mandatory. To the extent its directions are inconsistent with other Department of the Air Force publications, the information herein prevails, in accordance with Department of the Air Force Instruction (DAFI) 90-160, *Publications and Forms Management.*

DAFMAN 48-146 and this GM is applicable to the entire DAF, including all DAF civilian employees, all uniformed members of the Regular Air Force (RegAF), United States Space Force, Air Force Reserve and Air National Guard, as well as direct hire foreign nationals (as established by Status of Forces Agreements), and those with a contractual obligation to abide by the terms of DAF issuances. Specific changes are listed in the attachment; the paragraphs listed replace or update the corresponding paragraphs within DAFMAN 48-146.

This memorandum becomes void after one year has elapsed from the date of this memorandum, or upon publication of an IC or rewrite of DAFMAN 48-146, whichever is earlier.

JOHN J. DEGOES
Lieutenant General, USAF, MC, FS
Surgeon General

Attachment:
Guidance Changes

DAFMAN48-146_DAFGM2025-01

Attachment

Guidance Changes

The below changes to DAFMAN 48-146, dated 1 December 2022, are effective immediately.

(**Changed**) 3.2.2.3.2.2. When no standardized weapon system HRA template is available, BE should use CHET or the AIHA *Exposure Modeling Toolbox* to screen chemicals and identify hazards to associate with workplace processes in DOEHRS. CHET uses the same matrix tables as the exposure assessment priority discussed in **para 3.3.3.7.** See **Attachment 2** for additional guidance on determining if a chemical of concern should be entered in DOEHRS using CHET or the AIHA *Exposure Modeling Toolbox*. Chemicals regulated by an OSHA substance specific standard shall be entered in DOEHRS as a hazard regardless of the hazard determination calculation. (**T-1**)

(**Changed**) A5.4.1. 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/Mid Field (NF/MF) or Near Field/Far Field (NF/FF) models. These and other models are found in AIHA's IHMOD 2.0 Microsoft Excel spreadsheet. Input values should be limited maximum values identified within the IHMOD 2.0 spreadsheet, however, consider using lower-bound estimates to provide conservative modeling results. 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.

BY ORDER OF THE
SECRETARY OF THE AIR FORCE

DEPARTMENT OF THE AIR FORCE
MANUAL 48-146

1 DECEMBER 2022

Aerospace Medicine

OCCUPATIONAL HEALTH PROGRAM MANAGEMENT

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This manual implements requirements of Department of the Air Force Instruction (DAFI) 48-145, *Occupational and Environmental Health* and is consistent with Air Force Policy Document (AFPD) 48-1, *Aerospace & Operational Medicine Enterprise.* It provides procedures for successful management and operation of an Air Force installation occupational health (OH) program. This publication applies to the entire Department of Air Force (DAF), including all civilian employees and uniformed members of the Regular Air Force, the United States Space Force, Air Force Reserve, and the Air National Guard and those with a contractual obligation to abide by the terms of DAF issuances, except where noted otherwise. This instruction does not apply to DAF units receiving OH support from other military services under joint basing agreements. The lead service under the joint basing agreement will provide OH support according to their regulations and guidance. The supported unit is responsible for ensuring compliance with the tracking and completion of occupational health exams and training requirements. This manual does not apply to DAF contractor personnel and contractor operations. The contractor is directly responsible for safety and health risks to their personnel and the protection of the public, except where DAF has contractually agreed to assume responsibility for the protection of contract employee's health and/or compliance with Occupational Safety and Health Administration (OSHA) requirements. This instruction does not prohibit providing workplace sampling and survey information to contractors subject to local arrangements. This manual 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 OH program. Additionally, it specifies the exposure limits and hierarchy of controls that will be used in DAF workplaces. Compliance with the

attachments is mandatory. Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. Refer recommended changes and questions about this publication to the office of primary responsibility (OPR) using the DAF Form 847, *Recommendation for Change of Publication*; route DAF Forms 847 from the field through the appropriate functional chain of command This manual may be supplemented with additional or more stringent criteria. The authorities to waive wing, unit, delta or garrison level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See DAF Manual (DAFMAN) 90-161, *Publishing Processes and Procedures*, 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 requestor's commander for non-tiered compliance items. Supplements must be routed to the OPR of this publication for coordination prior to certification and approval. 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 DAF.

SUMMARY OF CHANGES

This publication is significantly revised and must be completely reviewed. Major changes include restricting this manual to Occupational Health (OH) program management and moving Environmental Health program management requirements to a new and separate manual. Additionally, new business practices are introduced for classifying high-risk industrial processes and defines new minimum health risk assessment (HRA) frequencies for all workplaces. These workplace HRAs are now aligned and executed by unit (e.g., squadron) with the aim of improved health risk communication to the commander as the risk acceptance authority. Furthermore, the time between qualitative unit comprehensive HRAs is lengthened, allowing OH resources to focus on prioritization and execution of quantitative workplace monitoring plan tasks (i.e., sampling) to increase confidence in hazard characterization, improve risk mitigation recommendations, and enhance exposure documentation in individual longitudinal exposure records. These changes increase the number of workplaces assessed (e.g., all workplaces in a squadron) but endeavor to reduce the administrative burden by limiting the number of workplaces that must be documented in the Defense Occupational and Environmental Health Readiness System. Furthermore, details on how to assign and manage health risk assessment codes are added to this manual as a companion to AFI 91-202, *The US Air Force Mishap Prevention Program*.

Chapter 1

INTRODUCTION

1.1. Overview. This manual addresses OH program management requirements in the identification, evaluation and control of workplace hazards. It outlines OH program roles and responsibilities and should be read in conjunction with DAFI 48-145, *Occupational and Environmental Health.* This manual focuses on OH program management as a subset of the larger occupational and environmental health (OEH) program. DAFI 48-145 defines basic concepts of the OEH management system: the Plan, Do, Check, Act cycle. While most of DAFI 48-145 describes the AF OEH program from a policy (the "plan" portion of the management system cycle) and programmatic level (the "check" and "act" portions of the management system cycle), this manual's primary purpose is to specifically inform OH program management at the installation level (the "do" portion of the management system cycle). This manual provides implementing guidance for the use of the Defense Occupational and Environmental Health Readiness System-Industrial Hygiene (DOEHRS-IH), hereafter referred to as DOEHRS.

1.2. Applicability. The roles and responsibilities section in **Chapter 2** and the supporting details in the remaining chapters of this DAFMAN largely focus on the medical unit execution and management of the OH program. Broader OEH roles and responsibilities of non-medical mission partners are covered in DAFI 48-145.

1.3. Requirements Outlined. The requirements outlined in this manual apply at Department of the Air Force installations overseas, including deployed locations, so long as the requirements do not conflict with applicable provisions from any of the following: international agreements, the Overseas Environmental Baseline Guidance Document, country-specific final governing standards, geographic combatant command policy, and annexes to operational orders, operational plans, other operational directives, or joint basing requirements.(Exception: requirements outlined in this manual relative to Environment, Safety, and Occupational Health (ESOH) Council and Occupational and Environmental Health Working Group (OEHWG) do not apply in deployed environments.)

1.4. Goals of the Department of the Air Force Occupational Health Program.

1.4.1. Protect the health and welfare of our workforce and ensure adherence to regulatory requirements (e.g., Occupational Safety and Health Administration (OSHA) standards).

1.4.2. Deliver accurate exposure assessments, correct longitudinal exposure records and optimal medical care.

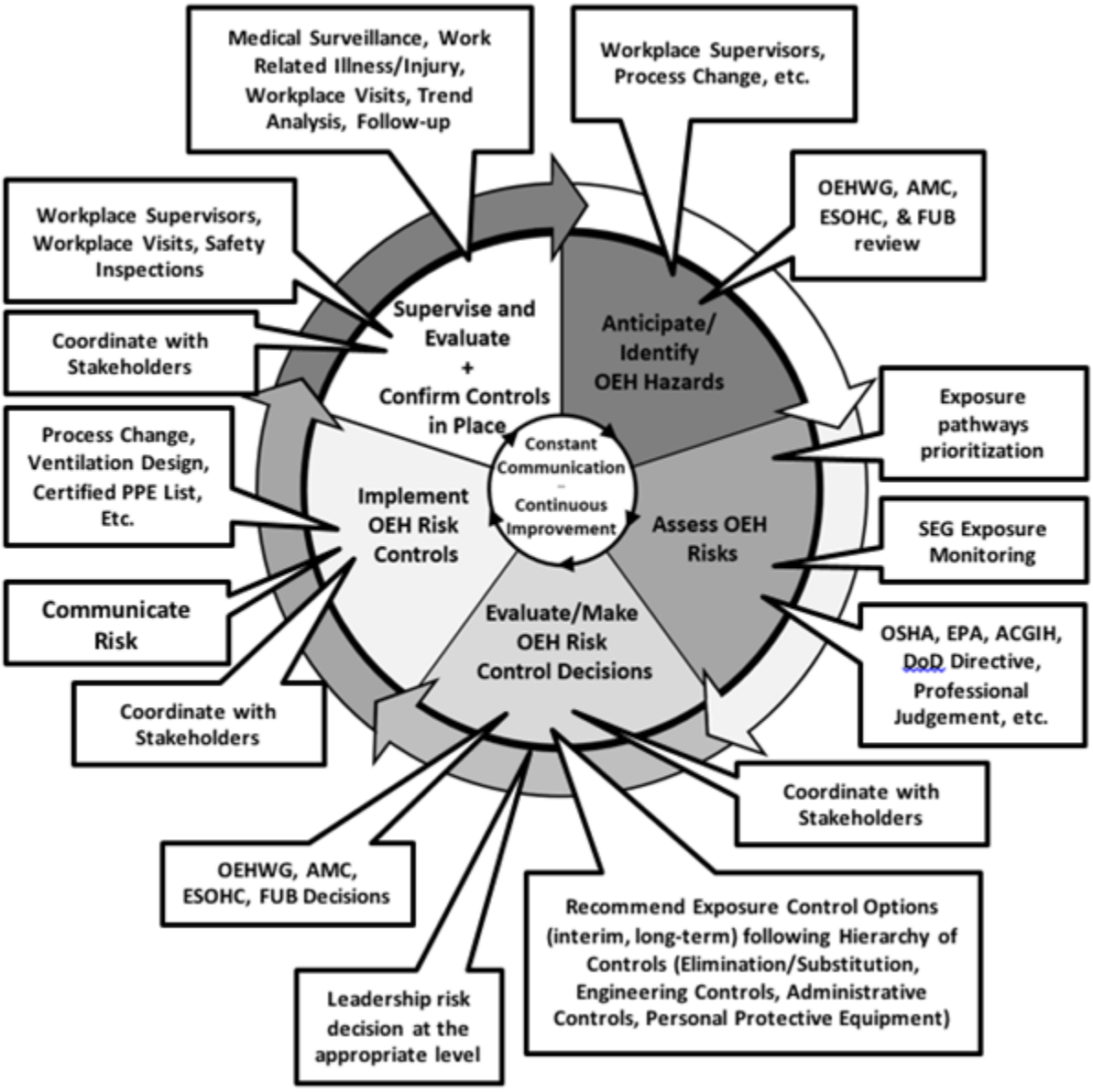
1.4.3. Provide DAF leaders effective options to control OH risk while optimizing operational performance.

1.4.4. Communicate risk, enabling DAF personnel to appropriately understand OH hazards and risk management opportunities.

1.5. The Role of Occupational Health Risk Management at the Installation Level.

1.5.1. As stated in DAFI 48-145, OH risks are communicated through the OEH risk management (RM) process to engage installation leadership in OH hazard reduction and resource prioritization. The overall OH program contribution to the supported organization's RM process is depicted in **Figure 1.1**, reprinted from DAFI 48-145.

Figure 1.1. The Occupational and Environmental Health Risk Management Cycle.



1.5.2. Risk management, in the traditional sense, is described in detail in AFI 90-802, *Risk Management*. OH risk management follows the same framework with key members of the Air Force Aerospace and Operational Medicine Enterprise (e.g., flight and operational medicine clinic (FOMC), bioenvironmental engineering (BE), and public health (PH)) taking a targeted approach to preventing and managing risks from potential health hazards. The OEH risk management cycle in **Figure 1.1** depicts how installations execute the "do" portion of the plan, do, check, act management system cycle and is the focus of this DAFMAN.

Chapter 2

ROLES AND RESPONSIBILITIES

2.1. Medical Unit Commander. For Regular Air Force and Space Force medical units, this is the medical treatment facility (MTF) Commander, who is dual-hatted, and in that capacity, executes the duties, authorities, and responsibilities of both the MTF Director and the service commander. The Air Reserve Component (ARC) equivalent is a Guard Medical Unit Commander (GMU Commander) or a Reserve Medical Unit Commander (RMU Commander) (or local equivalent).

2.1.1. Directs the installation OH program and ensures it is supported with adequate resources and staffing to implement the responsibilities outlined in this DAFMAN. (**T-1**)

2.1.2. Ensures all medical staff who examine patients are aware of illnesses and injuries that may have a correlation to hazardous OH exposures. (**T-1**)

2.1.3. Assigns a physician in writing to serve as the Installation Occupational and Environmental Medicine Consultant (IOEMC) as well as the Chair, Occupational and Environmental Health Working Group (OEHWG). (**T-1**) An occupational medicine physician (44UX) should be appointed as IOEMC if one is available.

2.2. Chief of Aerospace Medicine (SGP).

2.2.1. Provides direction and oversight of the installation OH program. (**T-1**)

2.2.2. Ensures MTF medical providers are aware (or familiar with) the spectrum of potential occupational injuries and illnesses based on health risks associated with the installation. (**T-1**)

2.3. Flight and Operational Medicine Clinic (FOMC) (or local equivalent). This section may be executed by the FOMC Flight Commander, Director of Occupational Medicine Services (OMS), Base Operational Medicine Clinic (BOMC) Flight Commander or local equivalent as determined by the MTF commander.

2.3.1. Ensures execution of medical exams according to **Chapter 5** of this DAFMAN. (**T-1**)

2.3.2. Coordinates workplace visits with BE and PH. (**T-3**)

2.3.3. Ensures medical surveillance exams (MSEs) are conducted based upon recommendations from the OEHWG as determined by the IOEMC. (**T-2**)

2.3.4. Ensures occupational and environmental health exposure data (OEHED) and clinical occupational health exam requirements (COHER) are filed in patient's medical record (hard copy or uploaded to electronic health record (EHR)) for shops with MSE requirements that are more than an annual audiogram. (**T-0**)

2.3.5. Schedules required MSE follow-ups and monitors until completion. (**T-2**)

2.3.6. Ensures abnormalities identified during the MSE are appropriately addressed and documented in the individual’s medical record. (**T-1**)

2.3.7. Provides MSEs for medical aid station personnel and geographically separated units without assigned medical personnel as well as limited scope medical treatment facilities (LSMTF) without credentialed providers. (**T-2**) Ensures a flight surgeon or occupational

health physician reviews all MSEs performed at supported LSMTF if no flight surgeon or occupational health physician is assigned to the LSMTF. (**T-2**)

2.3.8. Performs duties as outlined in the Base Operational Medicine Clinic Operating Plan (available on the BOMC Kx website). (**T-2**)

2.4. Bioenvironmental Engineering (or local equivalent).

2.4.1. Conducts unit OH assessments according to **Chapter 3** and **Chapter 4**. (**T-1**)

2.4.2. In coordination with PH, provides unit commanders an out-brief after completion of unit comprehensive HRAs. (**T-3**) Commander out-briefs shall be conducted by a fully qualified BE Officer (43E3X/43E4X), BE Craftsman (4B071), or civilian equivalent. (**T-3**)

2.4.3. Identifies, prioritizes, and executes workplace monitoring plan (WMP) tasks according to **Chapter 4**. (**T-1**)

2.4.4. Adds OH assessments defined in **Chapter 4** to the Master Schedule in DOEHRS. (**T-3**) Assigns projected due dates for each task based on the timelines in **Chapter 4**. (**T-3**)

2.4.5. Utilizes standardized OH assessment letter templates and supporting DOEHRS reports developed by the USAF School of Aerospace Medicine (USAFSAM). (**T-3**) **Note**: Air Logistic Complexes (ALCs) may use alternate OH assessment templates approved by AFMC/SGPB.

2.4.6. Calculates exposure assessment priorities (EAP) following procedures in **Chapter 3** for all health risk assessments. (**T-1**)

2.4.7. For airborne hazards, employs the lognormal 95th percentile of the Time Weighted Average (TWA) as the exposure level in SEG assessments with three or more samples, unless an exposure determination can be made in accordance with the DAF Exposure Assessment Strategy (DAF EAS) in **Attachment 5**. (**T-1**) See AFI 48-127, *Hazardous Noise and Hearing Conservation Program* for details on employing the DAF noise EAS.

2.4.8. Establishes and leads a cross-functional team to identify, evaluate, and document all feasible engineering and work practice controls when workplace exposure(s) are greater than the Occupational Exposure Limit (OEL) and required by OSHA substance specific standards. See paragraph (**para) 3.4.1.3** for additional details. (**T-1**)

2.4.9. At a minimum, updates workplace personnel rosters in DOEHRS during unit OH assessments. (**T-1**) Deployment and short tour locations (i.e., locations with higher rotation frequencies) shall establish local procedures to ensure rosters are updated in DOEHRS at an appropriate frequency (i.e., once per tour) to populate members' exposure records in DOEHRS which will be viewable in the Individual Longitudinal Exposure Record (ILER) system. (**T-1**)

2.4.10. Produces an updated workplace-specific OEHED summary from DOEHRS for each Similar Exposure Group (SEG) reviewed at the OEHWG. (**T-1**)

2.4.11. Annually provides a list of workplaces and SEGs in DOEHRS to PH to reconcile the list of workplaces and Potentially Exposed Groups (PEGs) in Aeromedical Services Information Management System (ASIMS). (**T-1**)

2.4.12. Documents OH exposures in DOEHRS (**T-0**) and ensures unit provided upgrade and home station training for BE personnel includes DOEHRS data entry. Guidance on this requirement can be found in BE *Career Field Education and Training Plan (CFETP).* (**T-1**)

Leverages the DOEHRS training and demonstration website as necessary to maintain system proficiency (**https://doehrs-ih-demo.csd.disa.mil**). (**T-3**)

2.4.13. Plans and programs for resources to support OH mission requirements. (**T-1**) Specific resources the BE shall purchase include (but is not limited to) the current versions of the American Conference of Governmental Industrial Hygienist's (ACGIH) *Threshold Limit Value (TLV) and Biological Exposure Indices (BEIs)*, ACGIH's *Documentation of the TLVs and BEIs, Patty's Industrial Hygiene, Industrial Ventilation: A Manual of Recommended Practices, SAX's Dangerous Properties of Industrial Materials, and* the American Industrial Hygiene Association's (AIHA) *A Strategy for Assessing and Managing Occupational Exposures.* (**T-3**)

2.5. Public Health (PH) (or local equivalent).

2.5.1. Ensures workplace supervisors have access to standardized training materials, reviews workplace training to ensure compliance with regulatory requirements (shop specific processes added to standardized training material) (**T-0**). Assesses employees' OH training knowledge during workplace visits. (**T-2**)

2.5.2. In coordination with BE, provides unit commanders an out-brief and a written report after completion of the unit comprehensive HRAs. (**T-3**) Commander out-briefs shall be attended by a PH Officer (43HX), PH Craftsman (4E071), or civilian equivalent. (**T-3**)

2.5.3. Identifies appropriate MSEs triggered by regulatory authority, exposure, and risk assessment on the OEHED. (**T-0**)

2.5.3.1. Produces an updated COHER document using the ASIMS web application. (**T-1**)

2.5.3.2. Briefs the COHER for the SEG in conjunction with the OEHED at the OEHWG after completion of unit OH assessments or when changes are made to the COHER. (**T-1**)

2.5.3.3. Following the OEHWG, modifies the COHER if necessary and coordinates it for final approval by the IOEMC. (**T-1**)

2.5.4. Ensures providers completing the MSE are aware/trained on how to access updated copies of the COHER and OEHED (e.g., how to navigate within IT systems, or where current documents are stored on a secure shared drive). (**T-2**)

2.5.5. Tracks MSE completion rates and reports this information to OEHWG, AMC, and ESOHC (or equivalent) (**T-1**). As needed, works with the Group Practice Manager (GPM) to review Occupational Health no-show appointments. (**T-3**)

2.5.6. Reports SEGs with less than 90% Medical Surveillance Exams (MSE) currency to the unit commander and SEG supervisor monthly (or as locally determined). **(T-2)**

2.5.7. Provides a copy of the current COHER exam requirements and training requirements to the SEG supervisor. (**T-0**)

2.5.8. Ensures OEHED and COHERs are filed in patient's medical record (hard copy or uploaded to EHR) for shops without MSE requirements and shops with only an audiogram MSE requirement. (**T-0**)

2.5.9. Annually reconciles the list of workplaces and PEGs in ASIMS with BE's listing of workplaces and SEGs in DOEHRS. (**T-1**)

2.5.10. Conducts OH epidemiological analysis and provides this data to the OEHWG, to include as a minimum, a description of trends in:

2.5.10.1. Audiogram significant threshold shifts (STS); (**T-2**)

2.5.10.2. Permanent threshold shifts (PTS); (**T-2**)

2.5.10.3. Abnormal MSE results (based on a records review); (**T-2**)

2.5.10.4. Trends in exposure incidents, injuries, clinic visits by type/Air Force Specialty Code (AFSC)/workplace, adverse pregnancy outcomes, etc. as deemed necessary and appropriate by the OEHWG. (**T-3**)

2.5.11. Conducts visits to workplaces requiring investigation or supervisor and/or worker education based on adverse epidemiological findings and adverse health events. (**T-2**) For example, workplaces with a higher than expected number or proportion of workers with STS and/or PTS should receive a visit from PH. This visit should be coordinated with BE, SGP or FOM provider, or other specialty as appropriate and available (e.g., audiologist for hearing conservation issue; physical therapist for ergonomic issue).

2.6. Integrated Operational Support and Medical Treatment Facility Physical Therapists (PTs) and Occupational Therapists (OTs).

2.6.1. Collaborates with BE to conduct workplace ergonomic assessments and make control recommendations following the process in **Attachment 4.** (**T-3**)

2.6.2. Attends the OEHWG, as required, to provide consultation on musculoskeletal injuries and illnesses. (**T-3**)

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

2.7.1. Chairs the OEHWG. (**T-1**)

2.7.1.1. Ensures OEHWG membership includes representatives from BE, PH, FOMC (or equivalent), and occupational safety as principal members. (**T-1**)

2.7.1.2. Ensures workplace supervisors are invited to attend when their workplace MSE requirements are under review. (**T-3**)

2.7.1.3. Invites other representatives such as Injury Compensation Specialist, civil engineering, Public Affairs, judge advocate (JA)/base legal office, etc., to the OEHWG, where warranted. (**T-3**)

2.7.2. Ensures medically appropriate risk assessment and medical surveillance activities are conducted. (**T-1**) Risk assessments should be based on specific hazards found within the workplace. Developing and administering occupational medical examinations based on OSHA regulatory requirements and Department of Defense Manual (DoDM) 6055.05, *Occupational Medical Examinations: Medical Surveillance and Medical Qualification,* will satisfy the basic medical surveillance requirements prescribed in Department of Defense Instruction (DoDI) 6055.05, *Occupational and Environmental Health (OEH).*

2.7.3. Ensures medical examinations are performed according to **Chapter 5** of this manual. (**T-1**)

2.7.4. Approves (by signing and dating) the COHER used to conduct MSEs. This cannot be delegated and should be completed within 15 days following the OEHWG completion or next unit training assembly (UTA) or regularly scheduled drill (RDS) for ARC units. (**T-1**)

2.7.5. Ensures current OEHED and COHER are filed in hard copy occupational health record (or uploaded to the electronic occupational health record if resources allow) for all workers enrolled in OH program. (**T-0**) Guidance on documentation being entered in the occupational health record or electronic occupational health record can be in found in AFMAN 41-210, *TRICARE Operations and Patient Administration.*

2.7.6. Reviews reported and suspected OH illnesses and provides necessary feedback to BE, PH, FOMC, and the injury compensation specialist as required. (**T-1**) If an occupational injury or illness is confirmed, follow paragraph (**para) 5.7**.

2.7.7. Annually briefs or schedules another qualified flight surgeon to brief the professional staff on occupational illness and injury trends and related issues (e.g., recognition, prevention, care and reporting) based on local needs and frequency of staff turnover. (**T-1**)

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

2.8.1. Meets at least six times per year (e.g., once every two months) for Active Duty MTFs and at least four times per year (e.g., quarterly) for ANG and AFR MTFs. Meetings are encouraged to meet face-to-face but may use other avenues, such as virtually. (**T-1**)

2.8.2. Acts as cross-functional forum to discuss OEH hazards, risks, mitigation measures, and medical surveillance to protect military and civilian employee health. (**T-1**)

2.8.3. Reviews DOEHRS OEHED documents provided by BE and corresponding ASIMS COHER provided by PH to ensure appropriate MSEs are included. (**T-1**) OEHED and COHER documents will be reviewed at the OEHWG:

2.8.3.1. At the completion of a unit comprehensive HRA (i.e., every 36 months). (**T-1**)

2.8.3.2. At the completion of an annual high-risk process HRA (i.e., every 12 months). (**T-1**)

2.8.3.3. The next OEHWG following the completion of a WMP task that results in a change to the workplace exposure profile. (**T-1**)

2.8.4. Recommends MSE requirements to the IOEMC; documents determinations in the OEHWG minutes. (**T-1**)

2.8.5. Implements procedures to investigate and report suspected OH-related illness or injury. (**T-0**) Guidance on this requirement is found in DoDI 6055.01 and DODM 6055.05.

2.8.6. Ensures all OH-related training requirements are identified and communicated to workplace supervisors by BE or PH. (**T-1**)

2.8.7. Tracks HAF, Major Command (MAJCOM), Field Command (FLDCOM), and installation-specific OH performance measures to assess the effectiveness of the installation OEH Program. (**T-0**) This requirement is found in DODI 6055.01, AFI 48-101, *Aerospace Medicine Enterprise* and DAFI 48-145.

2.8.8. Assists the installation Environment, Safety and Occupational Health (ESOH) Council with identifying and prioritizing requirements to optimize mission performance and minimize

ESOH risk and cost. (**T-1**) This requirement is found in AFI 90-801, *Environment, Safety, and Occupational Health Councils*.

2.8.9. Provides for a collaborative process of assessment, planning, facilitation, and advocacy for options and services to meet an ill or injured worker's health needs through communication and coordination of care to minimize delays in diagnosis, treatment, and return-to-work. (**T-3**)

Chapter 3

OH RISK MANAGEMENT

3.1. Occupational Health Risk Management overview. The main objective of the OH program is to identify, assess and evaluate process hazards to characterize comprehensive worker exposures in the occupational workplace and determine if control recommendations are needed and/or adequately implemented. As discussed in **Chapter 1**, OH risk management is part of the larger OEH Risk Management Cycle and is broken down in five steps: 1) anticipate and identify hazards, 2) assess hazards to determine risk, 3) develop controls and make risk decision, 4) implement risk controls and 5) supervise, evaluate & confirm controls in place.

3.2. Step 1. Anticipate and identify hazards.

3.2.1. Identify and Establish Occupational Workplaces. A workplace is where employees perform operations, processes, and tasks under the direction of a supervisor at one or more locations. 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. BE, in coordination with their ESOH partners, is responsible for determining workplaces for OH purposes. (**T-1)**

3.2.1.1. Industrial workplaces are periodically evaluated for occupational health hazards per the frequencies identified in **Chapter 4**; administrative workplaces are evaluated for occupational health hazards in response to specific health concerns (i.e., workplace supervisor's request for admin workstation ergonomic assessment, referral from safety assessor due to health concerns identified during annual safety inspection). (**T-1**)

3.2.1.2. When a workplace evaluation indicates DAF personnel are exposed to toxic substance(s) or harmful physical agent(s), the workplace will be added to DOEHRS to build a comprehensive longitudinal exposure record for DAF personnel. (**T-0**) **Note:** workplaces without exposures to toxic substance(s) or harmful physical agent(s) do not need added to DOEHRS, see **para 4.2.5 and para 4.2.6** for additional details.

3.2.1.3. When establishing or verifying a workplace in DOEHRS:

3.2.1.3.1. Add the workplace geographical-coordinates to the shop detail page to aid in visualizing OH hazards and workplace locations in the Air Force Geographical Information Management System (AFGIMS) which is commonly known as and hereafter referred to as "GeoBase". (**T-3**)

3.2.1.3.2. Add the applicable standard workplace identification code (WIC) in the DOEHRS "shop code" field using the standard WIC list. (**T-2**) The standard WIC list is available on the ESOH Service Center, **https://hpws.afrl.af.mil/dhp/OE/ESOHSC/pages/index.cfm?id=751**.

3.2.1.3.3. Establish shop names in line with their career field designation or applicable Technical Orders. (**T-2**) Examples of workplaces where occupational health exposures may occur are provided below:

3.2.1.3.3.1. 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 DOEHRS, with its own 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 repair, etc.) are identified in DOEHRS and assigned to an appropriate SEG within the ASM workplace. Ensure personnel are assigned to the appropriate SEG as opposed to assigning all personnel to all SEGs within the workplace. (**T-0**)

3.2.1.3.3.2. Hazardous Material (HAZMAT) Response Team: A single lead organization on an installation is typically in charge of incident/spill responses involving specific substances of concern (e.g., hydrazine, composite fibers, fuel, etc.) although personnel from different organizations (e.g., fire and emergency services, water and fuel system maintenance, aircraft maintenance, etc.) may be involved in the incident responses. For the purpose of health risk assessment, the lead organization of the specific HAZMAT response team should be designated as the workplace/shop, since the team typically maintains common equipment, staged at a common facility, and has a dedicated supervisor with associated organizational authority/accountability.

3.2.2. Basic OH Characterization. Personnel shall follow and utilize the most recent technical guides, standardized weapon system HRA templates (when available), and the industrial hygiene risk assessment methodology (IH RAM) located on the ESOH Service Center for detailed instructions on how to perform assessments. (**T-1**)

3.2.2.1. Pre-planning Activity.

3.2.2.1.1. Conduct a comprehensive OH records review (i.e., pre-survey) prior to a scheduled OH assessment. (**T-3**) This provides good background and foundational knowledge regarding workplace locations, processes, potential hazardous exposures, and existing hazard controls. Furthermore, health-based outcome data (e.g., OEHWG epidemiological analysis results or injury/illness investigations) may provide insight on the adequacy of current OH hazard characterization and effectiveness of existing controls. BE should collaborate with FOMC and PH (during or between OEHWG meetings) to ascertain any potential trends in OH-related illnesses or injuries related to a specific workplace. **Note**: Hazards may be present even in the absence of trends.

3.2.2.1.2. Use information related to unit mission, operational tempo, and OH impacts/concerns for assigned personnel to determine the scope of required OH support. (**T-3**) 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).

3.2.2.1.3. A qualified reviewer should review previous OH assessment activities to determine an appropriate strategy for the pending assessment. A qualified reviewer is a fully qualified BE Officer (43E3X/43E4X), BE Craftsman (4B071), or civilian equivalent. The pre-survey preparation may include a study of DOEHRS data, prior survey letters, and DOEHRS business object reports, and should include sending an email to the workplace supervisor requesting anything needed in advance of the assessment (e.g., personnel roster, chemical inventory, PPE listing, etc.) **Note:** See the IH RAM for DOEHRS reports available to assist the reviewer during this review process.

3.2.2.1.4. Contact the workplace supervisor (or equivalent), as appropriate, to explain the purpose of the OH risk assessment and identify workplace processes that need to be evaluated. (**T-3**) 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 that should be conveyed includes:

3.2.2.1.4.1. The scope of and schedule for completing the workplace HRA.

3.2.2.1.4.2. Status of previously identified findings.

3.2.2.1.4.3. Adverse trends in clinical surveillance or OH-related illnesses.

3.2.2.1.4.4. Any information needed by BE in advance of the assessment.

3.2.2.2. Identify Processes.

3.2.2.2.1. 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 in which the shop resides. (For example, a maintenance shop might have processes indoors in the maintenance hangar, but performing the same processes outdoors or in a non-specific location, such as on the flight line, may constitute a separate process.) Examples of some OH processes are provided below:

3.2.2.2.1.1. Aircraft painting is divided into distinct processes such as primer application, top-coat application, and stenciling operations. It may be beneficial to identify the location of each specific process (e.g., priming specific aircraft part in a paint booth versus priming the aircraft in the hangar.)

3.2.2.2.1.2. 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.

3.2.2.2.1.3. 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.

3.2.2.2.2. Assign an appropriate name to each process, and provide a clear description. (**T-1**) As standard weapon system HRA templates are completed and available from

USAFSAM, BE shall apply the templates to include standardized process names during unit OH assessments. (**T-1**) BE shall validate the template process names; however, an addition to a standardized process name may be necessary to match unit vernacular (i.e., adding the local term to the end in parentheses, such as depainting/desealing mechanical ("racetracking") or apply low observable coating-spray ("silver coating")). (**T-1**)

3.2.2.2.2.1. When no standardized HRA is available, the workplace supervisor (or equivalent) or the OH hazard source owner can aid in effectively naming and describing each process or pathway. For processes not already under the standard naming convention for DOEHRS, examples of how to name a process are included below.

3.2.2.2.2.2. "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 name that conveys the scope of the process.

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

3.2.2.2.2.4. Weapon system-related 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**)

3.2.2.2.2.5. Each applicable weapon system shall be added to the "Weapon Systems Information" area in DOEHRS for each process when applicable (e.g., Fixed Wing Aircraft, F-16A/B/C/D Fighting Falcon added to a "depainting/desealing mechanical" process.) (**T-3**)

3.2.2.3. Associate OH Hazards with Processes.

3.2.2.3.1. Identify potentially hazardous chemical, physical and biological agents in the workplace and associate the hazard with the process in DOEHRS. (**T-0**) For each health hazard, physical properties, routes of exposure, and potential health effects should be gathered. A workplace's chemical inventory and associated safety data sheets (SDSs) shall be the foundation for identifying chemical health hazards but special consideration should be made to process generated hazards that may not be listed on a SDS (e.g., silica and/or particulate generation from saw cutting concrete, beryllium and/or cadmium exposure when cutting/grinding metal components, etc.)

3.2.2.3.2. When establishing standardized weapon system HRA templates, USAFSAM identifies the chemical, physical, and biological hazards for each process. To aid in screening chemicals of concern, USAFSAM created the Chemical Hazard Evaluation Tool (CHET) to aid in the identification of chemical inhalation, contact, absorption, and ingestions hazards for further evaluation and entry in DOEHRS.

3.2.2.3.2.1. For standardized weapon systems, BE shall associate all applicable hazards listed in the standardized HRA templates with the associated weapon system processes in DOEHRS. (**T-1**) If information provided by the workplace indicates additional hazards (i.e., not included in the template) are present, these hazards should also be added to DOEHRS.

3.2.2.3.2.2. When no standardized weapon system HRA template is available, BE should use CHET or the AIHA *Qualitative Assessment Checklist* to screen chemicals and identify hazards to associate with workplace processes in DOEHRS. CHET uses the same matrix tables as the exposure assessment priority discussed in **para 3.3.3.7** See **Attachment 2** for additional guidance on determining if a chemical of concern should be entered in DOEHRS using CHET or the AIHA *Qualitative Assessment Checklist*. Chemicals regulated by an OSHA substance specific standard shall be entered in DOEHRS as a hazard regardless of the hazard determination calculation. (**T-1**)

3.2.2.3.3. See **Attachment 3** and **Attachment 4** for specific details on identifying and assessing nanomaterial and ergonomic hazards respectively.

3.2.2.4. Establishing SEGs.

3.2.2.4.1. SEGs establish a link between a group of individuals and OH exposures. Exposure data recorded in the SEG in DOEHRS represent the occupational health data that will populate a service member's longitudinal exposure record in the ILER system. It is very important to record accurate and representative data. 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 OH hazard characterization/assessment and using exposure monitoring data to define the SEG, or (3) a combination of both activities. Reference Chapter 4 of AIHA's *A Strategy of Assessing and Managing Occupational Exposures*, for additional information on establishing SEGs.

3.2.2.4.2. A single SEG is adequate if all individuals assigned to a workplace encounter the same OH 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 (i.e., different exposure level, duration, frequency, etc.).

3.2.2.4.3. 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, emergency management, explosive ordinance disposal, and BE.

3.2.2.4.4. Workplace rosters shall be collected and documented in DOEHRS for both home station and deployed locations, to ensure an accurate exposure record is created for all DAF personnel. (**T-0**) Manual roster updates are expected until a software solution is possible linking rosters which are maintained by workplace supervisors (e.g., ASIMS) to DOEHRS rosters.

3.2.2.4.4.1. BE shall request updated personnel rosters from workplace supervisors and indicate "start date" or "stop date" for identified personnel in the applicable shop, process, process controls, and SEG in DOEHRS anytime an OH assessment is completed (e.g., unit comprehensive HRA, annual high-risk process HRA, or WMP task) to ensure a complete exposure record for assigned members. (**T-1**)

3.2.2.4.4.2. Rosters for workplaces enrolled on the respiratory protection program shall be updated more frequently (i.e., continuously) to ensure accurate fit test

reporting, see AFI 48-137, *Respiratory Protection Program.* (**T-1**)

3.2.2.4.4.3. Locations with high turnover (e.g., short tours and deployments) shall develop local procedures to ensure all members are captured in appropriate SEGs. (**T-1**)

3.3. Step 2. Assess Hazards to Determine Risk. As part of the basic characterization, an initial exposure assessment of the hazard is required. (T-1) This assessment will often be qualitative in nature using existing data and observations and shall be documented as a SEG assessment in DOEHRS. Additional detailed quantitative assessments are conducted as part of the WMP as required.

3.3.1. Assign Assessment Start and Stop Dates. The first date of the process's/exposure's applicability is the first date any member of the workplace/SEG was exposed under the current process parameters (e.g., hazardous material, frequency, duration, environmental conditions, controls, etc.). This first date of applicability is not the date BE conducts monitoring. 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. **Note:** Accurate assessment dates are critical to tracking exposure in each worker's longitudinal exposure record.

3.3.2. Identify Occupational Exposure Limits (OEL). An 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 in DoD policy or by the BE Associate Corps Chief. (**T-1**) Each OEL may have three subcategories including an 8-hour time weighted average (TWA), 15-minute Short Term Exposure Limit (STEL), or ceiling. Although the 8-hour TWA is the most common way of assessing airborne exposure and is the focus of the DAF EAS, BE should be familiar with and apply STEL and ceiling limits when appropriate (See **Attachment 1** for expanded definitions). At this time, surface limits are not recognized DAF OELs. OELs for physical hazards are established elsewhere in hazard specific policies (e.g., hazardous noise in AFI 48-127, thermal stress in DAFI 48-151, *Thermal Stress Program,* ergonomics in **Attachment 4**, etc.) **Note:** See **para 3.7** for OELs during emergency responses.

3.3.3. Characterize Exposure. OH hazard characterizations shall follow the DAF EAS in **Attachment 5,** (**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.

3.3.3.1. Model/surrogate data/direct reading instrument (DRI). Models, surrogate data, and DRI 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. Modeled values from the AIHA *Qualitative Assessment Checklist* or AIHA Industrial Hygiene Modeling (IHMOD) spreadsheet can be typed in if the completed sheet is attached to the assessment. (**T-1**)

3.3.3.2. Integrated personal sampling. Full period personal air sampling is the best assessment of exposure available. Initial collection of three full period personal air samples (i.e., at least 420 mins of an 8 hour shift) will provide the ability to make a more complete risk assessment. Additional sampling may be required if an exposure determination cannot be made in accordance with the DAF EAS (**Attachment 5**).

3.3.3.3. 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 using the the DAF EAS in **Attachment 5**. (**T-1**) In DOEHRS, six TWA samples are required to calculate the lognormal 95th percentile. When six samples are not available, AIHA IHSTAT (AIHA Excel application that calculates exposure statistics) should be used to calculate the lognormal 95th percentile and test the distribution for three to five samples. When only one to two samples are available, the highest TWA sample should be used in the airborne exposure assessment.

3.3.3.4. 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. Cumulative exposure for an 8-hour work shift, to include exposures across multiple processes such as hexavalent chromium exposure from sanding and priming processes must be computed prior to comparing sampling results to an 8-hour TWA exposure standard. (**T-0**) Consecutive, partial-period samples are used to calculate a single TWA to compare to the appropriate OEL. (**T-0**)

3.3.3.5. A conventional work schedule is five consecutive 8-hour workdays, followed by two days off. Most OH 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 may be adjusted. Detailed information on techniques that can be used to adjust for non-standard conditions is provided in **Attachment 6**.

3.3.3.6. When there is observable risk of skin contact to a substance with an ACGIH skin notation, the risk of skin absorption shall be characterized. (**T-1**) A skin notation signals that overexposure may occur following dermal contact with liquid and aerosols, even when airborne exposures are at or below the OEL. Skin absorption risk may be modeled using AIHA IHSkinPerm (AIHA Excel application for estimating dermal absoption) or similar. The skin absorption risk does not need to be modeled if the effectiveness of controls is validated (e.g., PPE wear prevents skin contact and the permeability of gloves for the chemical(s) of concern is adequate). Refer to AIHA's *A Strategy for Assessing and Managing Occupational Exposures, 4th ed.* Chapter 13 or contact the ESOH Service Center for assistance when conducting a skin absorption risk assessment.

3.3.3.7. Assign Industrial Hygiene Exposure Assessment Priority. To characterize exposure, an EAP shall be assigned for all IH assessments. (**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 assessment may indicate high risk. **Figure 3.1** illustrates the EAP hazard assessment priority process. DOEHRS calculates the EAP using a 3-step process:

3.3.3.7.1. Step 1: Select a Health Effect Rating (HER) (aka Severity). See **para 3.3.3.7.5**.

3.3.3.7.2. Step 2: Select the Exposure Rating (ER) (aka Probability). See **para 3.3.3.7.6**.

3.3.3.7.3. Step 3: Determine the Uncertainty Rating (UR). See **para 3.3.3.7.7**.

3.3.3.7.4. 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 4.1**). **Note:** The OH hazard risk determination process follows guidance set forth in DAFPAM 90-803, *Risk Management (RM) Guidelines and Tools*. The terms, definitions and process may differ slightly but the process is consistent with established guidance.

3.3.3.7.5. 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 with respect to the OEL without regard to use of controls (**Table 3.1**). The HER is the potential for an exposure to result in an OH-related illness/injury. Some chemical hazards in DOEHRS are pre-loaded with an HER based on an exposure level equal to the OEL. **Note:** During the development of standardized weapon system HRA templates, USAFSAM documents the HER for inhalation hazards using CHET. BE may refer to CHET to see additional guidance and examples for selecting the appropriate HER for inhalation, dermal contact, and ingestion risks during non-standard processes.

Figure 3.1. Industrial Hygiene Exposure Assessment Priority (EAP).

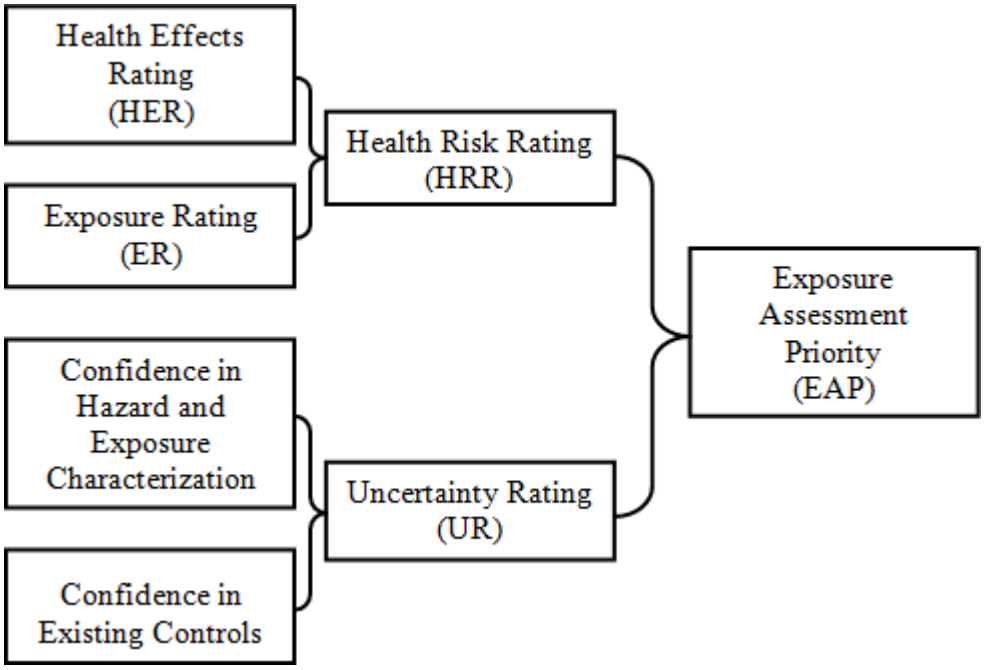


Table 3.1. Health Effects Rating.

Category	Input Value	Health Effects

Very High	5	Acute life threatening or disabling injury or illness. High potency, high acute/chronic toxicity, carcinogen, mutagen, or teratogen. Immediate hearing loss.
High	4	Chronic irreversible health effects of concern. Materials toxic by skin absorption including those assigned a "skin" notation by ACGIH. 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). Sensitizers, corrosive contact.
Low	2	Reversible health effects of concern. Incidental skin irritation.
Negligible	1	Nuisance/low risk health effects. Negligible skin hazard.

3.3.3.7.6. 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 3.2**, Exposure Rating. Contact USAFSAM ESOH Service Center for assistance selecting the appropriate OEL and action level if needed.

Table 3.2. Exposure Rating.

Category	Input Value	Description
Very High	5	Continuously experienced; expected to be above the OEL; ergonomic injury likely to occur immediately; gross frequent contact with agents at very high concentrations
High	4	Likely to be an exposure greater than 50% of OEL or the action level but less than the OEL; ergonomic injury likely to occur over time; likely contact with agent at high concentrations or infrequent contact at very high concentrations
Moderate	3	Exposure frequently less than action level or 50% of OEL and above 10% of OEL; ergonomic injury possible over time; occasional contact with agent at moderate concentrations or infrequent contact at high concentrations
Low	2	Could occur at some time; exposure infrequent; less than 10% of OEL; ergonomic injury unlikely to occur; infrequent contact with agents
Negligible	1	Unlikely; can assume will not occur; no detectable exposure; current science cannot determine ergonomic injury will occur; current science cannot determine that there is exposure to agent

3.3.3.7.7. Uncertainty Rating (UR). The UR (**Table 3.3**) is computed as a function of the confidence in hazard and exposure characterization and the confidence in existing

controls. For each OH hazard requiring an EAP determination, assess the confidence in hazard and exposure characterization (**Attachment 7**) and confidence in existing controls (**Attachment 8**).

Table 3.3. Uncertainty Rating.

		Confidence in Characterization		
		Low	Medium	High
Confidence in Controls	Low	5	4	3
	Medium	4	3	2
	High	3	2	1

3.3.3.7.8. 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 BE officer (43E3X/43E4X), BE craftsman (4B071), or civilian equivalent).

3.3.3.7.9. The EAP can result in a number of priority ratings (**Table 4.1**) 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.

3.3.3.7.10. When the DAF EAS indicates additional exposure data is required, a WMP task shall be created and a suspense assigned based on the EAP according to **Table 4.1** BE shall focus resources on the execution of WMP tasks to meet the defined timelines. Sample collection is instrumental in providing data-driven risk mitigation recommendations to Commanders and supervisors.

3.3.4. Develop a Workplace Monitoring Plan (WMP). Processes requiring additional hazard characterization shall have industrial hygiene exposure assessment priorities assigned and WMP tasks added to the DOEHRS master schedule (e.g., personal air sampling, noise dosimetry, laser surveys, etc.).

3.3.4.1. WMP task plans/sampling strategies shall include these minimum elements documented in DOEHRS, as applicable:

3.3.4.1.1. WMP task due date (**Note:** due date established based on EAP and timelines listed in **Table 4.1**) (**T-1**)

3.3.4.1.2. Sample type (e.g., bulk, grab, composite, blank) (**T-1**)

3.3.4.1.3. SEG or shop (**T-1**)

3.3.4.1.4. Process(es) (**T-1**)

3.3.4.1.5. Hazard (analyte) (**T-1**)

3.3.4.1.6. Inspirability (e.g., total, inhalable, or respirable fraction) (**T-1**)

3.3.4.1.7. Sampling method (**T-1**)

3.3.4.1.8. Laboratory information (**T-1**)

3.3.4.1.9. Process information (e.g., method of application, SDS information) (**T-1**)

3.3.4.2. WMP tasks shall be prioritized for completion according to **Chapter 4** (**Table 4.1**). (**T-1**)

3.3.4.3. Conditions and variables during WMP task execution shall be documented in DOEHRS defining the engineering, administrative and PPE process controls used at the time of the sampling event (e.g., ventilation system performance, worker rotation schedules, type of respiratory protection used). (**T-1**)

3.3.4.4. Refer to USAFSAM guidance documents to include the *USAFSAM Laboratory Sampling and Analysis Guide* and the *Automated Sampling Guide* (**https://hpws.afrl.af.mil/dhp/oealims/customeraccess/**) for additional assistance in defining WMP sampling task requirements in DOEHRS.

3.3.5. Make Exposure Determination. Once available information is gathered and characterized and the EAP is completed, determine exposure acceptability using the guidance in **Attachment 5**. (**T-0**) All exposures shall be classified as acceptable or unacceptable in DOEHRS. (**T-0**)

3.3.5.1. 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 maintenance workers with noise dosimetry where the calculated normal 95th percentile is above the OEL but controlled with hearing protection devices, and corrosion control workers with air sampling results where the calculated lognormal 95th percentile is above the hexavalent chromium OEL but is controlled with respiratory protection.

3.3.5.2. 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-0**)

3.3.5.3. If dermal absorption hazard is a significant route of exposure (e.g., skin notation hazard with systemic dose equivalent to 50% or more of the OEL) that results in the workers mandatory wear of PPE to prevent overexposure, then it is an unacceptable exposure. (**T-0**)

3.3.5.4. If hazard exposure measurements are not possible/practicable, but modeling results in a possible overexposure (e.g., lasers, electromagnetic field (EMF) radiation), then it is an unacceptable exposure. (**T-0**)

3.3.5.5. In the absence of an OEL, if the incidence and severity rates for the associated illness or injury (e.g., ergonomic work-related musculoskeletal disorders or) for the exposed population exceeds the expected injury or illness then it is an unacceptable exposure. (**T-0**)

3.3.5.6. 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. Step 3. Provide Control Plan.

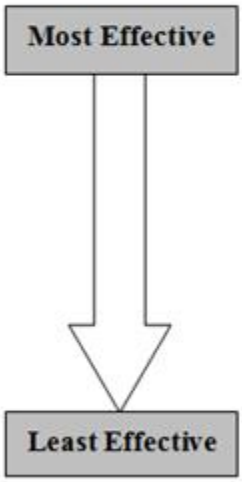
3.4.1. Provide Control Recommendations. BE shall assess the adequacy of existing controls and provide OH hazard control recommendations to unit commanders and workplace supervisors (or equivalent) as required. **Figure 3.2** displays the applicable management and/or control strategy based on SEG OH exposures. **Figure 3.3** shows the order of controls (hierarchy of controls): elimination; substitution of less hazardous materials, processes, operations, or equipment; engineering controls; administrative controls; and personal protective equipment.

3.4.1.1. 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**)

Figure 3.2. Strategy for Managing Occupational Health Exposures. (Adapted from AIHA, 2015)

SEG Exposure Control Category	SEG Exposure (i.e., 95th Percentile)	Applicable Management/Control Actions
0	<1% of OEL	No action
1	<10% of OEL	Procedures and training, general hazard communication
2	10-50% of OEL	Actions above and chemical specific hazard communication, periodic exposure monitoring
3	50-100% of OEL	Actions above and implement hierarchy of controls, required exposure monitoring, workplace inspections to verify work practice controls, medical surveillance, biological monitoring
4	>100% of OEL	Actions above and monitoring to validate respirator protection factor selection, assign a Risk Assessment Code (RAC) when applicable

Figure 3.3. Hierarchy of Controls. (AIHA, 2015)



Controls	Examples
Elimination (Engineering Control)	Designed to eliminate hazards such as hazardous materials and noise
Substitution (Engineering Control)	Substitute for less hazardous materials Reduce Energy (e.g. lower speed, force, amperage pressure, temperature, noise)
Other Engineering Controls	Ventilation systems, process change, isolation or enclosure, interlocks, wet methods, dilution systems, process automation
Administrative Controls	Safe job procedures, rotation of workers, adjust work schedules, housekeeping and equipment maintenance Hazard Communication training, warning signs, backup alarms, horns, labels
Personal Protective Equipment	Respirators, eye, hand and foot protection, clothing, barrier creams, hearing protection

3.4.1.2. BE associates OH 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**)

3.4.1.2.1. 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 high efficiency particulate air (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. (**T-0**)

3.4.1.2.2. 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 Title 29, Code of Federal Regulation (CFR) part 1910, Occupational Safety and Health Administration (29 CFR 1910), subpart 1001, *Asbestos* (29 CFR 1910.1001). Administrative controls should be prioritized to maximize effectiveness. At a minimum, ensure that: workers are aware of applicable OH 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. Based on 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**)

3.4.1.2.3. 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 1910.132-140, Subpart I, *Personal Protective Equipment*, to ensure appropriate equipment is selected and used. (**T-0**)

3.4.1.3. When exposures are greater than the OEL and as required by OSHA substance specific standards (e.g., 29 CFR 1910.1000-1051, *Subpart Z, Toxic and Hazardous Substances*), BE shall engage a cross-functional team (BE, maintenance (e.g., engineering, support), civil engineering, weapon system program offices, workplace supervisors, USAFSAM, etc.) to identify, evaluate, and document all feasible engineering and work practice controls to reduce employee exposures. (**T-1**) This feasibility study shall be documented (e.g., memorandum for record) and periodically updated. (**T-1**) BE should provide consultation to local leadership when determining the feasibility of certain engineering controls. Contact MAJCOM personnel and ESOH Service Center for advice on feasible control options.

3.4.1.4. 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*.

3.4.2. OH Risk Assessment Codes (RACs). When a hazardous condition exists in a workplace that could impact health and abatement or mitigation is technically feasible, BE shall assign a health RAC 1-3 to the identified deficiency using the guidance provided in **Attachment 9** and AFI 91-202. (**T-0**) When an administrative deficiency exists in the workplace, BE shall assign a health RAC 4 or 5. (**T-1**)

3.4.2.1. BE shall communicate directly with Commanders with risk decision authority during the OH risk decision making and risk acceptance process for critical (e.g., Risk Assessment Code (RAC) 1), serious (e.g., RAC 2) and moderate health hazards (e.g., RAC 3). (**T-1**)

3.4.2.2. BE shall complete the AF Form 1118, *Notice of Hazard* identifying the health RAC 1, 2, and 3 hazards and forward to the supervisor for posting no later than the end of the next duty day. (**T-1**)

3.4.2.3. BE shall work with unit commanders and workplace supervisors to ensure an AF Form 3, *Hazard Abatement Plan* is initiated for all health RAC 1, 2, and 3 hazards when the abatement is expected to take longer than 30 days from identification per AFI 91-202. (**T-1**) BE may remind commanders to conduct their semi-annual review of the AF Form 3 as required AFI 91-202. When a commander chooses not to abate the hazard and does not complete a Form 3 it implies the commander has accepted the risk. BE and the SGP should work with the commander to ensure the commander's risk acceptance is documented, the RAC should remain open and the Form 3 or documented risk acceptance should be re-accomplished for each new commander.

3.4.2.4. BE shall document health RACs in DOEHRS, upload the supporting AF Form 1118, AF Form 3, and documentation of the commander's risk acceptance (when applicable) in the shop's "Observations and Notes," (**T-1**) and add the geo-coordinates to the deficiency page to aid in visualizing RAC locations in GeoBase. (**T-3**)

3.4.2.5. BE shall differentiate between deficiencies which could cause acute or chronic health hazards and deficiencies which are only administrative:

3.4.2.5.1. Deficiencies leading to potential chronic health hazards (other than noise) shall be entered as "health" RACs in DOEHRS with the RAC code calculated using the tables in DOEHRS and provided in **Attachment 9**. (**T-1**)

3.4.2.5.2. Noise deficiencies shall be entered as "noise" RACs in DOEHRS with the RAC calculated by DOEHRS. (**T-1**)

3.4.2.5.3. Ergonomic deficiencies shall be entered as "safety and ergonomic" RACs in DOEHRS with the health RAC code calculated using the tables in DOEHRS (also provided in AFI 91-202, Table 13.1.). (**T-1**)

3.4.2.5.4. BE shall notify safety if an acute health hazard is identified for consideration of a Safety RAC. (**T-1**)

3.4.2.5.5. Deficiencies that are an administrative violation (e.g., training not documented) shall be entered as "Safety and Ergonomic" RACs in DOEHRS with the RAC code calculated using the tables in DOEHRS and provided in AFI 91-202, Table 13.1. For this type of deficiency, the hazard severity shall always be Code IV, "violation of a standard" and result in a RAC 4 or 5. (**T-1**)

3.4.2.6. BE shall coordinate with installation safety office to add health RACs to the master hazard abatement plan (i.e., AF Safety Automated System (AFSAS)). (**T-1**) Additionally, for infrastructure-based health RACs, BE should coordinate with civil engineering to document the mechanism being utilized to mitigate the risk. (**T-1**) There are three typical options; programmed in the Air Force Comprehensive Asset Management Program (AFCAMP), de-centralized facilities sustainment restoration & modernization (FSRM), or executed by civil engineering (e.g., local project) as shown in **Figure A9.2**.

3.4.3. BE is the sole authority in determining when a health RAC is closed. When BE determines abatement action is complete or the RAC is no longer valid (e.g., process no longer being accomplished), BE will inform the installation safety office to close or remove the health RAC to remove it from the master hazard abatement plan. (**T-1**) BE shall close RACs in DOEHRS when appropriate, to include RACs 4-5. (**T-1**)

3.4.4. BE shall annually review open RACs as part of the program management review.

3.5. Step 4. Report and Record Risk. The OH risk assessment process is complete when the risk and results are recorded in DOEHRS and communicated in a timely manner to the unit commander and workplace supervisor (or equivalent).

3.5.1. Immediately Dangerous to Life or Health (IDLH) Environments. When an environment is determined to be IDLH, BE must recommend immediate cessation of the process to the workplace supervisor and Unit commander, as well as Medical Group chain of command, as soon as possible. (**T-0**)

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

3.5.3. Unit OH assessment reporting. Unit OH assessment reports communicate significant findings, conclusions and recommendations to commanders and workplace supervisors. See **Chapter 4** for specific risk communication requirements for each type of OH assessment.

3.5.4. Record Keeping.

3.5.4.1. All OH exposure data will be entered into DOEHRS in accordance with business practices established in USAFSAM guidance documents for both garrison and deployed settings (classified areas exempt). (**T-1**) Unit OH assessment letters shall be uploaded to DOEHRS to maintain continuity. (**T-1**) Use of other management information systems for OH assessments in lieu of DOEHRS is strictly prohibited. (**T-1**)

3.5.4.2. BE will maintain a chronological record of each contact with a workplace in the shop "Observations and Notes" in DOEHRS. 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**)

3.5.4.3. The maintenance and calibration of industrial hygiene equipment is critical to ensure accurate measurements of workplace exposures. To ensure exposure assessment data quality, BE will enter, maintain, and record calibration of industrial hygiene equipment in DOEHRS. (**T-1**)

3.5.4.4. A qualified reviewer will verify the accuracy and completeness of all exposure assessment data entered in DOEHRS (when practicable at deployed locations) according to local quality assurance (QA) procedures. (**T-1**) A qualified reviewer is a fully qualified BE officer (43E3X/43E4X), BE craftsman (4B071), or civilian equivalent. (**T-1**) The qualified reviewer should be a person other than the member that did the original data entry. If a qualified reviewer is not available, place a request to the MAJCOM BEE to have reviews performed.

3.5.4.5. OH reports and surveys shall be maintained in accordance with respective Air Force Records Information Management System RDS.. (**T-0**) Employee exposure records are maintained in DOEHRS in accordance with DAFI 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 (OEH)*, 29 CFR 1910.1020, *Access to Employee Exposure and Medical Records*, and 29 CFR 1910.1096, *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):

3.5.4.5.1. Monitoring results, including personal, area, grab, wipe, and/or other samples and related information.

3.5.4.5.2. Hazardous Material (HAZMAT) information pertaining to OH hazards.

3.5.4.5.3. Biological monitoring results.

3.6. Step 5. Supervise/Evaluate/Re-Evaluate. BE must work with workplace supervisors to determine the effectiveness of health risk controls and conduct follow-up evaluations to ensure the controls remain effective. (T-1) This re-evaluation step is both the end and a new beginning of the OH Risk Management Process thus supporting continuous process improvement. Overtime, the continuous process improvement should advance up the hierarchy of controls resulting in an improved understanding of exposure risks and sustainable exposure controls.

3.6.1. Reassessment Frequency. At a minimum, reassessment should occur at the periodic frequencies identified in **Chapter 4**. The goal of reassessment during comprehensive and annual HRAs is to update SEGs, identify workplace changes that influence exposures, identify new hazard control requirements, and identify uncertain exposures for further information gathering (i.e., create/prioritize/execute WMP tasks). New WMP tasks shall be completed until sufficient samples/data are available following the EAS in **Attachment 5** to characterize exposures. (**T-1**)

3.6.2. Additional Triggers for Reassessment. BE should be aware of other triggers for reassessment which may include, but not limited to, process modifications, regulatory changes, unit reorganization, new OELs, and worker complaints.

3.6.2.1. BE shall follow periodic monitoring frequencies as described in the OSHA substance specific standards (e.g., 29 CFR1910.1000 , *Hexavalent Chromium,* 29 CFR1910.1025, *Lead,* etc.) (**T-0**)

3.6.2.2. BE shall conduct baseline and periodic ventilation surveillance on all systems used to control identified health hazards. (**T-1**) Air sampling shall be conducted to validate the system is adequately controlling exposures during baseline ventilation assessments. (**T-3**) Ventilation surveillance should be documented in DOEHRS. See 29 CFR1910.94, *Ventilation* and the USAFSAM *Industrial Ventilation Technical Guide* for additional guidance.

3.6.3. Medical surveillance. Active medical surveillance (e.g., exams, illness/injury rates, physician worksite visits) and passive surveillance (e.g., epidemiology, trend analysis) are used to evaluate the effectiveness of OH risk management. See **Chapter 5** for detailed medical surveillance requirements.

3.7. Applying the Occupational Health Risk Management Process to Emergency Response. During an incident response and in accordance with AFI 10-2501, *Emergency Management Program*, BE shall evaluate occupational health hazards for emergency responders. The basic steps of OH risk management are the same but often executed in a compressed timeframe with limited and evolving data.

3.7.1. OELs for Emergency Responders. OSHA PELs and ACGIH TLVs were developed assuming an employee conducting the task is exposed to the hazard for 8-hrs/day, 40-hrs a week over a working lifetime. These values may be overly conservative for a short-term incident response.

3.7.1.1. Although developed for the general population, BE may use acute exposure guideline levels (AEGLs) or emergency response planning guidelines (ERPGs) when determining OELs for emergency responders during short-term incident responses. AEGL and ERPG values may be searched on the Department of Energy *Protective Action Criteria (PAC)* database (**https://edms.energy.gov/pac/**).

3.7.1.2. For deployed and contingency operations and when necessary to meet mission objectives, BE may use military exposure guidelines (MEGs) to characterize chemical exposures and operational exposure guidelines (OEGs) to characterize radiation exposures in lieu of other OELs. See Army Technical Guide 230, *Environmental HRA and Chemical Military Exposure Guidelines* and Joint Publication 3-11, *Operations in Chemical,*

Biological, Radiological, and Nuclear Environments for additional details on MEGs and OEGs respectively.

3.7.1.3. BE should consider the following to determine when to transition from emergency response OELs to traditional 8-hour TWA OELs:

3.7.1.3.1. Is the emergency part of the response complete (e.g., public rescued, active spill contained)?

3.7.1.3.2. Has the recovery phase started?

3.7.1.3.3. Is the area well secured?

3.7.1.3.4. Do monitoring results indicate exposures are well below emergency response OELs but greater than 50% or more of a 8-hour PEL or TLV?

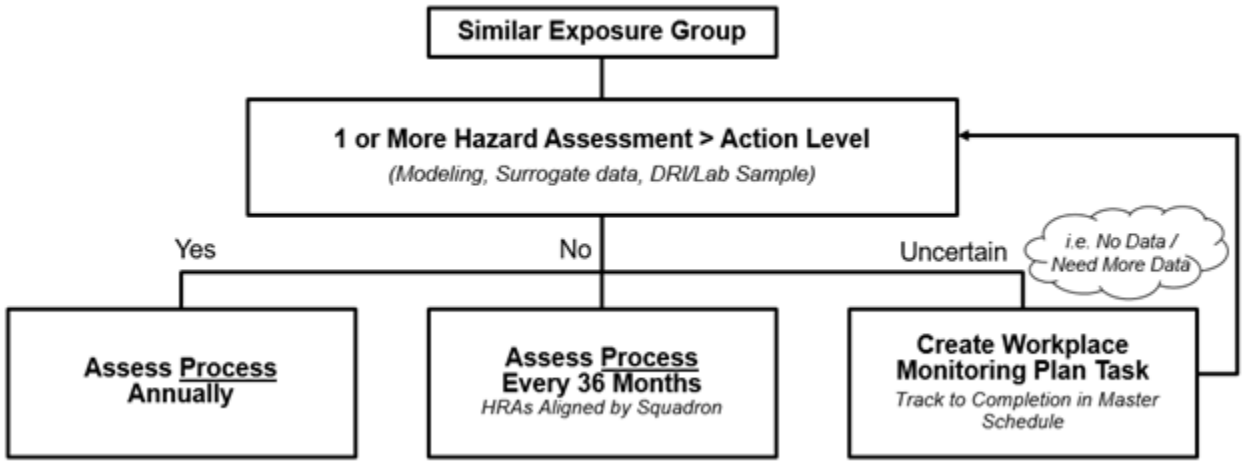
3.7.2. To record exposures from a specific incident, BE shall document HRAs for emergency responders using the incident response module in DOEHRS following guidance in the applicable USAFSAM Data Entry and Report Guide (DERG). (**T-0**)

Chapter 4

CONDUCTING UNIT OCCUPATIONAL HEALTH ASSESSMENTS

4.1. Unit Occupational Health Assessments. Unit OH assessments enhance overall mission effectiveness by protecting DAF personnel from OH hazards and risks and provide a framework to communicate control options, mitigation actions and follow-up monitoring with stakeholders. Unit OH assessments encompass several different types of assessments including, 1) unit comprehensive HRAs, 2) high risk process HRAs, and 3) specific WMP tasks. **Figure 4.1** helps illustrate when each type of assessment is required.

Figure 4.1. Similar Exposure Group Health Risk Assessments.



4.2. Annual High-Risk Process Health Risk Assessments. A high-risk process is defined as any process with an airborne exposure estimate greater than the action level, STEL or ceiling. High-risk processes shall be assessed annually (i.e., every 12 months) (T-0) using the appropriate elements of the IH RAM for the specific process. (T-1) In deployed settings, high-risk processes shall be assessed every deployment rotation. (T-1) Other high-risk hazards (i.e., noise, radiation, thermal stress) are addressed through workplace specific master schedule tasks defined in hazard specific policies and are excluded from this paragraph.

4.2.1. All workplaces in DOEHRS will be identified as either Category 1, high-risk (i.e., having one or more high-risk process) or Category 2, medium-risk (i.e., not having any high-risk processes but having one or more completed routes of exposure according to **para 4.2.4**). (**T-1**)

4.2.2. If a shop has multiple processes, only high-risk processes with an exposure estimate greater than the action level require an annual HRA. (**T-1**) Processes that are not high-risk will be assessed every 36 months according to **para 4.2** (**T-1**)

4.2.3. BE shall identify high-risk process(es) on the installation within 6 months of publication of this DAFMAN. (**T-3**) Within 18 months of publication of this DAFMAN, BE shall complete a HRA for each high-risk process(es) and annually reassess the process thereafter. (**T-3**)

4.2.4. Shops where hazards are poorly defined and historically categorized as Category 1 may not meet the definition of high-risk in **para 4.2.1** In this scenario where exposures are poorly

defined but no documented exposures are greater than the action level, BE shall identify what data is required to better characterize the hazard and create the appropriate WMP task and suspense according to **para 4.4** in lieu of establishing an annual qualitative HRA. (**T-1**) These shops will remain Category 2 until data supports their re-categorization as high-risk. (**T-1**) Using these business rules, defined quantitative assessments with a shorter suspense based on EAP (e.g., 30-365 days) are preferred over an annual qualitative assessment for Category 2 workplaces. This targets data gaps and improves risk mitigation recommendations for commanders.

4.2.5. BE will employ applicable elements of the IH RAM and document assessments in DOEHRS for annual high-risk process HRAs. (**T-1**)

4.2.6. The time to complete high-risk process HRAs will be determined by the number and complexity of high-risk processes in a workplace. The goal is to complete a high-risk process HRA in two weeks (e.g., single high-risk process in workplace) to four weeks (e.g., multiple high-risk processes in workplace) from the start date.

4.2.7. USAFSAM standardized letter templates and associated DOEHRS reports shall be used to communicate annual high-risk process HRA results similar to **para 4.3.8**.

4.3. Unit Comprehensive Health Risk Assessments. BE, with the assistance of PH as noted below, shall assess the OH programs of each standalone unit (e.g., squadron) on the installation every 36 months. (T-1) In deployed settings, unit comprehensive HRAs shall be conducted every 18 months. (T-1) Units that are strictly administrative (e.g., comptroller squadron) do not require a unit comprehensive HRA.

4.3.1. During a unit comprehensive HRA, all industrial workplaces within the unit will be assessed for effectiveness of illness prevention programs (e.g., performance) and compliance with occupational health directives. (**T-1**) Administrative workplaces shall be included in the unit comprehensive HRA only when specific occupational health concerns have been identified. (**T-1**) BE may collaborate with the installation Occupational Safety office and Unit leadership to identify administrative areas with occupational health concerns. For industrial workplaces, BE flights shall identify hazards, assess risk, and recommend controls for each workplace following the procedures defined in **Chapter 3** in addition to determining workplace compliance with **para 4.3.1.1** thru **para 4.3.1.12** below. BE flights may leverage standard workplace maturity audit (WMA) checklists in the Program Maturity Audit System (PMAS) to aid in conducting the HRAs.

4.3.1.1. Engineering Controls (**T-1**)

4.3.1.2. Personal Protective Equipment (**T-1**)

4.3.1.3. Hazardous Noise and Hearing Conservation Program (**T-1**)

4.3.1.4. Hazardous Material Management (**T-1**)

4.3.1.5. Respiratory Protection Program (**T-1**)

4.3.1.6. Radiation Protection (**T-1**)

4.3.1.7. Thermal Stress (**T-1**)

4.3.1.8. Confined Spaces (**T-1**)

4.3.1.9. Medical Surveillance (completed by PH) (**T-1**)

4.3.1.10. Hazard Communication and Training (completed by BE with PH collaboration) (**T-1**)

4.3.1.11. OSHA Substance Specific Standards (**T-0**)

4.3.1.12. DOEHRS exposure record documentation (e.g., process descriptions, hazards, controls, sampling, and assessments; consistent with the IH RAM) (**T-1**)

4.3.2. BE shall establish an assessment schedule that aligns workplace assessments by unit (e.g., squadron) within 12 months of publication of this DAFMAN. (**T-3**) Within 36 months of publication of this DAFMAN, BE shall complete at least one unit comprehensive HRA for all units receiving OH support and every 36 months thereafter. (**T-3**) **Exception:** For geographically separated units, detachments, or operating locations, schedule alignment by unit may not be feasible.

4.3.3. Prior to executing a comprehensive HRA, BE shall work with unit leadership to confirm the list of assigned industrial workplaces and identify potential administrative workplaces of concern. (**T-1**) BE shall also confirm physical workplace locations and supervisors. (**T-1**)

4.3.4. BE will employ the IH RAM and document assessments in DOEHRS for Category 1 and Category 2 workplaces with identified hazards that have a completed route of exposure (e.g., exposures greater than ten percent of the OEL). (**T-1**)

4.3.5. Workplaces with limited industrial process(es) resulting in insignificant OH hazards, no medical exams, and no completed routes of exposure should be assessed as part of a unit comprehensive HRA but are not required to be documented in DOEHRS (i.e., most Category 3, low-risk workplaces at the time of publication of this DAFMAN fit this criteria.) Existing Category 3 shops/processes/hazards/controls in DOEHRS should be end dated or reclassified as Category 2 as appropriate. Assessment of these workplaces may be limited to a walkthrough of the work location, verbal discussions with the supervisor, and documentation that the assessment occurred in the unit commander executive summary (i.e., DOEHRS documentation is not required).

4.3.6. An administrative workplace may be added to DOEHRS when necessary to facilitate specific WMP tasks (i.e., worker complaint, administrative ergonomic survey, etc.) but future periodic surveys should not be added to the Master Schedule and the processes/hazards/controls, SEG, and IH assessments should be end dated following resolution of the worker complaint and/or WMP task. If the issue cannot be resolved, the workplace should be designated as a Category 2 workplace, assessed periodically, and follow-up WMP tasks completed (as required).

4.3.7. The time to complete unit comprehensive HRAs will be determined by the number of workplaces in a unit, MTF resources, and shop personnel availability. The unit HRA timeline should aim to provide a targeted vertical assessment with timely reporting to the commander. The goal is to complete each unit comprehensive HRA in less than three months.

4.3.8. USAFSAM standardized letter templates and associated DOEHRS reports shall be used to communicate assessment results (e.g., standard workplace HRA reports for supervisors and standard comprehensive executive summary reports for commanders). (**T-3**) These documents

and further guidance on their implementation can be found on the ESOH Service Center website (**https://hpws.afrl.af.mil/dhp/OE/ESOHSC/**)

4.3.8.1. Supervisors shall be provided written HRA reports after completion of their individual workplace assessment. (**T-1**) The goal is to provide written reports to supervisors within 20 workdays of the assessment.

4.3.8.2. Commanders shall be provided an out-brief and a written report following completion of the last workplace assessment in the unit. (**T-1**) The goal is to complete the Commander out-brief and written executive summary report within 20 workdays of completing the last workplace assessment in the unit.

4.4. Workplace Monitoring Plan (WMP).

4.4.1. A significant portion of BE resources should be dedicated to the timely execution of WMP tasks. The completion of WMP tasks provides the data required to make data-driven risk mitigation recommendation to commanders. A WMP task may be required to assess changes in a workplace, to evaluate a worker health complaint, or as follow-up to high-risk process HRAs or comprehensive HRAs.

4.4.1.1. Workplace changes or health complaint. BE will create a WMP task and complete a qualitative HRA within 30 days of changes to workplace equipment/practices/procedures, notification of worker health complaint, or new OH concern. (**T-1**) These tasks may be entered in DOEHRS as a one-time periodic survey with a suspense of 30 days. Timely completion of these HRAs are necessary to identify immediate actions to protect health while waiting for additional characterization.

4.4.1.2. High-risk process or comprehensive HRA follow-up. For all other WMP tasks, BE will create, prioritize, and execute tasks according to the timeline in **Table 4.1** (**T-1**) Periodic monitoring for OSHA substance specific standards should be done at the frequency defined in the applicable 29 CFR 1910 regardless of EAP. (**T-0**)

Table 4.1. Exposure Assessment Priority and Assessment Timelines. (T-1)

Priority	EAP Rating	Required Assessment Completion Timeline
Very High	61-125	Within 60 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

4.4.2. WMP task results shall be documented in DOEHRS (**T-0**) in accordance with the applicable USAFSAM DOEHRS DERG. (**T-1**)

4.4.3. Completion of WMP tasks require the update of DOEHRS process information and exposure assessments. (**T-1**)

4.4.3.1. Control recommendations shall be updated when new data are available to verify adequacy. (**T-1**)

4.4.3.2. IH assessment exposure values shall be updated to include new data. (**T-1**) TWA or sample results shall be directly associated to applicable IH assessments in DOEHRS. (**T-1**)

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

4.4.4. USAFSAM standardized monitoring task letter templates and associated DOEHRS reports shall be used to communicate task (e.g., air sampling, noise dosimetry, etc.) results to commanders, supervisors, and affected individuals (**T-3**). The results must be provided within established OSHA substance specific standard reporting timelines (when applicable) (**T-0**). When not governed by OSHA, the goal is to provide results within 20 workdays. Template letters may be edited to meet local unit risk communication needs.

4.4.4.1. BE will establish local procedures to ensure affected individuals receive written notification of WMP task results (e.g., air sampling or noise dosimetry results) within 15 working days. (**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 report completion. (**T-0**)

4.4.4.2. Outcomes from WMP tasks that result in a change to a SEG exposure control category (see **Figure 3.2**) must be presented to the OEHWG, including plans for additional evaluations and recommendations to reduce risk. (**T-3**)

4.5. Summary of Unit Occupational Health Assessments. **Table 4.2** summarizes the workplaces, process(es), frequency, tools and risk communication products required for the various OH assessments.

Table 4.2. Summary of Unit Occupational Health Assessments.

	OH Assessment Type		
	Annual High-Risk Process HRA	**Unit Comprehensive HRA**	**WMP Task**
Workplace	Category 1, High Risk	Category 1, High Risk Category 2, Medium Risk	Category 1 Category 2 Administrative
Assessed Process(es)	High Risk Processes > AL, STEL or Ceiling	All Processes	Process(es) associated with specific WMP task
Assessment Frequency	12 Months (Deployed: every AEF rotation)	36 Months (Deployed: every 18 months)	Task with variable suspense based on EAP, per table 4.1 (60-365 days)
Risk Assessment Tool(s)	- Standardized Weapon System HRA templates - IH RAM - Various DERGS	- Standardized Weapon System HRA templates - IH RAM - Various DERGS	- USAFSAM Laboratory Sampling & Analysis Guide - ASAGE

			- Various technical guides - Various DERGS
Risk Communication Products	Standardized workplace HRA report (supervisor)	- Standardized workplace HRA report (supervisor) - Standardized comprehensive HRA executive summary report (CC)	- Standardized Air Sampling report - Standardized Noise Sampling report - All other tasks, locally developed memorandum for record

Chapter 5

OCCUPATIONAL AND ENVIRONMENTAL MEDICINE

5.1. General Information. Occupational and environmental medicine (OEM) professionals play a critical role in the prevention of work-related injuries and illnesses, and in the promotion of healthy work practices. OEM focuses on the medical surveillance of employees potentially exposed to the hazards identified during unit OH assessments, the physical requirements of the job, and on the prevention, diagnosis, and treatment of occupational injury and illnesses. In the DAF, OEM services may be provided by OMS, FOMC or BOMC (or ARC equivalent) depending on the employee population and size of the MTF.

5.2. Eligibility. Eligibility for Department of the Air Force Occupational and Environmental Medicine Services (5 CFR 339, Medical Qualification Determinations Subparts 104-304 and AFMAN 41-210) is discussed in para **5.2.1** through **5.2.5**.

5.2.1. Regular Air Force and Space Force Members. Regular Air Force and Space Force members are fully eligible for DAF OEM services. They receive care for work related illnesses/injuries in their assigned MTF when the MTF can provide required services or through the TRICARE network as needed.

5.2.2. ARC Members. Air National Guard (ANG) members receive OEM services through the GMU at their assigned wing. Air Force Reserve Command (AFRC) member OEM support is arranged through the RMU. Reserve component workers can receive OEM services through host units per local support agreements.

5.2.3. DoD Civilian Federal Employees (CFE).

5.2.3.1. DoD CFEs receive DAF required medical examinations and assessments from a DAF designated health care provider (HCP) at no cost to the CFE (5 CFR 339.303, *Medical Examination Procedures*; 29 CFR 1910). (**T-0**) 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 AFMAN 41-210). The IOEMC is responsible for ensuring results are of adequate quality to protect the CFE and the interests of the DAF. (**T-1**) The CFE is never to be asked for TRICARE information or third party billing information.

5.2.3.2. 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 commander (See 5 CFR 339 and DoD-M 6055.05. 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 DAF health care provider as their treating physician for the CFEs' Workers' Compensation claimed condition (See sample form, **Attachment 10**). (**T-1**) However, if the CFE previously elected care for the same medical condition through the Office of Workers' Compensation Program (OWCP) from a non-DAF HCP, the CFE must first obtain a written authorization from OWCP to change providers. (**T-1**)

5.2.3.3. The Division of Longshore and Harbor Workers' Compensation (DLHWC) only covers Non-appropriated Fund (NAF) employees for whom only one-time initial care may

be provided (when local policy permits) in a DAF MTF prior to being referred by the NAF liaison to care in the civilian community.

5.2.3.4. 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 (CPS) to learn if any CFEs on base fall in this category.

5.2.3.5. Where resources permit, CFEs can be assessed by a DAF 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.

5.2.3.6. When a DAF HCP (preferably an IOEMC) determines an illness or injury alleged to be work-related by the CFE was not caused by factors of DAF employment, no further care or medical work-up for the condition will be provided by the DAF. (**T-1**)

5.2.3.7. 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. (**T-1**)

5.2.3.8. 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.

5.2.4. Contract workers. Contract workers, unless specifically authorized in writing or by official DoD or DAF policy, are not eligible for care, medical qualification examinations (MQEs) or MSEs in an MTF and shall obtain OEM services through their employer (see AFMAN 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. (**T-1**) (Other rules may apply in a deployed setting or if otherwise covered in an DoD or DAF contract).

5.2.5. Supervisors, DAF JA, CPS. OEM consultative services may be provided to supervisors, DAF JA, CPS and DAF providers as required for official DAF activities.

5.3. Occupational and Environmental Medicine Services Overview.

5.3.1. The scope of OEM practice is broad and involves a diverse mixture of clinical, epidemiological, administrative, and communicative skills. OEM personnel work closely with unit commanders, BE, PH, safety professionals, supervisors and workers in the management of health and safety programs. In the DAF, 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. This chapter is primarily a guide to the DAF HCPs, nurses, and PH personnel who may be responsible for supporting OEM at the base level. Elements of a comprehensive OEM program include:

5.3.1.1. Workplace Evaluation

5.3.1.2. Epidemiology and Trend Analysis

5.3.1.3. Medical Examinations

5.3.1.4. Investigating, Treating and Recording OH Illnesses and Injuries

5.3.1.5. Record Keeping

5.3.1.6. OEM Consultative Services

5.4. Workplace Occupational and Environmental Medicine Evaluation.

5.4.1. **Chapter 3** and **Chapter 4** of this manual define how BE performs unit OH assessments to identify, evaluate, and recommend controls for workplace hazards. OEM and PH staff visit the workplace to become acquainted with the work demands and hazards of their patient population.

5.4.2. Provider and PH Workplace Visit Frequency. DAF providers must visit workplaces with high-risk processes annually (e.g., Category 1 workplaces) (**T-1**) and should aim to visit all workplaces receiving medical surveillance exams (other than audiograms) once per year. Knowledge gained visiting the workplace is extremely valuable as it enables appropriate determination of work limitations, surveillance exam protocols and illness/injury mechanism/causality. PH will conduct workplace visits on all Category 1 and Category 2 shops as specified by **Chapter 4** of this manual and as needed to investigate adverse trend results based on OH surveillance and epidemiological findings. (**T-1**)

5.4.3. Provider Workplace Visit Preparation. The provider should contact the workplace supervisor to schedule the workplace visit. A joint visit with the BE and/or PH technician is ideal but not mandatory. The provider visit is best performed soon after the BE annual or comprehensive HRA. Prior to the visit, the following information is reviewed by the DAF provider:

5.4.3.1. The BE OEHED summary to identify exposures of concern. (**T-2**)

5.4.3.2. Past OEM visit reports and any ongoing assessments. (**T-2**)

5.4.3.3. 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). (**T-1**)

5.4.3.4. The most recent medical surveillance exam protocol (i.e., COHER). (**T-2**)

5.4.3.5. PH trend analysis. If not readily available, ask PH to look for adverse clinical and surveillance information trends within the SEG. If adverse trends are identified, medical records may need to be reviewed by providers to better identify potential causation (e.g., elevated liver functions might suggest exposure to solvents, several cumulative trauma illnesses may suggest an ergonomic problem). (**T-2**)

5.4.4. Conducting the Provider Workplace Visit.

5.4.4.1. 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 they have 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. (**T-1**)

5.4.4.2. An essential element of the evaluation is validating identified physical, biological, chemical and/or radiological hazards, effectiveness of OH controls and assessment of work practices. It is particularly helpful to have a summary of the recommended OH controls (e.g., PPE, ventilation controls, worker rotation) from the most recent BE comprehensive HRA to ascertain what controls are used. Better still is for the DAF 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).

5.4.4.3. If the visit is conducted in response to a particular employee complaint, the specific circumstances surrounding that complaint are thoroughly evaluated. (**T-1**)

5.4.4.4. At the close, the supervisor is informed of any significant findings, recommendations, or the need for additional research or assessment. (**T-1**) They are 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. If necessary to document significant findings, a written report of the workplace visit should be provided to the supervisor within 5 duty-days of the visit.

5.4.4.5. Provider workplace visits will be documented in the OEHWG minutes. (**T-2**)

5.4.5. Conducting the PH Workplace Visit.

5.4.5.1. PH workplace visits may be done in conjunction with BE and/or the DAF provider or nurse. However, it is most beneficial to accompany the BE personnel on the annual or comprehensive HRA.

5.4.5.2. PH 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**)

5.4.5.3. 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 OH 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, 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.

5.4.5.4. PH will inspect lactation rooms in industrial workplaces as part of the normal industrial workplace inspection or at the request of the Commander. (**T-1**) See DAFI 36-3013, *Lactation Rooms and Breast Milk Storage for Nursing Mothers.*

5.4.5.5. Prior to the visit, PH will thoroughly review the most recent BE HRA, MSE compliance and trend analysis findings (based on a records review and audiogram reports), and occupational illness reports. (**T-2**)

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

5.4.5.7. PH workplace visits will be documented in the OEHWG minutes and in ASIMS, when possible. (**T-2**)

5.5. Epidemiology and Trend Analysis.

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

5.5.2. Trend Analysis shall be conducted on:

5.5.2.1. Medical Records (for MSE). When workplaces are presented to the OEHWG following BE's comprehensive and annual HRAs, a medical records review of MSE findings (excluding audiograms) is conducted using the following sampling plan: (**T-1**)

Table 5.1. Records Review Matrix.

# Personnel in Workplace	# of Records Reviewed
< 100	10
101-200	20
201-300	30
301-400	40
401-500	50
>501	50

5.5.2.2. 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 shall be reviewed for the past year looking for potentially undiagnosed OEH-related illnesses (i.e., unexplained rashes possibly related to chemical solvents/jet fuel, nose bleeds possibly related to hexavalent chrome exposure, musculoskeletal injuries possibly related to workplace ergonomic issues, etc.). (**T-1**)

5.5.2.3. 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**)

5.5.2.4. Occupational Illnesses/Injuries (non-Hearing Conservation Program): among assigned workers by workplace, calculate the # and % of workers with occupational illnesses (and injuries if available). (**T-1**)

5.5.2.5. 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). (**T-1**)

5.5.3. The OEHWG shall evaluate findings in the context of known workplace hazards, BE recommendations, PPE, training, and available historic workplace-specific data and trends. (**T-1**) 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**)

5.5.4. 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.

5.6. Medical Examinations.

5.6.1. Evaluation of the health status of an individual exposed to specific stressors or working in certain jobs is essential to achieve a safe and healthy workplace for that individual, their co-workers, and the general public. Occupational medical examinations may be categorized by their purpose. Two types of occupational medical examinations are currently performed: MSEs (e.g., Pre-placement, Periodic, Termination) and MQEs (e.g., Fitness for duty, Fetal Protection, Mental Health, etc.).

5.6.2. Medical Surveillance Exams. The MSE is primarily to determine if similarly exposed workers are adequately protected from exposures of concern.

5.6.3. MSE Background.

5.6.3.1. 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 DAF medical surveillance.

5.6.3.2. MSE protocols are SEG specific. The COHER is used to identify MSE protocols by defining examination, education and training requirements for the workers belonging to each SEG. The COHER for each SEG is approved by the OEHWG. (**T-2**)

5.6.3.3. Examination requirements are driven by potential workplace exposures identified on the SEG specific OEHED summary document, the most appropriate action level, DAF 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. (**T-1**) 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. Certain

OSHA substance specific standards require a separate termination of employment MSE for employees who remain employed by the DAF after previously terminating the potential for further exposure to a covered hazardous exposure (e.g., by transferring out of a particular SEG).

5.6.3.4. The IOEMC determines the MSE requirements contained in the COHER. They must be medically privileged to certify occupational exam requirements. The COHER used to conduct an MSE must be signed and dated by the IOEMC. (**T-1**) Guidance for required or recommended immunizations may be included on the COHER.

5.6.4. Basis for MSE protocols.

5.6.4.1. Preparation of requirements begins with awareness of relevant guidance in OSHA substance specific standards, DoDM 6055.05, DAFMAN 48-123, *Medical Examination and Standards*, DAFI 48-145, ACGIH BEIs, AIHA *Exposure Assessment Strategy*, and this manual.

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

5.6.4.3. 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.

5.6.4.4. Baseline MSE.

5.6.4.4.1. Baseline examinations shall be performed prior to work in a SEG when required by 29 CFR 1910, and 29 CFR 1926.62, *Safety and Health Regulations for Construction*, Part 26, *Lead* (**T-0**)

5.6.4.4.2. 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.

5.6.4.5. Periodic MSE.

5.6.4.5.1. Periodic MSEs are typically annual; however, some exposures may require more frequent monitoring per OSHA standard.

5.6.4.5.2. 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.

5.6.4.6. Termination MSE.

5.6.4.6.1. Termination MSEs may be classified as either termination of employment exams or termination of exposure exams (see **Attachment 1**). Depending on the exposure, there may be allowances for counting the last periodic examination as the termination exam per OSHA, DoD or DAF guidance. Where not otherwise required,

an MSE accomplished within 180 days of termination may serve as the termination examination. (**T-1**)

5.6.4.6.2. Some OSHA substance specific 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**)

5.6.4.6.3. 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) 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 and supervisor notified of refusal. If at the time of termination of employment the worker is within 6 months 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**)

5.6.4.7. MSE Scheduling.

5.6.4.7.1. MSE scheduling is arranged by OMS. When there is no OMS, it is accomplished by either BOMC or PH. (**T-1**) PH maintains good communication with the supervisors for each SEG so the supervisor can 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 current personnel rosters are maintained and validated every three (3) months in ASIMS. (**T-2**)

5.6.4.7.2. The SGP ensures MSE scheduling, administration, reporting, and follow up are accomplished in accordance with DAFI 48-145; the local scheduling process will be documented in the OEHWG minutes. (**T-1**)

5.6.4.7.3. PH tracks MSE completion and coordinates with supervisors to maximize completion rates and minimize impact on mission where possible. (**T-2**) As requested, PH will work with the GPM to address no-show occupational health appointments per AFI 44-176, *Access to Care Continuum*. (**T-3**)

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

5.6.4.7.5. By the fifth work day of each month, BOMC or OMS report to both PH and the IOEMC the number of outstanding MSE requirements that have not been closed

out and completed within 4 weeks of the initial clinic visit. (**T-2**) The applicable ARC medical clinic will report non-compliance to the GMU IOEMC at the next scheduled OEHWG. (**T-2**)

5.6.4.7.6. For AFRC Host Bases, unless specified otherwise in a host-tenant support agreement:

5.6.4.7.6.1. The AFRC 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**)

5.6.4.7.6.2. 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**)

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

5.6.4.7.7.1. When practical, exams are arranged to correspond with the annual review of the COHER, which is in turn tied to the BE's comprehensive HRA for 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**)

5.6.4.7.7.2. 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**)

5.6.4.7.7.3. Regardless of the scheduling system used for Category 1 and 2 workplaces, the current OEHED summary and MSE protocol (COHER) are filed in the employee medical record. For deployed settings, workers who belong to a SEG with an OEHED should have a copy filed in their medical record (hardcopy DD Form 2766, *Adult Preventive and Chronic Care Flowsheet*, or electronically if resources allow) prior to departure from the deployed location. (**T-1**)

5.6.4.8. MSE Compliance Reporting.

5.6.4.8.1. MSE compliance rates are reviewed at the OEHWG, Aerospace Medicine Council, Executive Committee 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 unit commander and SEG supervisor. (**T-2**)

5.6.4.8.2. 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) after notification by PH or the clinic scheduler, the IOEMC shall 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 when the MSE is 30 days or greater overdue. (**T-3**) 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.

5.6.4.9. Special MSE Considerations.

5.6.4.9.1. 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**)

5.6.4.9.2. A number of the OSHA substance specific standards (standards containing detailed instruction regarding the management and medical management of hazardous materials, contained in 29 CFR and associated subparts) 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**)

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

5.6.4.9.4. All OSHA substance specific standards require a written medical opinion from the examing physician following the MSE within the timeframe specified by OSHA. (**T-0**)

5.6.4.9.5. While letters from the DAF HCP to both the employee and supervisor do not have to be sent for all MSEs, this is done at the Air Logistic Complexes 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 substance specific standard requirements, the following content may be appropriate:

5.6.4.9.5.1. Letter to supervisor: the supervisor is informed that the CFE or Regular Air Force or Space 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**) The actual results of studies and labs and any medical findings and diagnoses are not included in the letter. (**T-3**)

5.6.4.9.5.2. 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 or Space 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 or Space Force member is advised to seek care at the MTF and the CFE with their private physician. (**T-2**) Any relevant lab or study results are provided to the employee to take to their provider. (**T-3**) If additional work-up or treatment is needed in the DAF MTF, the CFE or Regular Air Force or Space Force member is informed. (**T-3**)

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

5.6.4.9.6.1. 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**)

5.6.4.9.6.2. 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**)

5.6.4.9.6.3. 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).

5.6.4.9.6.4. 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.

5.6.5. Medical Qualification Exams. The MQE is to determine if workers are medically able to perform in their assigned positions. **Note**: Except where Regular Air Force or Space Force members are specifically identified, this section only applies to CFEs; medical qualification of Regular Air Force or Space Force members is covered in AFI 48-133, *Duty Limiting Conditions.*

5.6.5.1. MQE Background.

5.6.5.1.1. 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.

5.6.5.1.2. CPS requests a DAF 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 a DAF HCP recommendation for regular duty or restricted duty following an annual firefighter physical or whenever a new medical condition is identified by the DAF provider). (**T-1**) CPS works with the supervisor to ensure the DAF 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.

5.6.5.1.3. When a DAF provider performs a MQE, they are acting as the Agency Medical Officer and they assess each identified potentially limiting medical condition relative to the functional requirements and environmental factors of the position. They determine 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 DAF provider does not recommend termination or separation of an employee.

5.6.5.1.4. CPS working with the supervisor, not the DAF provider, decides if recommended medical limitations and restrictions can and will be accommodated and whether a worker will be retained or terminated. (**T-1**) They determine if a CFE's request for reasonable accommodation will be supported or denied. (**T-1**)

5.6.5.1.5. If a CFE attempts to secure a benefit from their supervisor or the DAF for a medical condition, the CFE should obtain an examination at their own expense outside of the DAF (5 CFR 339.304, *Payment for Examination*). (**T-1**)

5.6.5.1.6. A DAF provider must not perform a MQE on a CFE for the purpose of determining eligibility for coverage under the Family Medical Leave Act. (**T-1**)

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

5.6.5.2. Sources of information required to perform MQEs.

5.6.5.2.1. CPS, working with the supervisor, is responsible for identifying the functional requirements, environmental factors and any applicable medical standards on the Optional Form 178 (OF 178), *Certificate of Medical Examination,* or equivalent future 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 DAF provider must be provided a means of accessing the medical standard. (**T-1**)

5.6.5.2.2. The CFE is asked to provide the DAF 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:

5.6.5.2.2.1. When the job involves safety or security sensitive activities, the CFE is asked if they have any active Workers' Compensation claims or Veterans Affairs (VA) accepted conditions. If there is an active Workers' Compensation claim, they must provide the DAF 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 DAF provider for review. (**T-1**)

5.6.5.2.2.2. 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 DAF 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.

5.6.5.2.2.3. 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 DAF 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 DAF 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 military health system, 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.

5.6.5.2.3. A CFE (employee or applicant) may not be disqualified for any position solely on the basis of medical history. For positions subject to medical standards and/or physical requirements, and for positions under medical evaluation programs, a history of a particular medical condition may result in medical disqualification only if the condition at issue is itself disqualifying, recurrence of the condition is based on reasonable medical judgment, and the duties of the position are such that a recurrence of the condition would pose a significant risk of substantial harm to the health and safety of the applicant or employee or others that cannot be eliminated or reduced by reasonable accommodation or any other agency efforts to mitigate risk.

5.6.5.2.4. The DAF provider clinical assessment must include review of any information provided by the CFE from their private provider. (**T-3**)

5.6.5.3. Fitness for Duty Examinations (FFDEs), including New Hire Pre-placement FFDEs.

5.6.5.3.1. Requests for formal FFDEs are made by CPS, in coordination with the supervisor, in writing and are accompanied by an OF 178 or equivalent future 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 DAF 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 DAF 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 their assigned position; or (4) as required periodically by DoD or DAF 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**)

5.6.5.3.2. The primary purpose for performing a formal FDE 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.

5.6.5.3.3. 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 13 of DAFI 36-2710, *Air Force Equal Opportunity Program*.

5.6.5.4. Security Clearance MQEs and Record Reviews.

5.6.5.4.1. The Personnel Security Program requires initial and periodic review of medical records by a DAF 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 (DoDM 5200.02_AFMAN 16-1405, *Air Force Personnel Security Program*). These reviews may be requested by the employee's servicing security activity.

5.6.5.4.2. Disqualifying conditions include those that would be expected to cause defective judgment or reliability (see DoDM 5200.02_AFMAN 16-1405). A review may reveal the need for additional information in the form of a DAF 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).

5.6.5.4.3. 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 mental health assessment of a CFE must be done in accordance with the guidance provided elsewhere in this chapter.

5.6.5.5. 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 DoDMAN5200.02_AFMAN16-1405. The medical portions of these programs are managed under the direction of the local SGP.

5.6.5.6. Medical Standard Based MQEs.

5.6.5.6.1. 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, Medical Evaluation Programs).

5.6.5.6.2. 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 DAF provider in considering those medical conditions that may interfere with the safe performance of assigned functions in the assigned workplace.

5.6.5.6.2.1. When a DAF provider assesses a CFE for medical qualification and applicable medical standards or guidance exist, the DAF 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 mental health conditions for which there may be no medical standard, based on the knowledge and judgment of the DAF provider. In other words, a CFE is not summarily restricted or disqualified based on a diagnosis or medical history. (**T-0**)

5.6.5.6.2.2. The DAF provider must provide adequate documentation in the medical record to make it clear they 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 DAF 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.

5.6.5.6.2.3. The DoD and DAF have published medical standards for various positions and functional requirements. For example, DODM 5200.02, *Procedures For the DoD Personnel Security Program (PSP)*, describes mental health conditions that may be disqualifying for activities requiring a security clearance. DoDM 6055.05, and AFI 31-118 *Security Forces Standards and Procedures*, provides medical standards and guidance for DoD civilian police. The DAF has published "Technical Implementation Guide 1582-18 for 2018 NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*" (available on the Occupational Medicine AFMS Knowledge Exchange).

5.6.5.6.2.4. Medical standards can change on a schedule independent from this publication and can be found on the DAF and DoD electronic publication web pages or the Occupational Medicine webpage on the DHA Knowledge Exchange. The DAF typically adheres to the OSHA 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, *Respiratory Protection*, 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).

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

5.6.5.6.2.6. 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 a DAF or DoD medical standard. (For example, medical exam requirements for firefighters have been bargained locally).

5.6.5.7. Disability Retirement Package Reviews and MQEs.

5.6.5.7.1. When a CFE applies for disability retirement or when it appears the DAF must make the application on behalf of a CFE, CPS may request a DAF provider review application materials and make a written statement back to CPS commenting on whether or not the materials provided support the United States Office of Personnel Management (OPM) medical requirements for disability retirement. It is the employee's responsibility (when capable) to obtain and submit required medical information in support of their application.

5.6.5.7.2. The OPM criteria for disability retirement that pertain to the DAF 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.

5.6.5.7.3. 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**)

5.6.5.7.4. If the reviewing DAF provider determines they need to perform a direct clinical assessment, they may recommend CPS make a written offer to the employee (or the employee's guardian) to have the DAF 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 DAF provider requesting the examination and explaining the offer was accepted by the employee or guardian. (**T-2**)

5.6.5.8. Pregnancy and Fetal Protection Assessments.

5.6.5.8.1. Fetal Protection/Reproductive Risk Program. All workers, to include CFE, Regular Air Force and Space Force, and Air Reserve Components, 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 HRAs. 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 DAF 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 DAF 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 and Space Force members to PH. (The Pregnancy Discrimination Act of 1978 (Public Law 95-555, 92 Stat. 2076))

5.6.5.8.1.1. Pregnant Regular Air Force, Space Force and Traditional Reserve (TR) members.

5.6.5.8.1.1.1. Notification. DAF providers managing a pregnancy must notify PH at the time of the positive pregnancy test and recommend limitations via direct referral from the provider or clinic staff, by an AF Form 469, *Duty Limiting Condition Report,* initiated by the provider, or through other appropriate, locally developed means IAW AFI 48-133 and 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 DAF 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 and Space Force with civilian provider).

5.6.5.8.1.1.2. Fetal Protection Health Risk Assessment. When assessing risks to the fetus in industrial workplaces, 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 and include IH assessment exposure data (when available); a shop level assessment is inappropriate for work placement considerations. BE shall maintain pregnant member's privacy when performing

this assessment to ensure other members of the shop are not made aware of the pregnancy (i.e., do not call the supervisor and inform them you will be conducting a fetal health risk assessment). (**T-1**) Instead, interview the pregnant member on the specific processes she conducts. Fetal protection HRAs shall be completed within 5 days of referral, see AFI 48-101. (**T-1**) BE may use CHET as a resource to help identify chemicals that are reproductive hazards.

5.6.5.8.1.1.3. Duty Restrictions. In coordination with PH, the DAF provider reviews the fetal protection HRA for workplace exposures of concern relative to the pregnancy and then recommends appropriate work restrictions, if applicable, to the supervisor. Templates with evidence-based duty restriction recommendations are available in ASIMS, however providers should modify, and update, the provided verbiage as required for the specific risks of the individual member. (**T-2**)

5.6.5.8.1.1.4. Provider Review. All pregnancy related AF Forms 469 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). Workplace specific duty restrictions shall be provided within 15 days of referral, see AFI 48-101, AFI 48-133 and AFI 44-102 for additional guidance.

5.6.5.8.1.2. Pregnant Civilian Federal Employee Voluntary Assessment.

5.6.5.8.1.2.1. Notification & Fetal Protection HRA. 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 and Space Force members). PH drafts a letter for the worker listing any recommended changes to the worker's duties in potentially hazardous environment and forwards the electronic copy to the IOEMC appointed physician.

5.6.5.8.1.2.2. Medical Exam. 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.) 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**)

5.6.5.8.1.2.3. Work Limitation Recommendations. 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.

5.6.5.8.1.2.4. Release to the Workplace Supervisor. The provider will send work limitation recommendations directly to the pregnant CFE's supervisor after release from the CFE and only if those recommendations are based on a direct threat to the health or safety of the worker or co-workers. (**T-0**)

5.6.5.9. Breast Feeding Assessments.

5.6.5.9.1. 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.

5.6.5.9.2. Shop supervisors should remind Regular Air Force, Space 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.

5.6.5.9.3. 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 CFE only, and a copy placed in the medical record. These recommendations are subject to medical confidentiality rules. Should the CFE wish to seek alteration of job duties based on the recommendations, the worker may provide a copy of the letter to the supervisor. For Regular Air Force and Space Force members, see AFI 44-102 and MAJCOM implementing guidance.

5.6.5.10. Mental Health MQEs.

5.6.5.10.1. Mental Health Consults: before ordering the mental health consult, the medical record entry should clearly show if the consult is being ordered or offered and for what reason.

5.6.5.10.1.1. Ordering a mental health assessment. The DAF may order a mental health 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 mental health examination is specifically required for medical qualification for a position according to written medical standards. (**T-1**)

5.6.5.10.1.2. Offering a mental health assessment. When a CFE does not meet the criteria to order a mental health examination, the DAF 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 mental health condition or when the individual has a performance or conduct problem which may require DAF action.

5.6.5.10.2. The consult will only be used to inquire into a person's mental fitness to successfully and safely perform the duties of their position without undue hazard to the CFE or others (5 CFR 339.301, *Authority to Require an Examination*). (**T-0**)

5.6.5.10.3. A CFE who claims they have a mental health 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 DAF provider from the CFE's treating HCP.

5.6.5.10.3.1. If, after review of the CFE's outside medical information, the DAF provider determines an additional DAF 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 mental health assessment, but the CFE is unwilling to pay for an evaluation because they think there is nothing wrong with him or herself and is willing to submit to a mental health evaluation; then the DAF provider may order or offer (see above) a mental health consult (see additional criteria below). Mental health functional tests alone (without an assessment by a psychologist or psychiatrist) are inadequate evidence upon which to determine fitness for duty.

5.6.5.10.3.2. Before offering or ordering a mental health assessment, the DAF 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 DAF provider will not tell the unit or organization the diagnosis or type of provider required.

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

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

5.6.5.10.3.5. The DAF 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.

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

5.6.5.10.3.7. The quality of the evaluation can be greatly enhanced by giving the consulting mental health provider approval to conduct psychological testing if needed. If the assessment is being done in the local MTF, the DAF 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.

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

5.6.5.10.3.9. The consulted mental health provider must not be the CFE's treating provider and preferably has no direct ties or obligations to the treating mental health HCP. (**T-1**)

5.6.5.10.3.10. The following questions are recommended for inclusion in the

consult: has the CFE been and are they responsible for their 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 mental health assessment? Did the CFE authorize the evaluating mental health care provider to talk to their 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.

5.6.5.11. Workers' Compensation Case Assessment MQEs.

5.6.5.11.1. The DAF 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**)

5.6.5.11.2. When a CFE has an OWCP recognized treating physician for a work related condition other than the DAF 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 DAF provider. (**T-0**) However, the DAF provider may recommend to the supervisor and to CPS additional or more restrictive work limitations. To aid in returning an injured employee to suitable employment, the employer may also contact the employee's physician in writing concerning the work limitations imposed by the effects of the injury and possible job assignments. (However, the employer shall not contact the physician by telephone or through personal visit.) When such contact is made, the employer shall send a copy of any such correspondence to OWCP and the employee, as well as a copy of the physician's response when received. The employer may also contact the employee at reasonable intervals to request periodic medical reports addressing his or her ability to return to work.

5.6.5.11.3. In accordance with 20 CFR 10.506, *Claims for Compensation Under the Federal Employees' Compensation Act*, the DAF 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). (**T-0**) The DAF has a right to request and obtain copies of the treatment records in a compensation case without a release from the employee (DAF providers make such requests through Air Force Personnel Center Injury Compensation Program (AFPC IC) or through the OWCP district office). Refusal on the part of an employee to release OWCP related information or to submit to a DAF ordered examination may adversely impact the CFE's future employment with the DAF.

5.6.5.11.4. The DAF is authorized to require a CFE who has an active OWCP claim to submit to a medical assessment performed by a DAF 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 a DAF ordered examination may adversely impact the CFE's OWCP claim and future employment with the DAF.

5.6.5.11.5. If a DAF provider determines the OWCP treating physician limitations are inappropriately restrictive, they can send a written explanation to the treating provider regarding the ability of the unit/organization to potentially accommodate the worker. They 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.

5.6.5.11.6. 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 (JA) and ensure there is a written request from CPS before assessing the legitimacy of a NAF employee's compensation case restrictions.

5.6.5.12. Non-work Related Medical Condition Assessment MQEs.

5.6.5.12.1. A supervisor or CPS may obtain medical advice from the DAF 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 a DAF provider when either believes the CFE may be medically unfit to safely perform assigned duties and the employee agrees to the assessment.

5.6.5.12.1.1. Non-OEM physicians in civilian communities may have a limited understanding of the principals of OEM. Most are not as familiar as the DAF provider with the work requirements and work environment of DAF 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.

5.6.5.12.1.2. When a DAF provider evaluates a CFE's ability to return to duty, they make 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.

5.6.5.12.1.3. The DAF 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.

5.6.5.12.1.4. Studies show returning CFEs safely and expeditiously to productive work not only benefits the DAF 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.

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

5.6.5.12.1.6. 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 DAF provider for assessment of return to duty, the CFE is required to provide the DAF 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).

5.6.5.12.1.7. The evaluating DAF 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.

5.6.5.12.1.8. If there is a question regarding the duration of the recommended limitations, the DAF provider may consult an authoritative source (such as the DoD-provided access to **www.mdguidelines.com** on the DHA Kx) that describes the range of time expected following injuries and procedures. The DAF 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 DAF provider at the CFE's expense. The DAF cannot require medical tests of a CFE unless it pays for those tests (5 CFR 339).

5.6.5.12.1.9. The DAF 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 DAF provider to send a letter or talk directly to the outside provider in order to explain work requirements and potential accommodations. The DAF 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 a DAF provider fills out or DAF 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."

5.6.5.12.2. Supervisor requests for treating physician medical information.

5.6.5.12.2.1. A supervisor or CPS may consult with a DAF 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.

5.6.5.12.2.2. If the DAF provider determines outside medical information is required in order to advise the supervisor or CPS, they 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 DAF provider (with a signed release):

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

5.6.5.12.2.2.2. A note identifying the relevant medical diagnosis or diagnoses, including the current clinical status, the employee'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.

5.6.5.12.2.2.3. 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**)

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

5.6.5.12.4. 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). An agency may order a mental health examination (including a psychological assessment) only when:

5.6.5.12.4.1. The result of a current general medical examination that the agency has the authority to order under this section indicates no physical explanation for behavior or actions that may affect the safe and efficient performance of the applicant or employee, the safety of others, and/or the vulnerability of business operation and information systems to potential threats, or

5.6.5.12.4.2. A mental health examination or psychological assessment is part of the medical standards for a position having medical standards or required under a medical evaluation program established under this part.

5.6.5.13. 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 DAF provider recommends appropriate duty restrictions to the worker's supervisor (or commander).

5.6.5.14. Special MQE Considerations.

5.6.5.14.1. DAF Equal Opportunity Program, DAFI 36-2710.

5.6.5.14.1.1. It is unlawful for the DAF 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). DAF 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:

5.6.5.14.1.2. 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 they have a family history of heart disease or diabetes but would not be asked if they have a family history of cancer or history of "chronic medical conditions." Prior to the DAF 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."

5.6.5.14.1.3. 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 DAF provider.

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

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

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

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

5.6.5.14.1.4.4. The employee is informed of individual monitoring results.

5.6.5.14.1.4.5. Only aggregate information that cannot identify specific

individuals can be shared with DAF leadership.

5.6.5.14.1.5. DAF OEM Medical Records:

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

5.6.5.14.1.5.2. 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 DAF policy."

5.6.5.14.1.5.3. Outside medical records released to the DAF provider which contain a family medical history are filed in the DAF medical record. DAF 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**)

5.6.5.14.1.5.4. 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 Regular Air Force, Space Force and CFE.

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

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

5.6.5.14.2.2. The DAF 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 DAF provider recommendations/limitation is determined by the supervisor, not the provider.

5.6.5.14.2.3. In accordance with the Health Insurance Portability and Accountability Act (HIPAA), specific details about a CFE's medical condition are not communicated to leadership or CPS without prior consent of the CFE. For example, if a CFE is unable to perform essential job functions because of a heart condition, the supervisor may be told the minimum amount necessary to communicate that the CFE is not fit to perform specific duties. This complies with HIPAA's minimum necessary rule of disclosure as outlined in Title 45, Public Welfare, CFR 164, *Security and Privacy* (45 CFR 164.502(b), 164.514(d). However the actual diagnosis and medications will not be disclosed by the DAF provider without consent of and written authorization from the CFE (Reference

DoDM 6055.05, DAFMAN 48-123, DAFI 48-145) (**T-0**)

5.6.5.14.2.4. If the CFE wishes to be accommodated in the position, they will have to disclose sufficient medical information to establish that they have 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).

5.6.5.14.2.5. 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**)

5.6.5.14.2.6. 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 their job on a permanent basis or for the foreseeable future, the DAF provider makes a recommendation to the supervisor that there is a need for a formal FFDE (without disclosing the diagnosis). (**T-1**)

5.6.5.14.3. Family Medical Leave Act of 1993 (29 USC 2601 – 2619), (FMLA). DAF 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 DAF 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 DAF provider is not allowed to serve as a second or third medical opinion in these cases as is explained in 29 CFR 825.307, *The Family and Medical Leave Act of 1993*.

5.7. Occupational Illnesses and Injuries.

5.7.1. Investigating Occupational Illnesses and Injuries.

5.7.1.1. Injury vs. illness, OSHA definitions:

5.7.1.1.1. Work relationship is established under the OSHA recordkeeping system when an injury or illness results from an event or exposure in the work environment. The general rule is that all injuries and illnesses which result from events or exposures on the employer's premises are presumed to be work related. Furthermore, if it seems likely that an event or exposure in the work environment either caused or contributed to the case, the case is considered work related. It is sufficient for an exposure to only be a contributing and/or aggravating factor to establish work relationship for OSHA recordkeeping purposes.

5.7.1.1.2. An occupational injury is a medical condition that result from an instantaneous event or exposure. Injuries include cases such as, but not limited to, a cut, fracture, sprain, or amputation.

5.7.1.1.3. An occupational illness is defined as any abnormal condition or disorder resulting from a non-instantaneous event or exposure in the work environment. Illnesses include both acute and chronic illnesses, such as, but not limited to, a skin disease, respiratory disorder, or poisoning.

5.7.1.2. Providers may consult directly with BE, PH, and safety 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.

5.7.1.3. For the purposes of injury and illness reporting, the employee's home may be considered the workplace if the member is working from home if the injury or illness occurs while the employee is performing work for pay or compensation in the home, and the injury or illness is directly related to the performance of work rather than to the general home environment or setting.

5.7.1.4. 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.

5.7.1.5. 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.

5.7.1.6. 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.

5.7.1.7. 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 they drove to work or the clinic).

5.7.1.8. 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 DAF provider /clinic or private provider).

5.7.1.9. When determining causality, the DAF 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, *Recording and Reporting Occupational Injuries and Illnesses,* Subpart 5, *Determination of Work Relatedness* (**http://www.osha.gov/**). These OSHA criteria must be applied when the DAF provider determines work relatedness in AFSAS. However, when determining causation in the medical record, the DAF provider uses the criteria outlined in the Department of Labor (DoL) publication CA-810, *Injury Compensation for Federal Employees* (**http://www.dol.gov/**).

5.7.1.10. 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.

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

5.7.1.12. For an illness, if the DAF provider determines it is work related, they document 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 employee's expense. If a claim is disallowed by OWCP but the DAF provider is certain the claim should be allowed, the DAF 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.

5.7.1.13. For an injury, once a DoL Form CA-16, *Authorization for Examination,* 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,).

5.7.2. Treating Occupational Illnesses and Injuries.

5.7.2.1. Regular Air Force and Space 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 or Space Force member can be referred to or sent for a consult from a DAF OEM provider where this service is available. Occupational illnesses are brought to PH's attention for investigation and reporting.

5.7.2.2. DAF 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 (FECA) of 1971 (5 USC Chapter 81) which covers the majority of DAF CFEs; Division of Longshore and Harbor Workers Compensation (DLHWC) which covers 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.

5.7.2.3. If an eligible CFE seeks definitive and ongoing care for a work related condition at a DAF clinic capable of providing that care, the CFE must make a written, signed and dated decision to either choose the DAF clinic or a private provider as their 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-DAF provider. (**T-0**)

5.7.2.4. 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 DAF 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 DAF provider must not phone the private provider to discuss an OWCP case, but may communicate in writing while adhering to appropriate release requirements.

5.7.2.5. Once the CFE has chosen a treating provider and has notified OWCP, the CFE cannot change their OWCP treating provider until they obtain written approval from OWCP.

5.7.2.6. The DAF 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 DAF MTF. (**T-0**)

5.7.2.7. A DAF 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. (**T-0**) A DAF 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 DAF provider may provide medical care, if the CFE is otherwise authorized, and work limitations as appropriate.

5.7.2.8. OWCP Forms. An acutely injured non-NAF CFE requiring emergency care outside the DAF MTF obtains an authorization for payment in the form of a DoL Form CA-16 from their supervisor. Application for a claim is made by the CFE on a DoL Form CA-1, *Federal Notice of Traumatic Injury and Claim for Continuation of Pay/Compensation,* for injuries, on a DoL Form CA-2, *Notice of Occupational Disease and Claim for Compensation,* for illnesses, and on a CA-2A for a recurrence of an illness or injury.

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

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

5.7.2.11. 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). (**T-0**) A DAF 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).

5.7.2.12. The DAF provider can also request OWCP assign a nurse case manager to a case. DAF 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**)

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

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

5.7.2.14.1. 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.

5.7.2.14.2. A NAF employee with a work related injury or illness typically obtains care outside the local DAF 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 a DAF provider when requested by CPS in writing and the MTF resources are sufficient to support (AFMAN 41-210).

5.7.2.15. 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.

5.7.3. Recording Occupational Illnesses and Injuries.

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

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

5.7.3.3. All work related industrial illnesses presenting to the MTF are entered into AFSAS by PH with a workplace evaluation entered by BE, and a final determination of work relatedness entered by the IOEMC designated DAF provider; safety 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**).

5.7.3.4. OSHA does not require the OSHA 301 form or its equivalent to be completed by a medical person (OSHA Recordkeeping Handbook, **https://www.osha.gov/recordkeeping/entry-faq**), but this does not relieve the DAF clinic staff of the responsibility to do so when required by their governing policy.

5.7.3.5. When the OSHA 301 form or equivalent is completed in clinic, a copy is placed in the DAF medical record. (**T-0**)

5.7.3.6. Privacy. Under the below circumstances, the clinic must coordinate with the installation Safety office to ensure CFE names are not placed on the OSHA 300 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:

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

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

5.7.3.6.3. Mental illnesses.

5.7.3.6.4. HIV infection, hepatitis, or tuberculosis.

5.7.3.6.5. 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).

5.7.3.6.6. Other illnesses, if the employee independently and voluntarily requests that their name not be entered on the log.

5.8. Occupational and Environmental Medicine Recordkeeping.

5.8.1. 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., OEHED, 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 according to AFI 41-200, *Health Insurance Portability and Accountability Act (HIPAA).* Additional documentation maintained by PH will be up to local discretion. (**T-1**)

5.8.2. Medical information (medical records, forms, letters, diagnoses, medications, etc.) for DAF CFEs in general 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. (Reference DoDM 6055.05, DAFMAN 48-123, DAFI 48-145, and the Rehabilitation Act of 1973.)

5.8.3. 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*).

5.8.3.1. 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 1630.14, *Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act*, Part 14, *Medical examinations and inquiries specifically permitted*).

5.8.3.2. 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**)

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

5.9. Occupational and Environmental Medicine Consultative Services.

5.9.1. General Consultative Services. DAF 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, DAF providers, PH, and BE. External customers include SE, base leadership, Public Affairs, JA, CPS, supervisors of civilian employees and others.

5.9.1.1. The IOEMC guides the uniform and consistent application of occupational and environmental medical decisions and local policies.

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

5.9.1.2.1. 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 DAF employees.

5.9.1.2.2. 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 DAF/DoD policy and local/state/federal requirements. The IOEMC participates in installation ESOH councils.

5.9.1.2.3. Expert review and analysis of medical documentation and other materials submitted by the DAF 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.

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

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

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

5.9.1.2.5.2. 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.

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

5.9.1.2.5.4. Research and analysis of complex legal and medical issues in coordination with DAF labor attorneys.

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

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

5.9.2. FECA Working Group or equivalent.

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

5.9.2.2. The IOEMC or appointed DAF 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.

5.9.2.3. The IOEMC or DAF 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.

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

5.9.3. Case Management.

5.9.3.1. 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).

5.9.3.2. Communication with OWCP is arranged when performing local case management to avoid conflicts with OWCP nurse case management activities. A DAF case manager should not interfere with the activities of the OWCP case manager.

5.10. Occupational and Environmental Medicine Civilian Federal Employee (CFE) Examinations and Assessments that Exceed Local Medical Treatment Facility Capability.

5.10.1. 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 DAF and when the local MTF has the resources to support the required activity (see 5 CFR 339.301-304 and AFMAN 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 AFMAN 41-210. (See **Attachment 9** of this manual for a sample of a Commander's Authorization Packet).

5.10.2. DAF HCP Request for Outside Examination or Assessment.

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

5.10.2.1.1. The outside consult, study, laboratory test, or examination is required by the DAF in order to comply with a law or official policy, and the local MTF cannot support internally (e.g., OSHA standard 29 CFR 1910.95,*Occupational Noise Exposure,* requires interpretation of abnormal audiograms by a qualified HCP but the MTF has no qualified HCP).

5.10.2.1.2. 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, their 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 DAF 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.

5.10.2.1.3. 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 DAF HCP judges the medical assessment or recommendations are inaccurate or inappropriate. However, the AF HCP does not believe they can defend a contrasting medical opinion without obtaining a medical consult, study, laboratory test or examination.

5.10.2.2. Tracking the referral process may be facilitated by use of a tracking form (see sample in **Attachment 11**).

5.10.2.3. The IOEMC approves or rejects requests for a "Line of the Air Force or Space Force" unit or organization funded consult, study, laboratory test or examination. The IOEMC is responsible for ensuring the consult appropriately supports a legitimate DAF 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**)

5.10.3. 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 AFMAN 41-210. (**T-2**) Bases with pre-existing agreement between the "Line of the Air Force or Space Force" 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**)

5.11. DoD Expeditionary Civilian Workforce (DoD-EC).

5.11.1. 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 DAFI 48-122, *Deployment Health* for guidance and criteria). DAF 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 or equivalent form in addition to the standards identified in DoDI 6490.07.

5.11.2. 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 DAFI 48-122.

5.11.3. 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 AFMAN 41-210 for a more detailed explanation of beneficiary status)

5.11.4. 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 of that specific illness, disease, wound or injury in an MTF at no cost to the CFE pending adjudication by OWCP. (See DoDI 6490.03; and Health Affairs Policy 08-002, *Policy for Billing Care Furnished by Military Treatment Facilities to Federal Employees for On-the-Job Injuries and for Occupational Health*.)

5.11.5. 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.

5.12. Travel Medicine.

5.12.1. DAF 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 a DAF provider. PH assists by providing travel medicine information and recommendations to the provider. See DAFI 48-122 and AFMAN 48-105, *Public Health Surveillance* for additional details.

5.13. Education and Training for DAF Providers, Nurses and Technicians.

5.13.1. The IOEMC and full time OEM providers attend CME conferences on a regular basis to maintain currency and appropriate licensure and/or certifications. (T-0) 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.

ROBERT I. MILLER
Lieutenant General, USAF, MC, SFS
Surgeon General

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

5 CFR 339, *Medical Qualification Determinations Subparts 104-304*

5 CFR 339.104, *Medical Evaluation Programs*

5 CFR 339.205, *Medical Evaluation Programs*

5 CFR 339.301, *Authority to Require an Examination*

5 CFR 339.303, *Medical Examination Procedures*

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29 CFR 1910.94, *Ventilation*

29 CFR 1910.95, *Occupational Noise Exposure*

29 CFR 1910.132-140, Subpart I, *Personal Protective Equipment*

29 CFR 1910.134, *Respiratory Protection*

29 CFR 1910.1000-1051, *Subpart Z, Toxic and Hazardous Substances*

29 CFR 1910.1001, Asbestos

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

29 CFR 1910.1096, *Toxic and Hazardous Substances: Ionizing Radiation*

29 CFR 1926.62, *Safety and Health Regulations for Construction*, Part 62, *Lead*

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

45 CFR 164, *Security and Privacy*

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AF Form 469, *Duty Limiting Condition Report*

AF Form 190, *Occupational Illness/Injury Report*

DAF Form 847, *Recommendation for Change of Publication*

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)*

DoL Form CA-1, Federal Notice of Traumatic Injury and Claim for Continuation of Pay/Compensation

DoL Form CA-2, Notice of Occupational Disease and Claim for Compensation

DoL Form CA-2A, Notice of Recurrence

DoL Form CA-16, Authorization for Examination and/or Treatment

DoL Form CA-18, Federal Employee's Notice of Traumatic Injury and Claim for Continuation of Pay/Compensation

DoL Form CA-20, Attending Physician's Report

Abbreviations and Acronyms

ACGIH—American Conference of Governmental Industrial Hygienist

AEGL—Acute Exposure Guideline Levels

AFCAMP—Air Force Comprehensive Asset Management Program

AFGIMS—Air Force Geographical Information Management System (AFGIMS)

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFMRA—Air Force Medical Readiness Agency

AFMS—Air Force Medical Service

AFPAM—Air Force Pamphlet

AFPC IC—Air Force Personnel Center Injury Compensation Program

AFSAS—Air Force Safety Automated System

AFSC—Air Force Specialty Code

AFPD—Air Force Policy Document

AFRC—Air Force Reserve Command

AIHA—American Industrial Hygiene Association

AL—Action Level

ANG—Air National Guard

ARC—Air Reserve Component

ASIMS—Aeromedical Services Information Management System

ASM—Aircraft Structural Maintenance

BE—Bioenvironmental Engineering

BEI—Biological Exposure Indexes

BOMC—Base Operational Medicine Clinic

CFE—Civilian Federal Employee

CFR—Code of Federal Regulation

CHET—Chemical Hazard Evaluation Tool

COHER—Clinical Occupational Health Exam Requirements

COHN—Certified Occupational Health Nurse

CPS—Civilian Personnel Services

DAF—Department of the Air Force

DAFI—Department of the Air Force Instruction

DAF EAS—DAF Exposure Assessment Strategy

DAFMAN—Department of the Air Force Manual

DECA—Defense Commissary Agency

DERG—Data Entry and Report Guide

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

DoDM—Department of Defense Manual

DOEHRS—Defense Occupational & Environmental Health Readiness System

DoL—Department of Labor

DRI—Direct Reading Instrument

EAS—Exposure Assessment Strategy

EAP—Exposure Assessment Priority

EHR—Electronic Health Record

EMF—Electromagnetic Field

ER—Exposure Rating

ERPG—Emergency Response Planning Guidelines

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

FLDCOM—Field Command

FMH—Family Medical History

FMLA—Family Medical Leave Act

FOMC—Flight and Operational Medicine Clinic

FSRM—Facilities Sustainment Restoration & Modernization

FUB—Facility Utilization Board

GeoBase—Air Force Geographical Information Management System

GMU—Guard Medical Unit

HAZMAT—Hazardous Material

HCP—Health Care Provider

HEPA—High Efficiency Particulate Air

HER—Health Effects Rating

HIPAA—Health Insurance Portability and Accountability Act

HRA—Health Risk Assessment

HRR—Health Risk Rating

IC—Injury Compensation

IDLH—Immediately Dangerous to Life or Health

IHMOD—AIHA Excel application used for exposure modeling

IH RAM—Industrial Hygene Routine Assessment Methodology

IHSTAT—AIHA Excel application that calculates exposure statistics

IHSkinPerm—AIHA Excel application for estimating dermal absoption

ILER—Individual Longitudinal Exposure Record

IOEMC—Installation Occupational & Environmental Medicine Consultant

IOS—Integrated Operational Support

JA—Judge Advocate / base legal office

LSMTF—Limited Scope Medical Treatment Facility

MAJCOM—Major Command

MEG—Military Exposure Guideline

MQE—Medical Qualification Examination

MSE—Medical Surveillance Examination

MTF—Medical Treatment Facility

NAF—Non-appropriated Fund

NFPA—National Fire Protection Association

NIOSH—National Institute for Occupational Safety and Health

OEL—Occupational Exposure Limit

OEG—Operational Exposure Guideline

OEH—Occupational & Environmental Health

OEHED—Occupational & Environmental Health Exposure Data

OEHWG—Occupational & Environmental Health Working Group

OEM—Occupational & Environmental Medicine

OH—Occupational Health

OMS—Occupational Medicine Services

OPM—United States Office of Personnel Management

OPR—Office of Primary Responsibility

OSHA—Occupational Safety and Health Administration

OWCP—Office of Workers Compensation Program

Para—Paragraph

PEG—Potentially Exposed Group

PEL—Permissible Exposure Limit

PH—Public Health

PPE—Personal Protective Equipment

PT/OT—Physical Therapy/Occupational Therapy

QA—Quality Assurance

QC—Quality Control

RAC—Risk Assessment Code

RM—Risk Management

RMU—Reserve Medical Unit

RSD—Regularly Scheduled Drill

SEG—Similar Exposure Group

SF—Standard Form

SGP—Chief of Aerospace Medicine

STEL—Short Term Exposure Limit

STS/PTS—Standard threshold shift/Permanent threshold shift

TO—Technical Order

TLV—Threshold Limit Value

TR—Traditional Reserve

TWA—Time Weighted Average

UR—Uncertainty Rating

USAF—United States Air Force

USAFSAM—United States Air Force School of Aerospace Medicine

UTA—Unit Training Assembly

WIC—Workplace Identification Code

WMP—Workplace Monitoring Plan

Office Symbols

AF/SG3/4—Department of the Air Force Medical Operations Directorate

AFMRA/SG3PB—AFMRA Bioenvironmental Engineering Branch

AFMRA/SG3PF—AFMRA Flight and Operational Medicine Branch

AFMC/SGPB—Air Force Material Command, Bioenvironmental Engineering

USAFSAM/OE—USAFSAM Occupational and Environmental Health Department

Terms

95th Percentile—the value in which 95 percent of the population exposures are below. The lognormal distribution model is typical in industrial hygiene monitoring but should be verified. For lognormal distributions, the 95th percentile = exp (mean + (1.645 x standard deviation)). Verifying a lognormal distribution and calculating the 95th percentile can be accomplished using DOEHRS and the AIHA IHSTAT tools.

Action Level (AL)—An exposure level that dictates active air monitoring, medical monitoring, and employee training. The AL for airborne exposures is one-half the OEL for TWA exposures, except where 29 CFR or DoD policy designates a different concentration.

Activity—See Process

Acute Exposure Guideline Levels (AEGLs)—Are established by the National Advisory Council and intended to describe the risk to humans resulting from once-in-a-lifetime, or rare, exposure to airborne chemicals. AEGLs represent threshold exposure limits above which certain health effects are expected for the general public and are applicable to emergency exposure periods ranging from 10 minutes to 8 hours. AEGLs are applicable to the general population, including infants, children, and other individuals who may be susceptible. AEGLs are individually peer reviewed.

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)

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

Clinical Surveillance—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 DAF operations are adversely affecting the health of the workers. 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.

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

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

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

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

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

DoD Military Personnel—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 Candidate School and Aviation Officer Candidate School, Reserve Officer Training Corps cadets when engaged in directed training activities, and foreign national military personnel assigned to the DoD Components. (Source: 6055.01)

Emergency Response Planning Guidelines (ERPGs)—Are established by the American Industrial Hygiene Association (AIHA) and designed to assist industrial hygienist in the development of emergency response strategies for protecting workers and the general public against harmful effects of specific chemicals. ERPGs refer to exposure durations of 1 hour and define levels below which certain health effects are not expected in nearly all individuals. ERPGs are individually peer reviewed.

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—Any real or potential condition that can cause injury, illness, or death to personnel or damage to or loss of equipment or property, mission degradation. (Source: DoDI 6055.01)

Hazard Characterization—Process for assessing individual OH hazards, taking into accounts factors such as route of exposure, severity of OH- related illness that may result from exposure, length of exposure, or duration of exposure.

Health Risk Assessment (HRA)—Application of professional judgment (fully qualified BE Officer (43E3X/43E4X), BE Craftsman (4B071), or civilian equivalent) based on qualitative and quantitative information such as exposure measurements and estimates, mathematical modeling, and/or observations of work practices to identify and assess chemical, physical and biological health hazards.

Health Risk Assessment Code (RAC)—An expression of the health risk, as determined by BE, associated with a hazard that combines the hazard severity and mishap probability into a single Arabic numeral according to the criteria in **Attachment 9** of this manual.

Individual Longitudinal Exposure Record (ILER)—A web based application that provides DoD and Veterans Administration (VA) the ability to link an individual to exposures to improve the efficiency, effectiveness and quality of health care. It is designed to assist clinicians, researchers/epidemiologists and benefit advisors to link exposure data from DoD to assist Veterans. ILER compiles data from various information systems to create a comprehensive record of all OEH exposures for a full working lifetime for DoD personnel. While DOEHRS-IH is a primary source used to populate ILER, other DoD systems also provide supporting data (e.g., Military Exposure Surveillance Library, Defense Medical Surveillance System, Defense Manpower Data Center, Medical Data Repository, Various Registries, etc.)

Industrial Hygiene Risk Assessment Methodology (IH RAM)—A required business practice and collection of tools designed to streamline and standardize the comprehensive HRA process through accurate and relevant data entry. The IH RAM is designed to help identify and eliminate data gaps, provide relevant and defendable data, develop a high confidence in hazard characterizations, and facilitate optimal OH program management.

Longitudinal Exposure Record—A comprehensive record of all occupational and environmental exposures for a full working lifetime; applies to all DoD personnel.

Military Exposure Guideline (MEG)—Concentrations of chemicals in air, water, and soil that are designed as decision aids for health risk assessors to evaluate the significance of field exposures to chemical hazards during deployments. A MEG is a chemical concentration which represents a safe-sided estimate of the level above which certain types of health effects may begin to occur in individuals after an exposure of a specified duration. MEGs should only be used in deployed settings and when operational missions require a higher level of risk acceptance than traditional OELs (i.e., TLVs and PELs). MEGs are not individually peer reviewed.

Nanomaterial—Materials having a particle size <100 nanometers in at least one dimension

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 ESOH Service Center.

Operational Exposure Guidance (OEG)—The maximum amount of nuclear/external ionizing radiation that the commander considers a unit may be permitted to receive while performing a

particular mission or missions. (Source: JP 3-11, *Operations in Chemical, Biological, Radiological, and Nuclear Environments*)

Personal Protective Equipment (PPE)—Use of PPE shall be considered last in the control hierarchy unless other methods are not feasible. PPE is equipment worn to minimize exposure to a variety of hazards. This may include such items as gloves, foot and eye protection, hearing protection devices, hard hats, respirators, and full body suites.

Permissible Exposure Limit—is the maximum amount or concentration of a chemical or physical hazard such as noise that a worker may be exposed to under OSHA regulations. PELs can be defined in two different ways, 1) ceiling values (to include STELs): at no time should this exposure limit be exceeded, or 2) 8-hour TWAs: an average value of exposure over the course of an 8 hour work shift. OSHA recognizes that many of its permissible exposure limits (PELs) are outdated and inadequate for ensuring protection of worker health thus it is DAF policy to use the more conservative of the OSHA PEL and the ACGIH TLV when establishing an OEL according to the rules in **Chapter 3**.

Physical Hazards—OH 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.

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."

Termination of Employment Exam—These examinations are designed to assess pertinent aspects of a worker's health when the worker leaves employment. Documentation of examination

results may be beneficial in assessing the relationship of any future medical problems to an exposure in the workplace. These exams are particularly applicable to conditions that are chronic or that may have long latency periods, such as the sequelae of chronic exposure to asbestos. Federal regulations, such as part 1910.1001 for asbestos, require termination of employment examinations.

Termination of Exposure Exam—These examinations are performed when exposure to a specific hazard has ceased. Exposure may cease when a worker is reassigned, a process is changed, or the worker leaves employment. Termination of exposure examinations are most beneficial when the health effect being screened for is likely to be present at the time exposure ceases. Federal regulations, such as part 1910.120 of Reference (f) for Hazardous Waste Operations and Emergency Response (HAZWOPER), require termination of exposure examinations.

Threshold Limit Value (TLV)—the airborne (or surface) concentration of chemical substances and represent conditions under which it is believed that nearly all workers may be repeatedly exposed, day after day, over a working lifetime, without adverse health effects. TLVs are peer-reviewed guidelines developed by ACGIH to assist in the control of health hazards.

Threshold Limit Value-Ceiling (TLV-C)—The concentration that should not be exceeded during any part of the working exposure. Determining compliance with ceiling exposure limits is typically done using direct reading instruments.

Threshold Limit Value-Short Term Exposure Limit (TLV-STEL)—A 15 minute time-weighted average exposure that should not be exceeded at any time during a workday, even if the 8-hour TWA is within the applicable 8-hour TWA OEL. The TLV-STEL usually supplements the TLV-TWA where there are recognized acute effects from a substance whose toxic effects are primarily of a chronic nature; however, the TLV-STEL may be a separate, independent exposure guideline.

Threshold Limit Value-Surface Limit (TLV-SL)—The concentration on workplace equipment and facility surfaces that is not likely to result in adverse effects following direct or indirect contact. At the time of publication, very few published TLV-SLs are available. TLV-SLs will require additional study prior to applying them as OELs in DAF workplaces.

Threshold Limit Value-Time Weighted Average (TWA)—The concentration for a conventional 8-hour workday and a 40-hour workweek, to which it is believed that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse effect.

Unacceptable Exposure—A condition in which a significant risk for the development of occupational illness is associated with a SEG's exposure profile regardless of use of PPE, the probability of adverse health effects is significant, or there is evidence of adverse health effects associated with exposure to a hazard. (Source: DoDI 6055.05)

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.

Upper Tolerance Limit (UTL)—is the upper confidence limit of a point estimate of an exposure profile. In this manual, references to UTL are the $UTL_{95\%, 95\%}$ which represents the point estimate that the industrial hygienist can state with 95% certainty that the true 95th percentile is less than. The UTL has low power available with small sample sizes as it results in very large confidence limits around the percentile estimate. This makes the UTL more appropriate for exposure determinations when there are a large number of samples.

Workplace—A workplace is where employees perform operations, processes, and tasks under the direction of a supervisor at one or more locations. Per OSHA, this includes the establishment and other locations where one or more employees are working or are present as a condition of their employment. For the purposes of injury and illness reporting, the employee's home may be considered the workplace if the member is working from home.

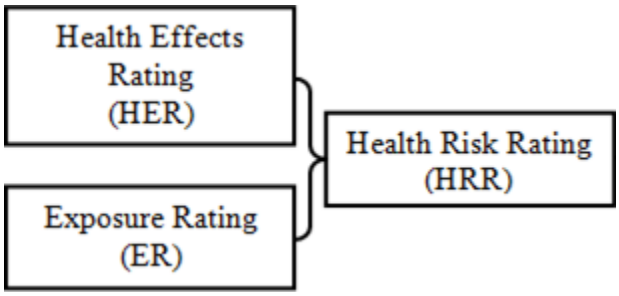
Workplace Supervisor—An individual with the authority to implement controls to eliminate, minimize, or reduce OH-related risk associated with a hazard in a workplace.

Attachment 2

DETERMINING IF A CHEMICAL OF CONCERN IS A HAZARD

A2.1. Exposure Assessment Priority Matrix. The EAP matrix tables in **Chapter 3** may be employed to determine when a chemical of concern is a hazard.

Figure A2.1. Determining the HRR.



A2.2. Health Effects Rating. The HRR is the product of the HER and ER from **Table 3.1** and **Table 3.2** (i.e., HRR = HER x ER), and when multiplied by a Frequency-Duration Factor may be used to determine if a chemical of concern is a hazard and should be entered in DOEHRS for further evaluation and characterization.

Table A2.1. Frequency-Duration Factor.

Duration- Frequency Factor					
Daily	4 *Any / Minimal (under 1 hour)*	8 *About ¼ Shift (1 to 3 hours)*	12 *About ½ Shift (3 to 5 hours)*	16 *About ¾ Shift (5 to 7 hours)*	20 *Almost Full Shift (over 7 hours)*
Weekly	3 *Any / Minimal (under 5 hours)*	6 *5 to 16 hours per week*	9 *16 to 25 hours per week*	12 *25 to 30 hours per week*	15 *Use More Frequent Basis*
Monthly	2 *Any / Minimal (under 25 hours)*	4 *25 to 70 hours per month*	6 *70 to 100 hours per month*	8 *100 to 130 hours per month*	10 *Use More Frequent Basis*
Yearly	1 *Any / Minimal (under 250 hours)*	2 *250 to 550 hours per year*	3 *550 to 1000 hours per year*	4 *1000 to 1500 hours per year*	5 *Use More Frequent Basis*

Table A2.2. When to Enter a Chemical as a Hazard in DOEHRS Based on HRR.

Route of Exposure	HRR x Duration-Frequency Factor	Action
Inhalation	>71	Add chemical of concern and route of exposure as a hazard to applicable process in DOEHRS for further assessment.
Contact	>63	
Absorption	>63 + a HER >3	
Ingestion	>47	

Figure A2.2. Example Hazard Determination Calculation.

Process: Prepping Base Metal
Chemical of concern: Methyl Ethyl Ketone
Route of Exposure Assessed: Inhalation
HER: 4 (from CHET)
ER: 3
HRR = 3 x 4 = 12

Frequency-Duration Factor: 8 (daily for 1-3 hrs)
Frequency-Duration Factor x HRR = 8 x 12 = 96

The recommended threshold for an inhalation route of exposure is 71, as listed in Table A2.3. Since 96>71 as shown for this example, methyl ethyl ketone should be entered as a hazard for the "Prepping Base Metal" process and the inhalation route of exposure further assessed in DOEHRS.

Attachment 3

NANOMATERIALS

A3.1. The health risk from nanomaterials is evaluated similarly to other chemicals and determined by the physical properties of a substance (e.g., influencing absorption), as well as the chemical form of the particles and the route and dose of exposure.

A3.2. DoD use of nanotechnologies include aluminum nanoparticles as diesel fuel additives, alloys, explosives and 3D printing. There are many knowledge gaps within this dynamic emerging field; research and development efforts may be particularly problematic where toxicity and chemical interactions are yet unknown.

A3.3. Nanomaterials can be added to fuels, paints, adhesives, etc., which can potentially expose workers throughout the products' life cycle. The exposure profile of nanomaterials may depend on their formulation. A nanomaterial additive that becomes agglomerated or fixed in a solid will likely not have the same exposure profile as a pure, powdered form.

A3.4. The sonication, shaking, stirring, pouring, or spraying of powdered nanomaterials (such as used in 3D printing) pose an inhalation exposure risk.

A3.5. Products containing nanomaterials may be procured from outside vendors without awareness that the product contains nanomaterials. Nanomaterials are ubiquitous in commercial products and there are no requirements to specifically identify their presence on labels or safety data sheets, and chemical content information may be of limited value when determining the potential hazards from nanomaterials. However, awareness of the nanomaterial's presence is necessary to limit exposure and establish appropriate medical surveillance programs.

A3.6. With limited knowledge on the health effects of nanomaterials, their effects will likely depend on the nanomaterials' chemical and physical composition. To date, there have been very few case reports of human illness attributed to exposure to engineered nanomaterials (Journeay and Goldman and Song, Li, and Du). Rodent species exposed to carbon nanofibers and carbon nanotubes have developed pulmonary fibrogenic inflammation, granulomas, and pulmonary fibrosis. Precautionary guidance warrants conservative, risk-based measures in protection of workers, as traditional control measures may be ineffective. Workers exposed to engineered nanomaterials should have appropriate exposure controls and medical surveillance programs tailored to their exposure.

A3.7. While there are no federal occupational exposure limits or OSHA PELs for nanomaterials, NIOSH does have recommended exposure limits for titanium dioxide, carbon nanotubes, and carbon nanofibers (see NIOSH Publications 2013-145, *Occupational Exposure to Carbon Nanotubes and Nanofibers*, 2011-160, *Occupational Exposure to Titanium Dioxide*, and 2009-116, *Interim Guidance for Medical Screening and Hazard Surveillance for Workers Potentially Exposed to Engineered Nanoparticles*). These may assist in developing appropriate medical surveillance programs for occupational exposure to nanomaterials.

Attachment 4

ERGONOMICS ASSESSMENT

A4.1. 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:

A4.1.1. Carpal tunnel syndrome

A4.1.2. Cubital tunnel syndrome

A4.1.3. Tendinitis

A4.1.4. Rotator cuff injuries (affects the shoulder)

A4.1.5. Epicondylitis (affects the elbow)

A4.1.6. Trigger finger

A4.1.7. Muscle strains and low back injuries

A4.2. Workplace Assessments. Ergonomics hazards are an OH hazard that should be evaluated, controlled, documented, and managed just as other hazards.

A4.2.1. BE shall identify ergonomic hazards during comprehensive HRAs. (T-0)

A4.2.2. When a detailed evaluation is necessary, BE will collaborate with IOS and/or MTF physical/occupational therapy (PT/OT) personnel to complete a detailed ergonomic exposure assessment following the guidelines in **Chapter 15**, Ergonomics, of AIHA's *A Strategy for Assessing and Managing Occupational Exposures*. The evaluation 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 and PT/OT should use a standardized decision process such as the one in **Figure A4.1**.

A4.2.3. BE, with consultation from PT/OT, will document ergonomic assessments in DOEHRS (T-0) following the applicable DOEHRS DERG. (T-1)

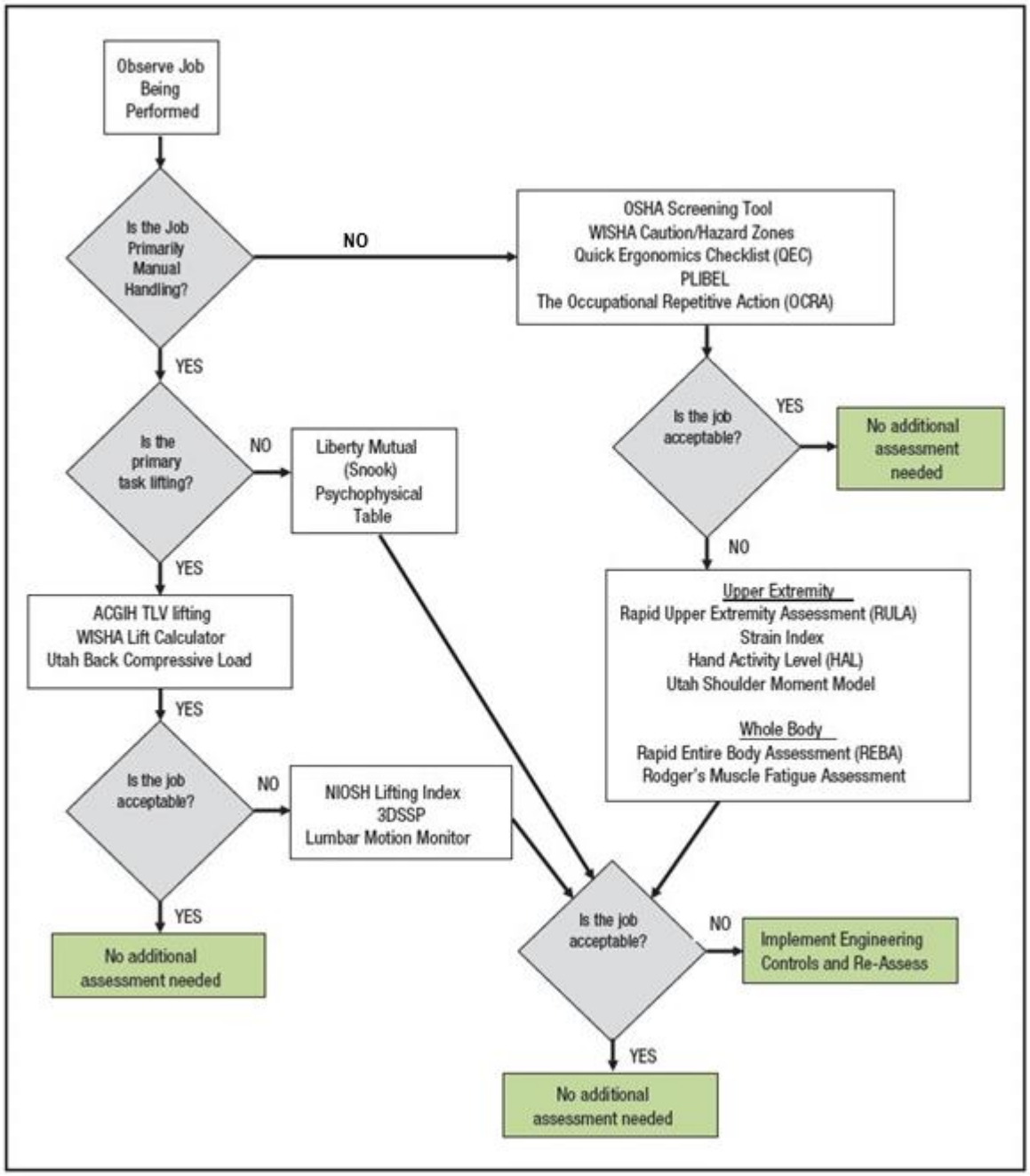
A4.2.4. Ergonomic hazards will be included on OEHEDs provided to the OEHWG. (T-1)

A4.2.5. Ergonomic hazards will be controlled using the hierarchy of controls in **Figure 3.3** (T-0)

A4.2.5.1. Engineering controls such as mechanical lifts, adjustable height work surface, or ergonomic tools are the preferred solution.

A4.2.5.2. 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.

Figure A4.1. Decision Logic for the Selection of the "Most Appropriate" Ergonomic Assessment Tool.



A4.2.5.3. The OEHWG will update the COHER with any applicable ergonomic training or medical evaluations. (T-1)

A4.3. Workplace Ergonomic Injury Investigations.

A4.3.1. Initial Medical Evaluation.

A4.3.1.1. Regular Air Force and Space Force. Members will be seen by a MTF provider following the injury. If the provider determines the injury is a work-related ergonomic issue, the provider will start the AF Form 190, *Occupational Illness/Injury Report*, process by placing two referrals in the medical record. The referrals will be for PT/OT to conduct an ergonomic assessment and for PH to initiate an injury/illness investigation.

A4.3.1.2. Civilian Worker. If a CFE is injured due to their assigned job, the CFE has the choice to be seen in the MTF or by their off base primary care provider. If the CFE chooses the MTF, the process in **para A4.3.1.1** is followed. If the CFE chooses their primary care provider and the diagnosis is ergonomically related, the employee must relay the information to their supervisor.

A4.3.1.3. The supervisor must contact BE and PT/OT to initiate a workplace ergonomic evaluation.

A4.3.2. PT/OT Ergonomic Evaluation.

A4.3.2.1. PT/OT will use the information provided by the supervisor and the employee to conduct the ergonomic evaluation. 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. When the PT/OT work space evaluation identifies a hazardous ergonomic condition and feasible mitigation is expected to reduce the risk, BE shall assign a ergonomic RAC in accordance with this manual and AFI 91-202. The PT/OT provider will enter the evaluation into the medical record.

A4.3.2.2. BE and/or PH will transcribe the PT/OT provider's ergonomic evaluation in AFSAS.

A4.3.3. Work-related determination and documentation.

A4.3.3.1. The off base provider and PT/OT results will be forwarded/presented to the Flight Medicine Clinic providers. The BOMC providers will review the information and complete the AF Form 190 process in AFSAS.

A4.3.3.2. The BOMC provider will send a memorandum for record (MFR) of their recommendations to BE, PT/OT provider, workplace supervisor, and CPS (**Note:** MFR should not contain HIPAA information.) The MFR and RAC, if applicable, will be used by the workplace supervisor to justify the purchase of new equipment or a process change.

A4.3.3.3. After new equipment or process change has been put in place, the PT/OT provider will conduct a final work space evaluation, report findings to OEHWG, recommend RAC closure to BE as appropriate, and close the employee's ergonomic injury investigation.

Attachment 5

EXPOSURE ASSESSMENT STRATEGY

A5.1. Exposure Assessments. Exposure assessments 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 DAF Exposure Assessment Strategy (EAS) shall be used for each chemical exposure assessment performed as shown in **Figure A5.1** See AFI 48-127 for a similar EAS to assess hazardous noise exposures.

A5.2. 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 AIHA recommends that only exposures expected to be over 10% of the OEL should be assessed. (Jahn, Bullock, & Ignacio, 2015, p. 98) Use of CHET or the AIHA Qualitative Assessment Checklist is recommended as a method to rule out exposures of concern using particle hazard ratios, vapor hazard ratios, and the rule of tens.

A5.3. 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.

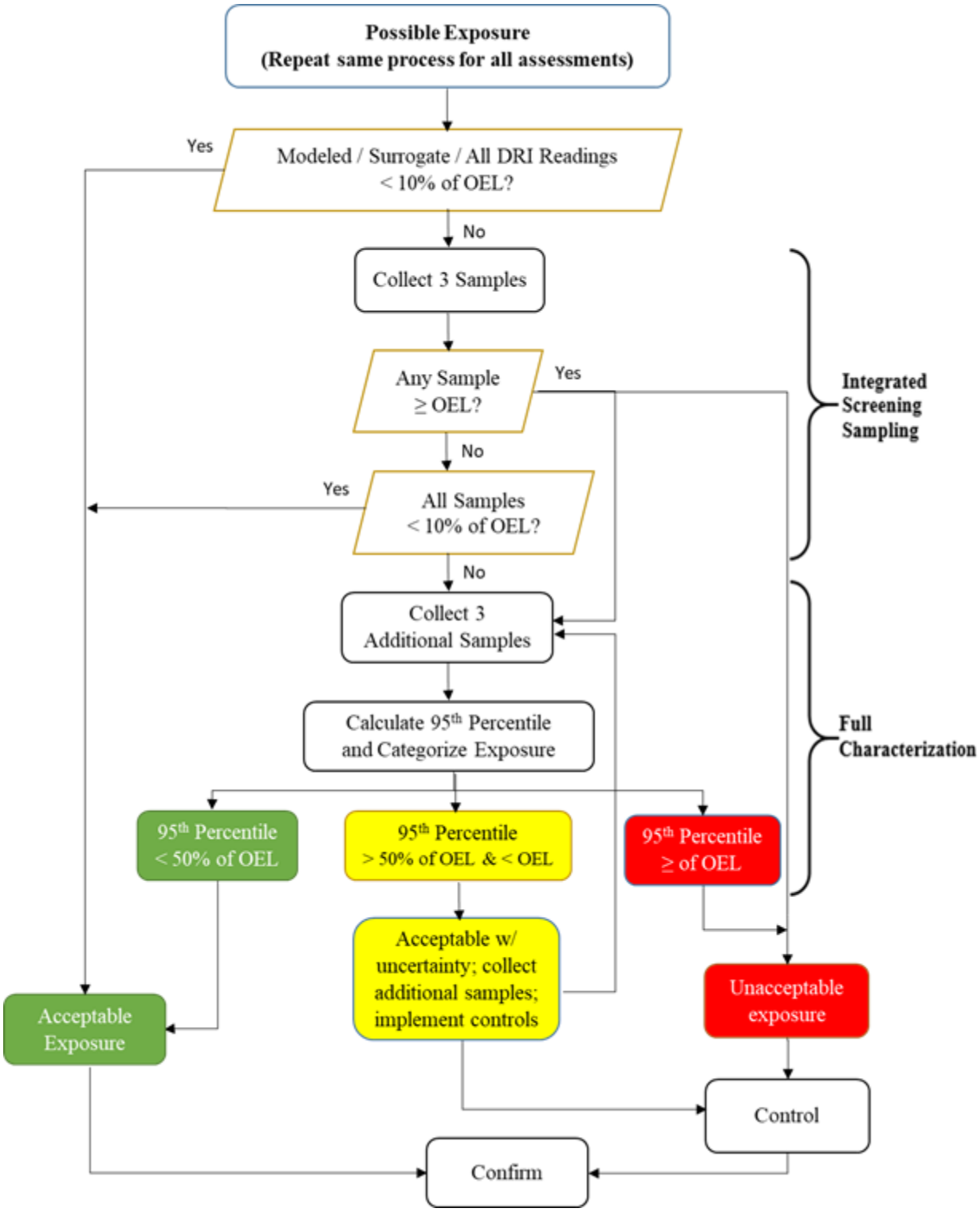
A5.4. Model/Surrogate/DRI.

A5.4.1. 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^3. Near field, far field, and air flow between near and far fields should be limited to IHMOD maximum values of 0.92 m^2, 200 m^2, and 6.7 m^3/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.

A5.4.2. Surrogate Data. 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.

A5.4.3. Direct Reading Instrument (DRI). 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.

Figure A5.1. Exposure Assessment.



A5.5. 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. STEL and ceiling samples should also be collected as needed. 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. If any sample is above the OEL, then collect 3 more random samples and mark this exposure as unacceptable.

A5.6. Full Characterization. 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 3 categories: exposures <50% OEL; > 50% and < 100% of the OEL; and > OEL. The first categories is considered acceptable exposures, barring other information that warrants additional sampling or scrutiny. The second category is considered acceptable but requires additional sampling and controls. As a minimum, PPE needs to be verified as being adequate. The final category (>OEL) is unacceptable exposures that need to be controlled. (Jahn, Bullock, & Ignacio, 2015, p. 57) **Note:** It is reasonable to presume that the underlying distribution for workplace exposure data is the lognormal distribution unless there is compelling reason to believe otherwise. However, the assumption of lognormality should be checked (e.g., AIHA IHSTAT). If the distribution is not lognormally distributed, there is potential the data includes two or more SEGs.

A5.7. Confirm. Confirmation of previous work is always necessary. (Jahn, Bullock, & Ignacio, 2015, pp. 143-148) At a minimum, comprehensive HRAs 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 is less than the OEL, but the 95th percentile Upper Tolerance Limit (UTL) is not below the OEL, the exposure is acceptable with uncertainty, and additional information gathering is recommended. (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.

Attachment 6

APPLYING OELS TO UNUSUAL WORK SCHEDULES

A6.1. Determining Compliance with an OSHA PEL for Extended Shifts. When determining compliance with an OSHA PEL other than lead (see **para A6.3** for lead) for employees who work extended shifts beyond 8 hours, BE flights shall 1) sample the worst continuous 8-hour work period of the entire extended shift and compare the 8-hour TWA to the PEL or 2) collect multiple samples over the entire work shift and calculate the 8-hour TWA based upon the worst 8 hours of exposure during the entire shift and compare the 8-horr TWA to the PEL.

A6.2. Adjusting OELs Using Mathematical Models. 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. Two scenarios are described in **para A6.3** and **para A6.4**.

A6.3. Adjusting the PEL when required by an OSHA substance specific standard. The only OSHA substance specific standards which require PEL adjustments are the lead standards in 29 CFR 1926.62and 29 CFR 1910.1025. The lead PEL of 50 µg/m^3 is adjusted using the following formula:

A6.3.1. Adjusted Lead PEL (µg/m^3) = 400 / hours worked in the day

A6.4. Using the Brief and Scala Model. 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 **Figure A6.1** and **Figure A6.2**).

A6.4.1. 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.

A6.4.2. The advantages of this method are it is a simple calculation, it generates a conservative estimate of the exposure limit, and it requires no detailed knowledge about the substance being evaluated.

Figure A6.1. Adjusted TWA Formula.

$$Adjusted\ exposure\ standard\ (TWA) = \frac{8 * (24 - h) * listed\ exposure\ standard\ (TWA)}{16 * h}$$

where h = *hours worked/day*

Figure A6.2. Example Adjusted TWA Calculation.

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

Solution:

$$Adjusted\ exposure\ standard\ for\ 12\ hr\ work\ shift = \frac{8 * (24 - 12) * 1000\ ppm}{16 * 12}$$

$$Adjusted\ exposure\ standard\ for\ 12\ hr\ work\ shift = 500\ ppm\ (12\ hr\ TWA)$$

Attachment 7

DETERMINING CONFIDENCE IN OCCUPATIONAL HEALTH EXPOSURE CHARACTERIZATION

A7.1. Confidence in Exposure Assessment. 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.

A7.1.1. 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.

A7.1.1.1. Quantitative data does not exist, or is insufficient to draw a conclusion regarding exposure.

A7.1.1.2. The hazard has not been fully characterized.

A7.1.1.3. Qualitative assessment alone was used to initially characterize a medium/high risk hazard, i.e., skin absorption, significant ergonomic stress, exposure to carcinogens.

A7.1.2. 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.

A7.1.2.1. Additional monitoring is required to increase confidence in the conclusion.

A7.1.2.2. Surrogate data from similar DoD and or private sector operations (qualitative or quantitative) was used to evaluate the exposure.

A7.1.2.3. 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.

A7.1.3. 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.

A7.1.3.1. Sufficient quantitative data has been collected to draw a conclusion about exposure acceptability in accordance with the DAF EAS. 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).

A7.1.3.2. Valid monitoring (e.g., swipe sampling, scatter radiation measurements, electromagnetic frequency radiation survey) has been performed and no additional monitoring is required (other than periodic monitoring). Quantitative monitoring results have been used to fully characterize the hazard being assessed.

Attachment 8

DETERMINING CONFIDENCE IN CONTROLS

A8.1. Confidence in Controls. 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.

A8.1.1. LOW: low confidence in controls indicate 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 a poor 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.

A8.1.1.1. 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).

A8.1.1.2. Regulated areas are accessible by untrained, unprotected personnel.

A8.1.1.3. 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.

A8.1.2. MEDIUM: medium confidence in controls indicate 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.

A8.1.2.1. Chemical application method controls exposure (e.g., worker uses tongue depressor to apply sealant).

A8.1.2.2. PPE is required to control exposure and workers have been observed using required PPE effectively.

A8.1.2.3. Medical surveillance has identified no unacceptable dose, verifying controls are effective; or, workers have no medically substantiated symptoms associated with exposure.

A8.1.3. HIGH: high confidence in controls indicate 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.

A8.1.3.1. Chemical Inhalation – exposure is controlled below the action level 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.

A8.1.3.2. Chemical contact and absorption, and physical hazards – exposure is controlled below exposure limits by engineering controls that are proven serviceable by periodic evaluation.

A8.1.3.3. Administrative controls are in place to prevent access to regulated areas by unprotected, untrained personnel.

A8.1.3.4. Medical surveillance has identified no unacceptable dose, verifying controls are effective.

Attachment 9

HEALTH RISK ASSESSMENT CODE (RAC) CALCULATIONS

A9.1. Deficiencies. Deficiencies leading to potential chronic health hazards shall be entered in DOEHRS and calculated using Tables **A9.1**-**A9.8** below. These tables are not appropriate for calculating health RACs for ergonomic/safety hazards, noise hazards, acute health hazards, or administrative deficiencies, see **Chapter 3**.

A9.2. Determine the Health Hazard Severity Code (HHSC). The HHSC reflects the magnitude of exposure to a single physical, chemical, or biological agent and the effects of chronic exposure.

A9.2.1. Use the procedures in **Tables A9.1** and **Table A9.2** to assess exposure points.

A9.2.2. Total the exposure points assessed in **Table A9.1** and **Table A9.2**.

A9.2.3. Use **Table A9.3** to determine the HHSC based on the total points assessed.

Table A9.1. Exposure Points Assessed.

Alternate exposure Route?	Exposure Condition			
	95th percentile: < 10% OEL	95th percentile: ≥ 10% OEL and < 50% OEL	95th percentile: ≥ 50% OEL and < OEL	95th percentile: ≥ OEL
No	0	3	5	7
Yes	1 – 2	4	6	9

Table A9.2. Medical Effects Points Assessed.

Condition	Points
No medical effect, such as nuisance noise and nuisance odor	0
Temporary reversible illness requiring supportive treatment, such as eye irritation and sore throat	1 - 2
Temporary reversible illness with a variable but limited period of disability, such as metal fume fever	3 - 4
Permanent, non-severe illness or loss of capacity, such as permanent hearing loss	5 - 6
Permanent, severe, disabling, irreversible illness, such as asbestosis, lung cancer, or death	7 - 8

Table A9.3. Determining the HHSC.

Total Points (sum of exposure and	HHSC

medical effects points)	
13 - 17	I
9 - 12	II
5 - 8	III
0 - 4	IV

A9.3. Determining the Effect Probability Category (EPC). The EPC is a function of the duration and frequency of exposure and the number of exposed personnel.

A9.3.1. Use the guides in **Table A9.4** and **Table A9.5** to assess the frequency and duration of exposure points assessed.

A9.3.2. Sum the points in **Table A9.4** for exposure duration and exposure frequency, divide by 2, then round up. Add those points with the exposed personnel points assessed in **Table A9.5**.

A9.3.3. Use **Table A9.6** to determine the EPC for chronic hazards based on the points totaled from **Table A9.4** and **Table A9.5**.

Table A9.4. Duration and Frequency of Exposure Points Assessed.

Points	Exposure Duration							
	> 8 hrs/day	6-8 hrs/day	4-6 hrs/day	2-4 hrs/day	1-2 hrs/day	30-60 mins/ day	15-30 mins/ day	0-15 mins/ day
	8	8	6	5	4	3	2	1
Points	Exposure Frequency							
	Daily	2-3 times/ week	Weekly	2-3 times/ month	Monthly	Quarterly or 2-3 times/yr	Annual	Less Than Annual
	8	7	6	5	4	3	2	1

Table A9.5. Number of Exposed Personnel Points Assessed.

Number of Exposed Workers	Points
< 5	1 - 2
5 - 9	3 - 4
10 - 49	5 - 6
> 49	7 - 8

Table A9.6. Determining the Effect Probability Category (EPC).

Total Points (from Tables A9.4 and A9.5)	EPC

14 - 16	A
10 - 13	B
5 - 9	C
< 5	D

A9.4. Determining the RAC for Health Hazards. Determine the RAC for chronic hazards by using the matrix in **Table A9.7** to account for HHSC and EPC.

Table A9.7. Determining the Risk Assessment Code for Health Hazards.

HHSC	EPC			
	A	B	C	D
I	1 Critical/Imminent	1 Critical/Imminent	2 Serious	3 Moderate
II	1 Critical/Imminent	2 Serious	3 Moderate	4 Minor
III	2 Serious	3 Moderate	4 Minor	5 Negligible
IV	3 Moderate	4 Minor	5 Negligible	5 Negligible

A9.5. Computing the Severity and Probability Multiplier Matrix. Determine the HHSC multiplier (M) for a health RAC using the matrix in **Table A9.8** The multiplier (M) shall be used by the installation Safety office in conjunction with the additional steps in AFI 91-202 to determine the abatement priority number to establish a priority list of projects.

Table A9.8. Determining Severity and Probability Multiplier Matrix.

HHSC	EPC			
	A	B	C	D
I	188	63	21	7
II	63	21	7	2
III	21	7	2	1
IV	7	2	1	0.26

A9.6. Bioenvironmental Engineering Role in Assigning and Closing a Health Risk Assessment Codes. The process for assigning a health RAC is depicted in **Figure A9.1** and **Figure A9.2** BE shall communicate with stakeholders throughout the process to facilitate timely mitigation and/or abatement of health RACs.

Figure A9.1.

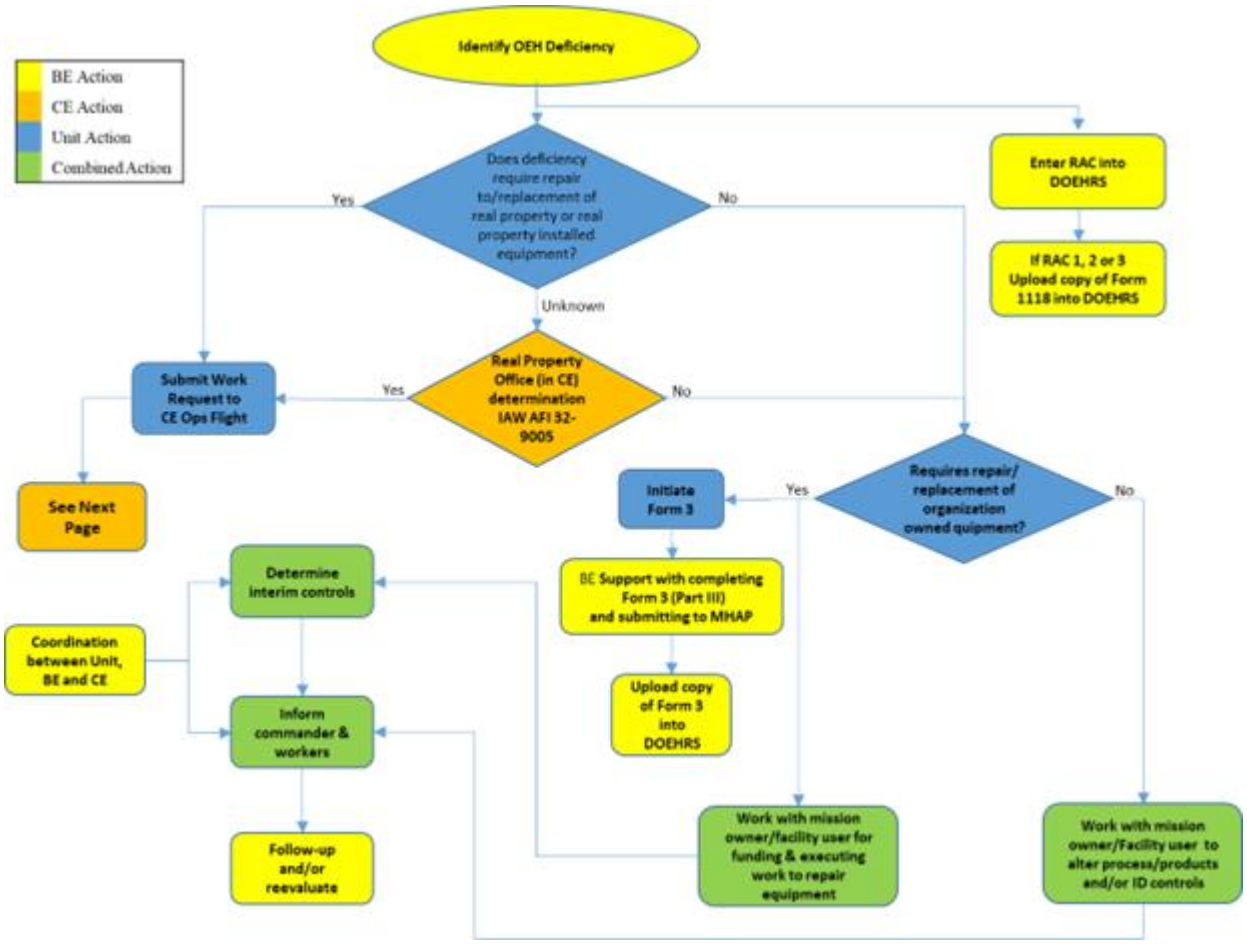
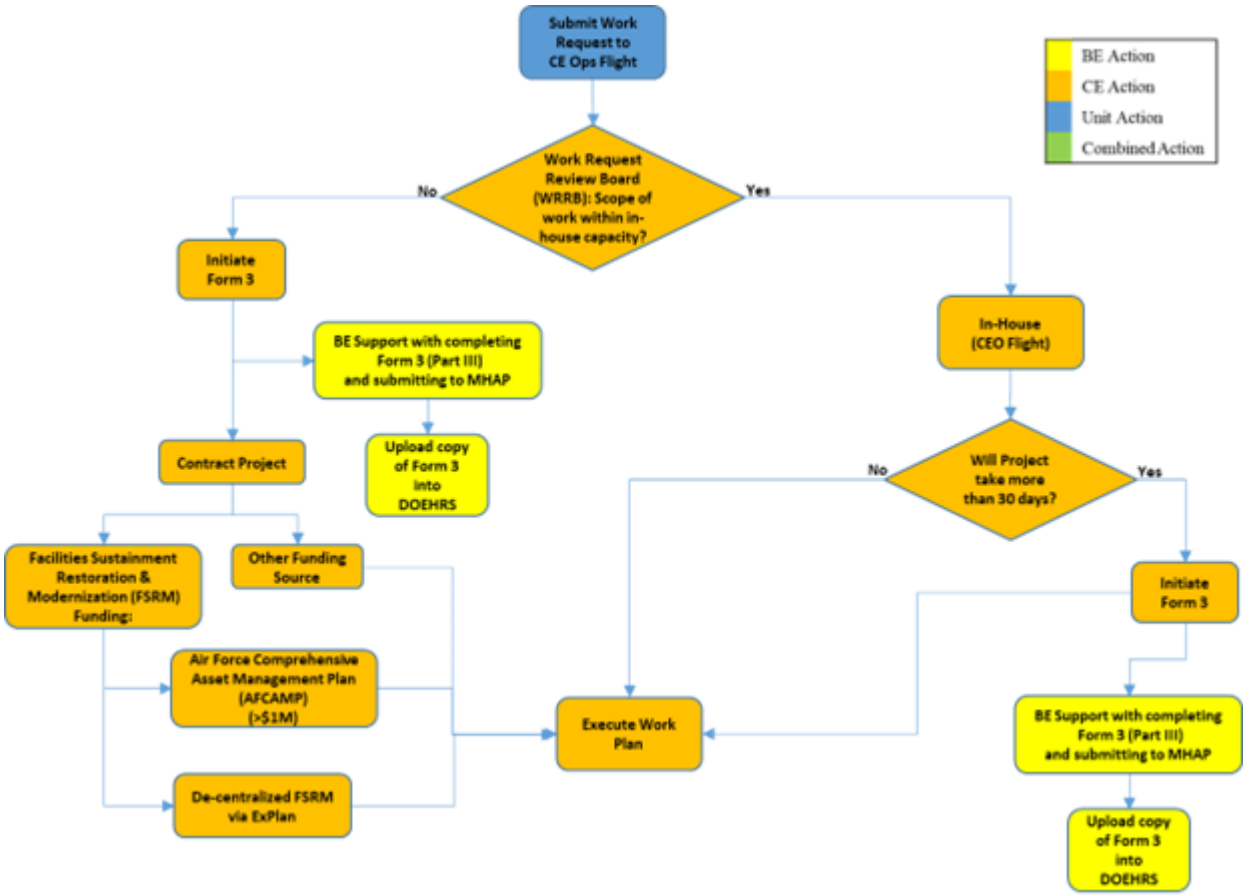

BE Action
CE Action
Unit Action
Combined Action
Identify OEH Deficiency
Does deficiency require repair to/replacement of real property or real property installed equipment?
Yes
No
Unknown
Enter RAC into DOEHRS
If RAC 1, 2 or 3 Upload copy of Form 1118 into DOEHRS
Real Property Office (in CE) determination IAW AFI 32-9005
Yes
No
Submit Work Request to CE Ops Flight
See Next Page
Requires repair/ replacement of organization owned quipment?
Yes
No
Initiate Form 3
BE Support with completing Form 3 (Part III) and submitting to MHAP
Upload copy of Form 3 into DOEHRS
Determine interim controls
Coordination between Unit, BE and CE
Inform commander & workers
Follow-up and/or reevaluate
Work with mission owner/facility user for funding & executing work to repair equipment
Work with mission owner/Facility user to alter process/products and/or ID controls

Figure A9.2. Health Risk Assessment Code Process - Continued.



Attachment 10

EXAMPLE ELECTION OF CARE PROVIDER STATEMENT

Figure A10.1. Example Election of Care Provider Statement.

NSN 7540-00-634-4176

HEALTH RECORD	CHRONOLOGICAL RECORD OF MEDICAL CARE
DATE	SYMPTOMS, DIAGNOSIS, TREATMENT, TREATING ORGANIZATION *(Sign each entry)*
	Patient Election of Care Provider for Work Related Injury or Illness
	I have chosen to have the Air Force Medical Service as my health care provider for the work
	related medical condition I am being seen for today. I understand I have the right to refuse care
	through the Air Force and to seek care through my private medical care provider. However, I
	decline to exercise that right. I understand that I cannot change my choice of providers for a
	Workers' Compensation claimed condition without obtaining permission from the Office of
	Workers' Compensation Program.
	_____ _____
	(Patient Signature) (Date)

PATIENT'S IDENTIFICATION *(Use this space for Mechanical Imprint)*

RECORDS MAINTAINED AT:		
PATIENT'S NAME *(Last, First, Middle Initial)*		SEX
RELATIONSHIP TO SPONSOR	STATUS	RANK/GRADE
SPONSOR'S NAME		ORGANIZATION
DEPART./SERVICE	SSN/IDENTIFICATION NO.	DATE OF BIRTH

CHRONOLOGICAL RECORD OF MEDICAL CARE STANDARD FORM 600 (REV. 5-84)
Prescribed by GSA and ICMR
FIRMR (41 CFR) 201-45.505

Attachment 11

EXAMPLE TRACKING WORKSHEET FOR CIVILIAN FEDERAL EMPLOYEE EXAMINATION REQUESTS

Figure A11.1. Example tracking worksheet for Civilian Federal Employee Examination Requests.

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 (AFMAN 48-146) and is not used for medical care. Inappropriate use of this 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#: Unit/Shop:

Supervisor Name/Phone/Email/Address:

Purpose of Request (check one): ☐ OSHA required ☐ OWCP Controvert ☐ Formal Fitness for Duty Assessment

Requesting Medical Officer Name/Phone/Email/Address:

Service Requested: (check one)

Medical Specialty Consult:
_ Audiology
_ Cardiology
_ Dermatology
_ Gastroenterology
_ General Surgery
_ Immunology
_ Infectious Disease
_ Neurology
_ Neuropsychology/Neuropsychiatry
_ Oncology
_ Ophthalmology
_ Optometry
_ Orthopedics, General
_ Orthopedics, Hand
_ Orthopedics, Spine
_ Otolaryngology
_ Physiatry
_ Psychiatry
_ Psychology
_ Pulmonology
_ Rheumatology
_ Other:_____

Laboratory (chemistry, culture, cell, tissue):
_ Specific Lab required:_____
_____

Study:
_ Magnetic Resonance Imagining
_ Cat Scan
_ Ultra Sound
_ X-ray
_ B read of Chest X-ray
_ Cardio lab
_ Pulmonary lab
_ Cardiopulmonary lab
_ Other_____
_____
COMMENTS:

==========

Estimate for consult/study/lab obtained $_____ _____ _____(date/initial)
DD 2161 request ☐ approved ☐ rejected by IOEMC _____ _____(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 Requests (1, 2, 3 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)

OSHA—Occupational Safety & Health Administration; OWCP—Office of Workers' Compensation Program; IOEMC—Installation Occupational & Environmental Medicine Consultant; CCA—Civilian Consult Administration

Attachment 12

EXAMPLE REQUEST FOR COMMANDER'S AUTHORIZATION OF PAYMENT FOR CIVILIAN MEDICAL EXAM

Figure A12.1.

DATE

MEMORANDUM FOR _____/CC

FROM: MDG/CC

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

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.

Subject to 5 CFR § 339.301, 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.

Per 5 CFR § 339.304, 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.

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).

b. Attachment 2 contains payment instructions for your unit RA, along with an estimate of the cost for the employee's exam.

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.

MTF Commander's Signature

Attachments
1. Commander's Authorization of Payment for Civilian Medical Exam
2. Instructions to Unit Resource Advisor

Figure A12.2. 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 MDG/SGSR (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 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 employee'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 A12.3. Attachment 2, "Request for Commander's Authorization of Payment for Civilian Medical Exam" Front Side-Example.

Attachment 2: Instructions to Unit Resource Advisor

Per 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 (MORD 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.

Figure A12.4. Attachment 2, "Request for Commander's Authorization of Payment for Civilian Medical Exam" Reverse Side-Example.

Reverse Side of Attachment 2: Instructions to Unit Resource Advisor

Payment via MORD	Payment via unit GPC
STEP 1: Please prepare an AF Form 406, Miscellaneous Obligation/Reimbursement Document (MORD), for the estimated cost provided above. In your Line of Accounting, please cite Element of Expense and Investment Code (EEIC) 572EM (Non-TRICARE Civilian Employee Medical Exams). The funding MORD will be in PC "S" for IAPS input and future payment.	STEP 1: Unit GPC cardholder inputs the service (exam) into AXOL.
STEP 2: Please send to the MTF POC above— (1) Signed Commander's Authorization for Payment of Civilian Medical Exam letter, and (2) Copy of certified MORD	STEP 2: Send a copy of the approved GPC purchase request to the MTF POC.
PROCESSING FINAL PAYMENT	
STEP 3: The civilian provider will submit to the MTF the employee's exam results, and the invoice for payment. NOTE: The MTF will verify that the invoice states "Full" or "Final" payment. If the invoice does not state that it is for full final payment, then the MTF must contact the civilian provider's billing office in order to receive a revised bill.	
STEP 4: The MTF will prepare an SF 1034, Public Voucher for Purchases and Services Other Than Personal, IAW the AFAFO Miscellaneous Payment Guide located on the AFAFO Community of Practice at the following link - https://km.saffm.hq.af.mil/ASPs/docman/DOCMain.asp?Tab=0&FolderID=OO-FM-AF-01-63&Filter=OO-FM-AF-01 to reflect the full/final amount owed to the civilian provider, and (1) Annotate the standard document number (SDN) of MORD on the SF 1034. (2) Attached a copy of the invoice to the SF 1034. (3) Forward all documents to the base-level FMA. (4) Send a copy to the unit RA. NOTES: - 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 FMA until the additional funds are loaded on the MORD. - If the final cost is less than the amount on the MORD, you may deobligate the balance.	STEP 4: The MTF will provide the unit RA with a copy of the invoice. The Unit GPC cardholder makes payment. NOTES: - If the GPC transaction is rejected, the MTF will notify the unit RA immediately. The unit RA will assist the MTF in resolving the GPC payment. STEP 5: In order to capture costs in the proper EEIC, you will need to prepare a Journal Voucher in order to transfer the cost of the exam you're your GPC's EEIC to EEIC 572EM (Non-TRICARE Civilian Employee Medical Exams). Using EEIC 572EM enables AF-wide visibility of funds expended on these exams.