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Aerospace Medicine

OCCUPATIONAL AND ENVIRONMENTAL HEALTH PROGRAM

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This Air Force instruction (AFI) implements Air Force policy directive (AFPD) 48-1, *Aerospace Medical Programs* and AFPD 90-8, *Environment, Safety, and Occupational Health,* and rescinds AFI 48-119, *Medical Service Environmental Quality Programs* and AFI 48-136, *Agency for Toxic Substances and Disease Registry (ATSDR) Programs.* It establishes procedures to govern implementation of medical support requirements of the *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program* (AFI 91-301) throughout the Air Force at home station and during deployed operations. It applies to all Air Force personnel (at classified and unclassified locations). Additionally, this AFI applies to the Air Force Reserves, the Air National Guard, and direct reporting units (DRU) and field operating agencies (FOA) not located on Air Force installations. This instruction does not apply to employees working under government contract or private contractors performing work under government contracts, or State employees with traditional Guard positions. Contractors are solely responsible for compliance with Occupational Safety and Health Administration (OSHA) standards and the protection of their employees unless otherwise specified in their contract. This AFI does not prohibit providing workplace sampling and survey information to contractors based on local arrangements. Send comments and suggested improvements on AF Form 847, *Recommendation for Change of Publication*, through channels, to AFMOA/SG3PB, 110 Luke Ave, Room 400, Bolling AFB DC 20032-7050. Any organization may supplement this instruction. Major Commands (MAJCOM), FOA, and DRU send one copy of each supplement to Air Force Medical Operations Agency/Bioenvironmental Engineering Division (AFMOA/SGPB); other commands send one copy of each supplement to the next higher headquarters. This instruction is consistent with Air Force Occupational Safety and Health (AFOSH) standards. This publication requires the collection and or maintenance of information protected by the Privacy Act (PA) of 1974. The authority to collect and/or maintain the records prescribed in this publication is Executive Order 12196, *Occupational Safety and Health Programs for Federal Employees*, February 26, 1980. Forms affected by the PA have an appropriate PA statement. System of records notice F044 AF SGE Medical Record System (December 9, 2003, 68 FR 68609) applies. This is authorized by 10 U.S.C., Chapter 55, Medical and Den-

tal Care, 10 U.S.C., Sec 8013, Power and Duties of the Secretary of the Air Force, and Executive Order 9397. Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 37-123, *Management of Records*, and disposed of in accordance with *Air Force Records Disposition Schedule* located at **http://afrims.amc.mil**. Field activities must send implementing publications to the higher headquarters functional OPR for review and coordination before publishing

SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed.

Chapter 1

INTRODUCTION

1.1. Overview.

1.1.1. Department of Defense (DoD) Instructions 6055.1 *Safety and Occupational Health (SOH) Program* and 6055.5, *Industrial Hygiene and Occupational Health* require that every employee be provided with a work environment that is free from recognized hazards that cause or are likely to cause death, injury or illness. To ensure this objective is achieved, occupational and environmental health (OEH) hazards must be effectively anticipated, identified, evaluated, and controlled ultimately to enhance workforce availability and mission capability. Consistent, meaningful OEH assessment programs must be implemented to ensure exposures are adequately controlled to protect the health of DoD personnel. In addition, military and DoD civilian officials at each management level are required to advocate for and demonstrate a leadership commitment of a strong Environment, Safety, and Occupational Health (ESOH) program, provide personnel safe and healthful working conditions through active hazard prevention and control, and provide education and training that will enable these personnel to prevent OEH-related injuries and illnesses. Finally, every member of the Air Force at all levels has a responsibility to actively participate in their organization's ESOH program.

1.1.2. This instruction outlines standard procedures to effectively capture, analyze, document, and communicate information regarding OEH hazards and risks in the workplace. A workplace is defined as any environment where a potential OEH exposure may occur. A workplace may be administrative, industrial, or inclusive, to include living quarters as in a deployed setting. The OEH hazard identification, risk assessment and documentation process should be identical in both home station and deployed settings. This facilitates establishing an accurate longitudinal exposure record (LER) in accordance with Presidential Review Directive 5, "Improving the Health of Our Military, Veterans, and Their Families (Aug 98)". In addition, DoDI 6490.03, *Deployment Health* requires the creation and maintenance of an exposure assessment record for each DoD member's full career.

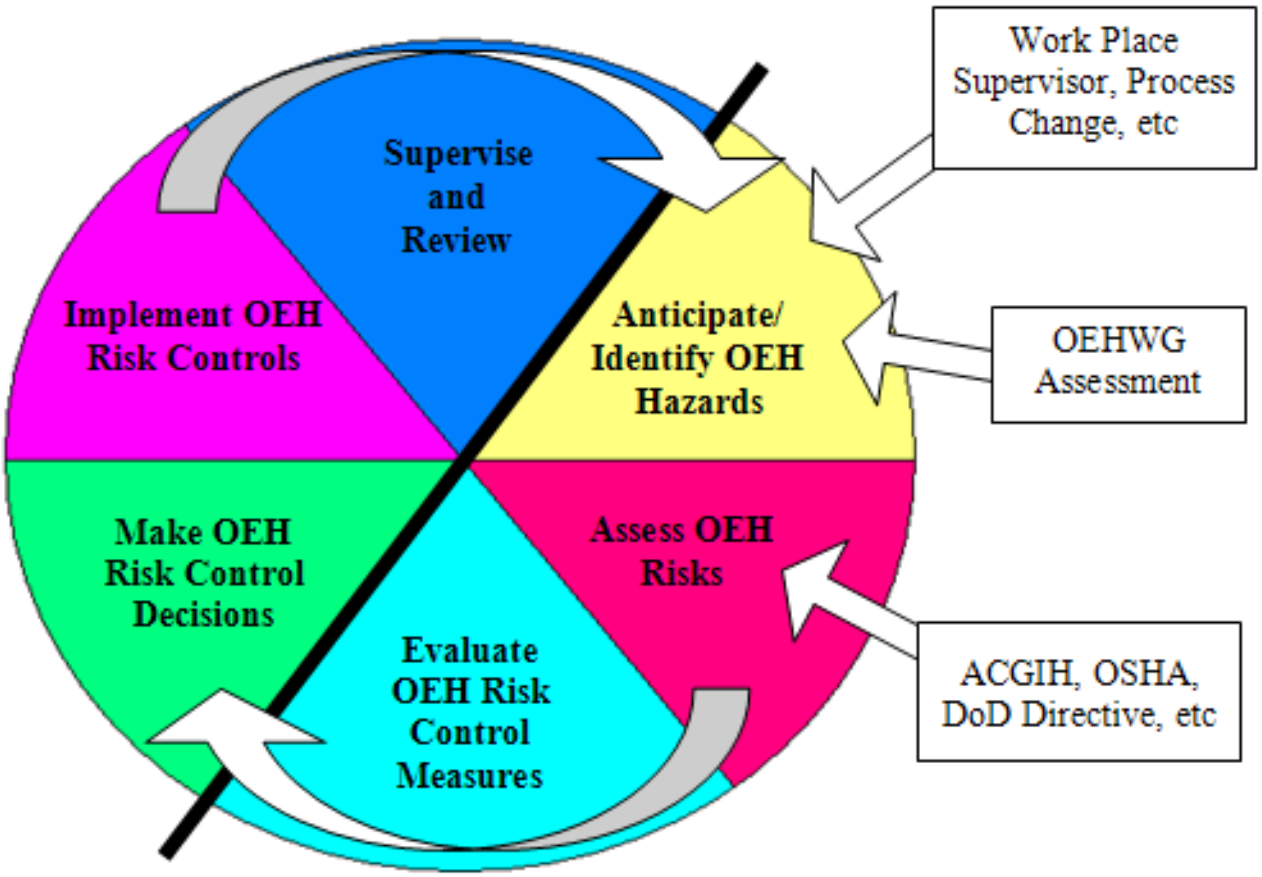
1.1.3. The role of Aerospace Medicine relative to human health is addressed in the environmental compliance requirements set forth in Civil Engineer Instructions (32-series). In general, that role focuses on health risk assessment and associated monitoring, sampling, and surveillance responsibilities. However, this AFI addresses non-workplace related environmental issues that affect human health that are not addressed in existing publications (e.g. exposure to personnel in deployed setting from hazardous waste burial site).

1.1.4. AFI 48-145 serves as the foundational document for the overall AF OEH Program. The specific program execution requirements are contained in supporting AF Manuals.

1.1.5. This instruction prescribes the use of an AF approved OEH Management Information System (OEH-MIS) to standardize and enhance data entry, management, and reporting. The Command Core System (CCS) is the current MIS used to archive OEH data. The DoD Medical Health Service (MHS) is currently developing the Defense Occupational and Environmental Health Readiness System-Industrial Hygiene (DOEHRS-IH) to meet this objective. DOEHRS-IH is a DoD software program designed to provide a web-based information management system that will store and manage personal OEH exposure information and monitoring data, personal protective equipment (PPE) usage data, and employee health hazard education data. DOEHRS-IH will eventually replace the CCS.

1.1.6. OEH risks are communicated through the Operational Risk Management (ORM) process to engage installation leadership in resource prioritization. The overall OEH Program contribution to the supported organization's ORM process is depicted in **Figure 1.1.**

Figure 1.1. Operational Risk Management.



1.1.7. Air Force Medical Service (AFMS) personnel play a key role in the ORM process by identifying hazards, assessing risks, determining significance of risks, determining appropriate control measures and communicating risk information. Health risk assessment inputs augment the decision-making process by helping commanders effectively apply the principles of ORM outlined in AFI 90-901, *Operational Risk Management*:

1.1.7.1. Accept no unnecessary risks,

1.1.7.2. Make risk decisions at the appropriate level,

1.1.7.3. Accept risks when benefits outweigh the costs,

1.1.7.4. Integrate ORM into operations and planning at all levels.

Chapter 2

PURPOSE

2.1. Purpose. The purpose of the AF OEH Program is to protect health while enhancing combat and operational capabilities. The program is designed to mitigate OEH-related risks and enhance delivery of AFMS desired effects and Team Aerospace capabilities. The OEH program is a key component of the AF ESOH program and AF ESOH management system as directed in AFPD 90-8, *Environment, Safety and Occupational Health*.

2.1.1. Exposure to OEH hazards, i.e., chemical, biological, radiological and physical, can result in casualties and contribute to the incidence of disease and non-battle injury (DNBI), long-term health effects, increased liability, increased costs, increased scrutiny by external regulatory agencies and ultimately decreased mission effectiveness.

2.1.2. Effective identification and control of OEH hazards is a force extender. Supervisors and commanders: must implement controls to mitigate risks for identified OEH hazards to an acceptable level; ensure risk mitigation will be effected through engineering or administrative controls wherever operationally feasible; and ensure appropriate individual protective equipment (IPE) or PPE will be made available and used when adequate engineering or administrative controls are not feasible/practical.

2.1.3. Enhance workforce and mission capability.

2.1.4. Address OEH impacts from AF operations.

2.1.5. As OEH Program manager, the local medical treatment facility (MTF) or air reserve component (ARC) medical unit will:

2.1.5.1. Execute Health Service Support (HSS) and deliver AFMS required capabilities through the OEH Program. The program includes deliberate and crisis action response tactics, techniques, and procedures.

2.1.5.2. Provide OEH expertise to facilitate and enhance commander decision-making in support of OEH risk and operational risk management.

2.1.5.3. Prioritize work based on mission requirements and associated OEH risks.

2.1.5.4. Ensure planning, modeling, sampling, reporting, surveillance, and treatment focus on OEH risk assessment and mitigation.

2.1.5.5. Improve program performance and/or reduce costs where feasible.

2.1.6. As OEH Program partners, installation agencies will support OEH operational risk management, to include: recognition, identification, mitigation and control of OEH hazards; health education; medical examinations; injury and illness prevention and reporting; assignment of risk assessment codes to OEH hazards in coordination with Safety; and lost workday and compensation claim reduction.

Chapter 3

RESPONSIBILITIES

3.1. Deputy Assistant Secretary of the Air Force for Environment, Safety, and Occupational Health (SAF/IEE). Provides guidance, direction and oversight of all matters pertaining to the formulation, review and execution of plans, policies, programs and budgets relative to the ESOH programs.

3.2. Air Force Surgeon General (USAF/SG)

3.2.1. Provides strategic direction and develops policy to execute the AF OEH Program.

3.2.2. Advocates for health risk assessment surveillance, and control requirements associated with health-based OEH Programs through the medical and Line of the Air Force (LAF) Planning, Programming and Budgeting System (PPBS).

3.2.3. Reports the status of the OEH program on an as-requested basis to SAF/IEE through a formal program management review.

3.3. Air Force Medical Operations Agency (AFMOA/SG3P).

3.3.1. Assists with developing policy to execute the OEH Program.

3.3.2. Plans, programs, and budgets for the resources to execute the OEH Program through the Aerospace Operations Panel.

3.3.3. Develops and monitors AF-level performance measures (metrics) to assess OEH Program effectiveness.

3.3.4. Formally establishes a Functional User Group (FUG) to identify, prioritize, and resolve OEH-MIS technical, funding and management issues.

3.3.5. Reviews proposed modifications to standard data sets (pick lists) and provides approval for implementation in the OEH-MIS.

3.3.6. Distributes guidance and policy to correct identified OEH-MIS requirement gaps.

3.4. Major Command Surgeon.

3.4.1. Establishes OEH Program medical support priorities and supplements to this AFI to execute MAJCOM mission requirements.

3.4.2. Supports OEH initiatives by validating requirements and technical needs.

3.4.3. Ensures planning, programming, and budgeting for resources and provides oversight for execution of the OEH Program.

3.4.4. Reviews OEH risk reduction opportunities and makes recommendations to assist LAF in executing effective resource prioritization.

3.4.5. Ensures OEH Program management performance monitoring across all bases within their command.

3.4.6. Disseminates information pertaining to policy and new or pending legislation within MAJCOM.

3.4.7. Coordinates with AFMOA/SGP to identify and resolve OEH programmatic issues.

3.4.8. Monitors the OEH Program through the MAJCOM ESOH Council.

3.5. Installation Commander.

3.5.1. Provides a safe and healthful workplace for all Air Force military and civilian workers.

3.5.2. Monitors execution of the installation OEH Program through the local Air Force ESOH Council, IAW AFI 90-801, *Environment, Safety, and Occupational Health Councils,* or an equivalent group in a deployed setting.

3.6. Medical Treatment Facility Commander (MTF/CC) (or local equivalent).

3.6.1. Provides OEH support to the Wing (or local equivalent) and supported units.

3.6.2. Directs the installation OEH Program and ensures it is supported with adequate resources and staffing to implement the responsibilities outlined in this AFI.

3.6.3. Ensures that timely care is provided for OEH-related injuries and illnesses.

3.6.4. 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). An occupational medicine physician (48EX) or an aerospace medicine specialist (48AX) is most appropriate; a flight surgeon or family practice physician with occupational health experience may substitute for a 48EX or 48AX.

3.6.5. Ensures medical staff who examine patients are aware of illnesses and injuries that may have a correlation to an OEH exposure.

3.6.6. Ensures the IOEMC (or a designated full-time medical representative for ARC installations) attends the Federal Compensation Act (FECA) Working Group, with FM, BE and PH support and attendance as required. Medical participation will be IAW DoD 1400.25-M, *DoD Civilian Personnel Manual*, Subchapter 810-Injury Compensation and other military and civilian lost work/duty time initiatives, including the Safety, Health and Return-to-Employment (SHARE) Team concept and the SECAF/CSAF Military Lost Workday Metric. SECAF/CSAF Military Lost Workday Metric does not apply to ANG.

3.7. Aerospace Medicine Squadron Commander (AMDS/CC) (or local equivalent).

3.7.1. Leads Team Aerospace execution of OEH Program responsibilities.

3.7.2. Establishes an Occupational & Environmental Health Working Group (OEHWG) under the direction of the Aerospace Medicine Council.

3.7.3. Ensures, at a minimum, representatives from Flight Medicine (FM), Bioenvironmental Engineering (BE) and Public Health (PH), participate in OEHWG meetings.

3.7.4. Ensures integration of OEHWG activities with other installation ESOH professionals, including but not limited to Safety, Civil Engineering, Fire Protection, Physical Therapy, and the Injury Compensation Program Administrator.

3.7.5. Ensures Occupational and Environmental Health Medical Examination (OEHME) scheduling, administration, reporting, and follow up are accomplished IAW paragraph **5.5.**

3.7.6. Ensures workers who require OEHMEs receive the appropriate exam, effectively partners with unit commanders (or designees) to ensure OEHMEs are accomplished in a timely manner, and regularly communicates OEHME compliance rates to medical and line commanders through the ESOH Council.

3.7.7. Ensures prompt medical support and consultation is provided to the Installation Compensation Program Administrator (ICPA) or to the Injury Compensation Specialist and Human Resources Office (HRO) for ANG units, as requested.

3.8. Flight Medicine Flight Commander (or local equivalent).

3.8.1. Ensures FM participates in the OEHWG.

3.8.2. Supports the installation OEH Program through consultation and workplace visits.

3.8.3. Ensures OEHMEs are conducted based upon recommendations from the OEHWG, except where a separate Occupational Medicine Clinic already accomplishes these examinations (e.g., Air Logistics Centers).

3.9. Bioenvironmental Engineering Flight Commander (or local equivalent).

3.9.1. Assists commanders and supervisors with integrating OEH input into ORM-based decision processes.

3.9.2. Accomplishes OEH risk assessments.

3.9.2.1. Investigates proposed process changes that could result in new OEH hazards.

3.9.2.2. Assigns categorization to each workplace IAW **Table 4.1.** and provides a completed list to the OEHWG for review.

3.9.2.3. Ensures personnel are assigned to appropriate Similar Exposure Group (SEG).

3.9.2.4. Recommends, evaluates and determines adequacy of OEH hazard controls.

3.9.2.5. Evaluates risk related to environmental health issues that could result in adverse health outcomes (e.g., poor indoor air quality in a dormitory).

3.9.2.6. Effectively communicates the risks to the organizational leadership, the affected individual and members of a related Similar Exposure Group (SEG).

3.9.3. Executes all BE-related tasks required to complete an Occupational & Environmental Health Site Assessment (OEHSA).

3.9.3.1. Accomplishes and maintains proficiency to accomplish the full spectrum of assessment/sampling necessary to complete an OEHSA.

3.9.3.2. Provides input to the Force Protection Working Group to assist in completing the installation vulnerability assessments.

3.9.4. Provides incident response IAW AFI 10-2501, *Emergency Management Program.*

3.9.5. Ensures the approved OEH-MIS is used to manage OEH surveillance data.

3.9.6. Assesses and documents workplace exposures for potential OEH-related illnesses identified by PH.

3.9.7. Provides consultation on OEH Program compliance, including training required by regulatory compliance.

3.9.8. Updates and provides Occupational and Environmental Health Exposure Data (OEHED) to the OEHWG.

3.9.9. Serves as OEH Program liaison to appropriate regulatory authorities, e.g., OSHA, as required.

3.10. Public Health Flight Commander (or local equivalent).

3.10.1. Provides OEH epidemiology.

3.10.1.1. Provides epidemiological analysis to the OEHWG to include as a minimum, the presence or absence of OEH-related trends. Analysis may also include trends in training, PPE usage, safety incidences, clinic visits by type/AFSC/workplace, etc. as deemed necessary and appropriate by the OEHWG.

3.10.1.2. Provides consultation to OEHWG on OEH medical examinations, training requirements and risk communication.

3.10.1.3. Provides OEH-related illness data to installation's ESOHC, FECA Working Group and any other appropriate venue, which address workers compensation issues.

3.10.1.4. Ensures data from the Occupational Safety and Health Administration (OSHA) Form 301 and CA-17s are available as needed for workers' compensation cases.

3.10.1.5. Manages the Occupational and Environmental Illness Program (paragraph **5.7.**).

3.10.1.6. Manages the Installation Fetal Protection Program

3.10.1.6.1. Interviews all pregnant females (military and civilian) working on base, consults with BEE and Primary Care Manager (PCM) or IOEMC on potential OEH threats, records health risks and documents recommended preventive actions on the AF Form 469, *Duty Limiting Condition Report*. The original AF Form 469 will be filed in the individual's medical record and copies will be given to the individual for the individual and the supervisor. In addition a copy of the 469 will be sent to the supervisor to ensure the supervisor is aware of the pregnant worker restrictions.

3.10.1.6.2. Provides epidemiological analysis of adverse pregnancy outcomes as deemed necessary by the OEHWG.

3.10.1.7. Acts as MTF or ARC medical unit liaison to local/community health department.

3.10.2. Force Health Management (FHM)

3.10.2.1. Identifies OEHMEs triggered by regulatory authority and risk assessment activity based on OEHED.

3.10.2.2. Works with supervisors, designated unit representatives or individual employees to schedule appointments.

3.10.2.3. Provides the medical records section with the updated OEHED to be filed in the employees medical record.

3.10.2.4. Coordinates with supervisors to maximize completion rates and to minimize impact on mission where possible.

3.10.2.5. Tracks completion rates of Occupational Exams and maintains records of show/cancellation rates and reports this information to the OEHWG.

3.11. Installation Occupational & Environmental Medicine Consultant (IOEMC).

3.11.1. Appointed by the Medical Group Commander and serves as Chair and approval authority for the OEHWG-recommended clinical OEHME requirements, including pregnancy profiles IAW AFI 44-102, *Community Health Management*. (This can be delegated to any flight surgeon as needed).

3.11.2. Provides medical oversight for the OEH program and ensures medically appropriate risk assessment and medical surveillance activities are conducted. Reviews reported and suspected OEH-related illnesses or injuries and provides necessary feedback to BE, PH, FM and ICPA as required.

3.11.3. Determines work relatedness of suspected occupational illnesses in consultation with the worker, supervisor, BE, PH, FM/OM, PCM and other appropriate agencies using guidelines in National Institute for Occupational Safety and Health (NIOSH) publication 79-116, *A Guide to the Work-Relatedness of Disease*, or most current edition.

3.11.4. Makes recommendations for submission to the Department of Labor regarding the work relatedness of occupational illness and injury claims and to the Social Security Administration regarding Disability Retirement applications. (Garrison Only) At ANG installations, the FECA working group will make recommendations for submission to the Department of Labor.

3.11.4.1. Represents the MTF or ARC medical unit at the installation's workers compensation working group, the Installation ESOHC Council and or other AF forum where OEH illness data are discussed and used to approve or disapprove compensation.

3.11.4.2. Ensures data from the OSHA Form 300 and CA-17s is available as needed for workers' compensation cases.

3.11.4.3. Leads medical participation in multi-disciplinary forums to reduce military and civilian lost workdays and injury rates, including SHARE and the SECAF/CSAF Military Lost Workday Metric. SECAF/CSAF Military Lost Workday Metric does not apply to ANG.

3.11.5. Periodically briefs professional staff on occupational illness and injury trends and related issues (e.g., recognition, prevention, care and reporting).

3.11.6. Reviews and approves occupational "Fitness for Duty" determination examinations.

3.12. Installation Occupational & Environmental Health Working Group.

3.12.1. Reviews workplace categorization provided by the BE Flight Commander or equivalent (IAW **Table 4.1.**) and makes recommendations for changes.

3.12.2. Recommends OEHME requirements to the IOEMC; documents determinations in the OEHWG minutes.

3.12.3. Implements procedures to investigate and report suspected OEH-related illness or injury.

3.12.4. Ensures all OEH-related training requirements are identified and communicated to workplace supervisors.

3.12.5. Develops measures to assess the effectiveness of the installation OEH Program.

3.12.6. Provides semi-annual OEH Program review to the installation ESOH Council, to include at a minimum adverse trends and OEHME completion rates.

3.12.7. IAW AFI 90-801, *ESOH Councils*, paragraph 5.3.7, assists the Installation ESOHC with identifying and prioritizing requirements to optimize mission performance and minimize ESOH risk and cost.

3.12.8. Provides for a collaborative process of assessment, planning, facilitation, and advocacy for options and services to meet an injured worker's health needs through communication and coordination of care to minimize delays in diagnosis, treatment, and return-to-work, including SHARE and the SECAF/CSAF Military Lost Workday Metric. (Unless accomplished via alternate forum). SECAF/CSAF Military Lost Workday Metric does not apply to ANG.

3.13. OEH-MIS Functional User Group.

3.13.1. Assists AFMOA/SGPB with identifying, prioritizing, and resolving OEH-MIS technical, funding, and management issues. The OEH-MIS FUG Chair will define its purpose, responsibilities and membership through a written charter, which is approved by AFMOA/SGPB.

3.13.2. Participates in the OEH-MIS development process to include evaluating and testing system changes.

3.14. Air Force Institute for Operational Health (AFIOH).

3.14.1. Provides specialized, technical consultation to assist in assessing and managing installation OEH Programs.

3.14.2. Performs and/or assists with on-site evaluations, sampling, analysis, health risk assessment and mitigation to support DoD, AF, MAJCOM and installation OEH Programs, as requested.

3.14.3. Identifies OEH risk reduction opportunities with AF-wide significance and evaluates costs/benefits.

3.14.4. Analyzes AF-wide, MAJCOM and installation OEH data (home station and deployed locations) to identify significant trends and provides annual summary analyses (exposure and outcome based) to the AF/SG, Combatant Command Air Component, MAJCOM and MTF or ARC medical unit staff.

3.14.5. Recommends AF-level OEH Program metrics to AFMOA/SGP.

3.14.6. Identifies, develops and maintains standard data sets (pick lists) for use in the OEH-MIS.

3.14.7. Provides guidance on implementing and sustaining the AF-approved Material Safety Data Sheet (MSDS) tracking system.

3.14.8. Maintains a master OEH exposure data repository through the OEH-MIS.

3.14.9. Plans, programs and budgets for maintenance and upgrades to the OEH-MIS and for meetings of the OEH-MIS FUG.

3.14.10. Provide standardized recommendations for medical examinations based on exposures most commonly observed among given Air Force Specialty Codes (AFSCs).

3.15. USAF School of Aerospace Medicine.

3.15.1. Provides AFSC-awarding and advanced OEH Program training to members of Team Aerospace, including appropriate OEH-MIS training.

3.15.2. Ensures all aspects of OEH training are integrated with OEH-MIS data entry and information management training for Team Aerospace personnel.

3.15.3. Participates in the OEH-MIS FUG and supports system changes and optimization.

3.15.4. Collaborates with 882nd Training Group (Sheppard AFB, TX) to ensure clinical staff are familiar with OEH Program requirements/process.

3.16. Wing/Base Ground Safety.

3.16.1. Documents and reports OSHA Reportable occupational illnesses on the OSHA Form 300, Reportable Injury/Illness Log, or electronic equivalent. **(Garrison Only)**

3.16.2. Works with Team Aerospace personnel to ensure installation complies with applicable regulatory and policy requirements, as outlined in applicable 91-series publications.

3.17. Installation Compensation Program Administrator (ICPA).

3.17.1. Perform workers compensation duties IAW DoD 1400.25-M to expedite return-to-work and reduce compensation costs. At ANG installations, this responsibility lies within the State Human Resources Office (HRO).

3.17.2. Share appropriate workers compensation data with Ground Safety and OEH POCs to ensure prevention and reduction of lost workdays

3.18. Workplace Unit Commander. Ensures compliance with all OEH program requirements and ensures employees report for all scheduled OEHMEs.

3.19. Workplace Supervisors.

3.19.1. Ensure required OEH hazard controls are implemented and functioning correctly, and personal protective equipment is available and used correctly in the workplace; instruct personnel on care/hygiene of their personal protective equipment.

3.19.2. Ensure workplace complies with applicable OEH regulatory and policy requirements.

3.19.3. Inform BE, or BE/PH Staff at ARC bases, if a change to workplace equipment or practices and procedures may impact exposure to OEH hazards.

3.19.4. Conduct workplace-specific OEH hazard training, per regulatory or policy requirements; document training in accordance with AFI 91-301.

3.19.5. Consult with appropriate subject matter experts to ensure OEH hazard training meets or exceeds minimum requirements.

3.19.6. Ensure baseline examinations are performed before commencement of a specific job to assess an employee's ability to perform the job capably and safely from a medical perspective.

3.19.7. Ensure personnel requiring OEHMEs attend scheduled medical appointments.

3.19.8. Maintain accurate rosters of personnel assigned to the workplace; provide updates to Team Aerospace personnel upon request. Ensure personnel movements between workplaces are updated in MILPDS and civilian personnel systems.

3.19.9. Ensure Public Health is informed promptly about each job-related illness or injury.

3.19.10. Supports the OEH hazard identification and risk assessment process by ensuring active engagement of personnel with OEH professionals evaluating the workplace.

3.20. Employees.

3.20.1. Comply with OEH program requirements, including training and the proper use of personal protective equipment.

3.20.2. Report on time for scheduled OEHME appointments.

3.20.3. Report changes that may impact exposure to OEH hazards to the appropriate supervisor; actively participate in workplace health hazard identification and health risk assessments, to include wearing sampling/monitoring equipment.

3.20.4. Report to supervisors and medical authority any occupationally related exposures or health conditions, and seek medical care as required.

Chapter 4

OEH PROCESS ASSESSMENT

4.1. Purpose. The purpose of OEH process assessment is to enhance overall mission effectiveness by protecting AF workers from OEH hazards that may be present in home station and deployed environments. Process assessment provides a framework to:

4.1.1. Integrate AF OEH Program objectives with AFMS desired effects and capabilities.

4.1.2. Effectively employ the DoD Industrial Hygiene Exposure Assessment Model to prioritize assessment efforts/activities on operations posing the greatest health risk.

4.1.3. Recommend and evaluate the effectiveness of control options designed to minimize OEH-related exposure.

4.1.4. Accurately document OEH exposure(s) to ensure an accurate **Longitudinal Exposure Record** (LER) is created/maintained for all AF workers.

4.1.5. Ensure commanders comply with applicable federal, state or host-nation, and local regulations, standards and requirements, as applicable. **(Garrison Only)**

4.2. Process Description. The AF implementation of the DoD Industrial Hygiene Exposure Assessment Model is illustrated in **Figure 4.1.** Implementation is organized into two basic courses of action: Routine Assessment and Special Assessment.

4.3. Routine Assessment.

The routine assessment is a qualitative and/or quantitative assessment conducted to identify and scope the processes employed to execute the unit's mission. The potential health hazards and associated risks should be scoped to the extent that the workplace can be categorized IAW paragraph **4.6.** and additional health assessment requirements identified. The information collected during routine assessment is used to focus limited resources in a prioritized manner. These assessments are designed to be short-duration, and identify/prioritize the need for more in-depth (special) assessment. During routine assessment, BE will periodically identify: potential OEH risks; data required to characterize these risks; additional evaluations needed to obtain required data; existing hazard controls; and compliance with OEH Program and regulatory requirements. Information obtained from the health risk assessment is then conveyed to the appropriate organization for information/action. The principle purpose of routine assessment is to:

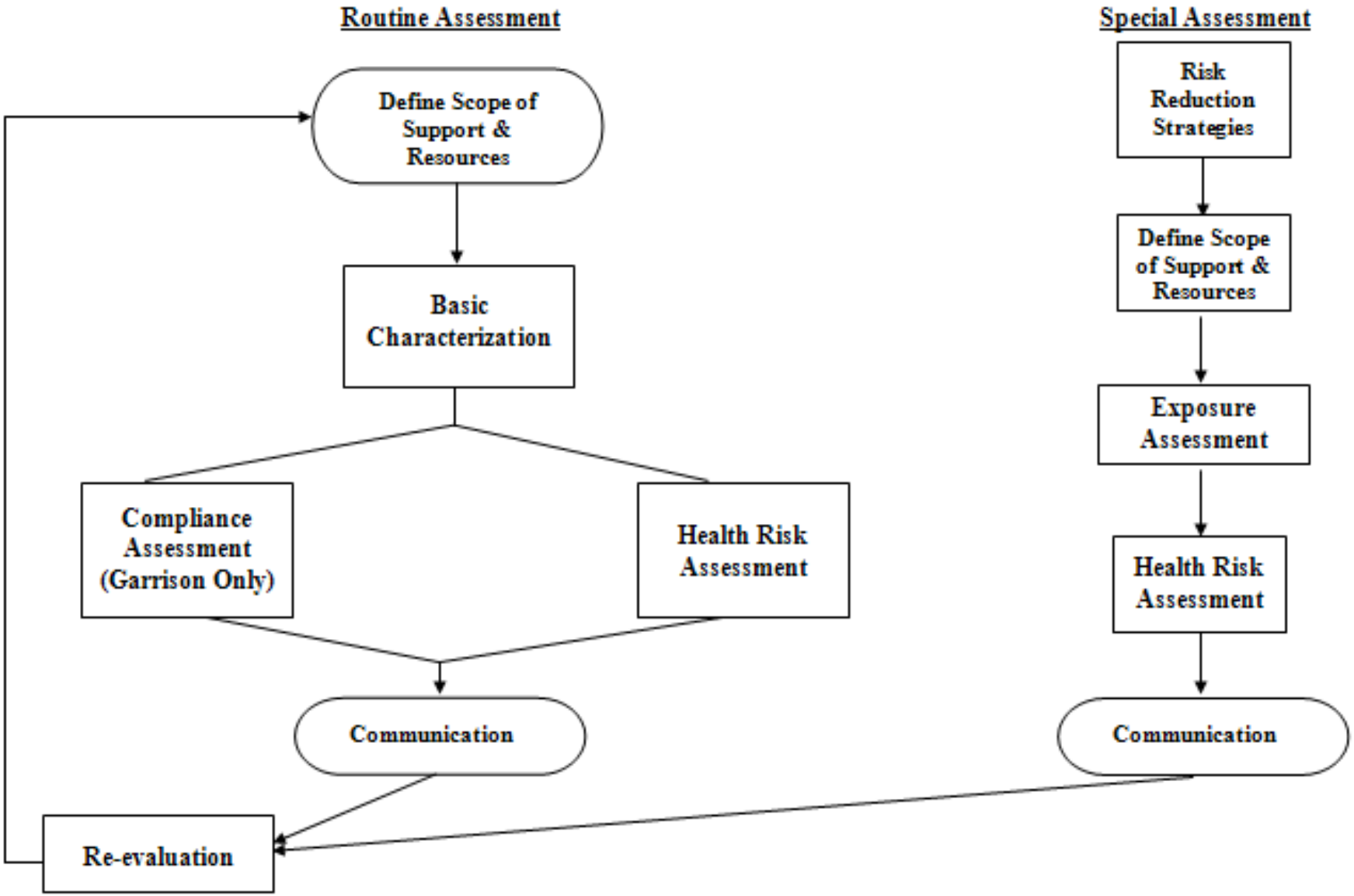
4.3.1. Identify OEH support requirements;

4.3.2. Identify potential OEH hazards related to a process/processes;

4.3.3. Assess confidence in exposure characterization, confidence in existing controls and acceptability of exposure relative to applicable standards; and

4.3.4. Assign a qualitative risk to each hazard.

Figure 4.1. Air Force OEH Exposure Assessment Model.



4.4. Special Assessment.

The special assessment is typically a quantitative assessment that focuses resources on OEH-related hazards that require additional evaluation or classification. During special assessment, BE further characterizes health risk through specific additional monitoring. The results of additional monitoring are interpreted by comparison with applicable health-based exposure standards. Information obtained from the health risk assessment is then conveyed to the appropriate organization for information/action. The principle purpose of special assessment is to:

4.4.1. Quantify potential exposures identified during routine assessment;

4.4.2. Perform periodic control evaluations, e.g., ventilation surveys, to maintain confidence in the effectiveness of established controls;

4.4.3. Evaluate unscheduled requests, e.g., pregnancy evaluations, OEH illness investigations, etc;

4.4.4. Provide follow-up action on recommendations or direction from the OEHWG

4.4.5. Sustain compliance with regulatory requirements. (Garrison Only)

Special assessment requirements are generally identified during routine assessment but may also be identified by other means, e.g., illness or injury reports.

4.4.6. Prioritize and perform Special Assessment IAW AFMAN 48-146, *Occupational and Environmental Health Program and Information Management*.

4.4.7. Periodically review the list of Special Assessment requirements and adjust priority based on risk, or as required by local requirements/conditions.

4.4.8. Provide commander and affected individuals with a summary of the outcome of the special assessment, plans for additional evaluations and recommended actions to reduce hazard/risk to acceptable levels.

4.5. OEH Process Assessment Steps.

The paragraphs below list the major steps necessary to accomplish Routine and Special Assessment.

4.5.1. **Define Scope of Support and Resources.**

4.5.1.1. Identify organizations that require support

4.5.1.2. Capture organization demographics

4.5.1.3. Receive unscheduled requests for surveys

4.5.1.4. Program and budget

4.5.1.5. Schedule and suspense

4.5.2. **Basic Characterization.**

4.5.2.1. Review previously collected data, including a quality assessment of the data

4.5.2.2. Identify applicable process/es

4.5.2.3. Associate actual/potential OEH hazards with process/es

4.5.2.4. Identify/evaluate controls designed to address each OEH hazard.

4.5.2.5. Establish one or more SEG based on the processes performed by each affected group and associated potential exposures

4.5.2.6. Assign personnel performing the process to a SEG, as appropriate

4.5.3. **Risk Assessment.**

4.5.3.1. Assess hazard exposure using confidence in existing controls and in hazard characterization

4.5.3.2. Determine operational health risk using Severity and Probability

4.5.3.3. Identify OEH risk reduction strategies

4.5.4. **Compliance Assessment (Garrison Only).**

4.5.4.1. Identify applicable checklist items for the specific workplace

4.5.4.2. Answer checklist questions in OEH-MIS for applicable OEH Program areas, e.g., Hazard Communication (HAZCOM), etc.

4.5.5. **Communication.**

4.5.5.1. Generate routine and/or special assessment reports

4.5.5.2. Complete OEHED

4.5.6. **Risk Reduction Strategies.**

4.5.6.1. Prioritize assessment based on ORM outlined in AFPAM 90-902

4.5.6.2. Schedule and suspense required Special Assessment

4.5.7. **Exposure Assessment.**

4.5.7.1. Measure/estimate exposure

4.5.7.2. Compare exposure measurement/estimate to appropriate exposure standard

4.5.7.3. Determine appropriate ORM-based course of action

4.5.7.4. Provide control recommendations, as necessary

4.5.8. **Reevaluation.**

4.5.8.1. Consolidate requirements and update annual planning

4.5.8.2. Repeat health risk assessment process, including re-assessment of control effectiveness

4.5.8.3. Establish procedures for BE to identify significant process changes

4.6. Workplace Categorization & Assessment Frequency.

Table 4.1. is a tool for categorizing workplaces based on potential OEH risk to workers. The categorization decision rests with the BE Flight Commander (or equivalent), in consultation with the OEHWG. The characteristics listed here, coupled with local priorities, should be integrated with ORM principles outlined in AFI 90-901, *Operational Risk Management (ORM)* and AFPAM 90-902, *ORM Guidelines and Tools*, to aid in decision-making. Note the characteristics listed here are not "all inclusive" and are meant as guidelines. BE shall document any locally devised rationale/categorization plan as well as categorization (application of the plan) for each workplace using the OEH-MIS. In the deployed setting, the Com-

batant Command Air Component Surgeon may establish routine surveillance requirements. If there are no established guidelines, routine surveillance of category 1 and 2 workplaces will normally be performed during each AEF rotation.

Table 4.1. Workplace Categorization & Required Routine Assessment Frequency*

	Workplace Category		
	1 - High	**2 - Medium**	**3 - Low**
	Hazards poorly defined or poorly controlled; work environment or processes unstable	Hazards well defined and controlled; work environment and processes stable	No hazards; work environment and processes stable
	Inherent OEH risk present with medium to high hazard potential	Inherent OEH risk present with relatively low hazard potential	Non-existent or negligible sources of OEH risk present
	Regulatory assessment requirements, e.g., asbestos (29 CFR 1910.1001)	Minimal potential for hazards to go out of control or create significant risk	Full OEH regulatory compliance
	Requirement for special purpose occupational exams, other than audiograms	Requirement for annual audiograms	
	Potential for significant OEH regulatory non-compliance	Potential for OEH regulatory non-compliance	
Required Assessment Frequency (In Months)	**Every 12**	**Every 30**	**Locally Determined**

* The required routine assessment frequency establishes a minimum requirement. A workplace should be visited/assessed as frequently as necessary to adequately identify, assess and control specific OEH hazards. The decision to exceed the established minimum assessment frequency is made by the base BEE, in consultation with the OEHWG.

Chapter 5

OCCUPATIONAL AND ENVIRONMENTAL CLINICAL SURVEILLANCE

5.1. Purpose.

The objective of OEH clinical surveillance is to protect AF workers by detecting potential failure in controlling exposure(s). A secondary objective is to protect AF workers by detecting disease at or before the point it becomes clinically evident. Historically, bases have developed individual risk assessment and clinical surveillance guidelines. Emphasis is shifting to focus on a corporately developed assessment process to allow greater confidence in OEH hazard characterization across the AF. Medical surveillance data for specific potential exposures will become more uniform as the capability to broadly assess and analyze OEH-related hazards improves.

5.2. Occupational Medicine Support.

5.2.1. Occupational medicine supports AF mission objectives by helping optimize workforce availability.

5.2.2. Occupational Medicine supports the OEH Program with direct clinical functions (tertiary preventive medicine), and illness prevention activities (primary and secondary prevention). This is accomplished by:

5.2.2.1. Identifying worker fitness and limitations for tasks, i.e., New Hire/Special Purpose/Fitness for Duty Examinations;

5.2.2.2. Preventing illness through clinical medical surveillance, i.e., performing OEHME and assisting with/consulting on workplace surveillance;

5.2.2.3. Identifying and supporting prompt treatment of OEH-related injuries and illnesses and rehabilitation to minimize disability and impairment. At ANG installations, provide referral to employee's primary care physician or Military Healthcare System if on Air Guard Reserve active duty status or as appropriate. For full time technicians, see para **3.11.4.**

5.2.2.4. Providing medical consultation and case management for occupationally ill/injured civilians and military members.

5.3. Occupational & Environmental Health Medical Examinations.

Descriptions and requirements for OEHMEs are presented in DoD 6055.5-M, *Occupational Medical Surveillance Manual*, the US Navy's Medical Matrix (available from the Naval Environmental Health Center) and other current guidance. The general types of exams are as follows:

5.3.1. **Baseline Examination (Pre-placement).**

5.3.1.1. Baseline examinations are performed before commencement of a specific job to assess an employee's ability to perform the job capably and safely from a medical perspective. Ideally these medical examinations should be done before commencement of work. However, if the individual has already started work, these examinations will be completed within 60 days of assignment unless more stringent requirements exist.

5.3.1.2. Baseline exam should be accomplished prior to job placement for all workers permanently or temporarily assigned to the work area for 30 or more days per year unless more stringent requirements exist, e.g., respirator users must receive a baseline examination regardless of anticipated duration of work.

5.3.2. **Periodic Examination.**

Periodic OEHME are accomplished to identify changes in health status and may include medical monitoring to detect evidence of unacceptable exposure including biological changes indicative of an OEH-related illness or injury.

5.3.3. **Examination at Termination of Exposure.**

An OEHME is accomplished upon termination of exposure such as a Permanent Change of Station or transfer to another workplace; if the person is continuing in the same job at the next assignment, a termination examination may not be necessary. Normally, the examination requirements will be the same as for the periodic examination. Generally, if a periodic OEHME was accomplished within the last 180 working days, a termination of exposure OEHME will not be required unless more stringent requirements exist, e.g., asbestos workers must have termination exam within + 30 days of termination. Not all exposures require termination exams. Proper documentation of a termination exam is important in preventing future compensation costs. Termination of exposure exams are used for hazards with predominately acute effects.

5.3.4. **Termination of Employment.**

OEHME are accomplished to characterize worker health at termination of employment, e.g., separation or retirement. Not all exposures require termination exams. A termination exam may be required by law (e.g. OSHA expanded standard) or by local policy.

5.4. OEHME Requirements.

5.4.1. The OEHWG reviews the Occupational and Environmental Health Exposure Data (OEHED) provided by BE. The OEHED summarizes the type of work performed, the workers' overall OEH exposure, and required controls.

5.4.2. OEHWG will identify regulatory and additional OEHME requirements, e.g. requirements in union agreements and/or local contracts.

5.4.3. The OEHWG will document and track OEHME requirements for all workplaces.

5.5. OEHME Scheduling, Reporting and Follow-up.

5.5.1. **Force Health Management** (FHM) will work with supervisors, designated unit representatives or individual employees to schedule appointments.

5.5.2. FHM will coordinate with supervisors to maximize completion rates and to minimize impact on mission where possible.

5.5.3. FHM will validate personnel assignments.

5.5.4. FHM will track completion and maintain records of show/cancellation rates for clinical surveillance. Air Force Air Reserve Components' installations OEHME scheduling, reporting, and follow-up is accomplished by the Reserve Medical Unit.

5.5.5. FM will communicate results of the OEHME to the worker within timeframes established AF and/or regulatory requirements.

5.5.6. FM will schedule any required follow-ups and monitor until completion.

5.5.7. FM will conduct OEHME and document all results in the respective member's medical record

5.6. Data Standardization. OEH surveillance programs will be standardized across the Air Force as follows:

5.6.1. FM will review the OEHED and OEHWG requirements prior to each OEHME.

5.6.2. At the time of examination, if the OEHED and OEHME requirements located in the employee's medical record are not current, locate and file current information in the appropriate medical record.

5.7. OEH Illness Program Management.

5.7.1. Supervisors, military personnel and DoD civilian employees are responsible for minimizing OEH-related risks.

5.7.2. All medical personnel who examine (or see) patients should be aware of illnesses that have a correlation to OEH exposures. DoD 6055.5-M has a list of sentinel events related to workplace exposure.

5.7.3. Workers and other beneficiaries suspected of having OEH-related illnesses will be referred to PH. PH will document and track suspected OEH-related illnesses; Ground Safety will document and track suspected occupational injuries.

5.7.4. PH will use the OEH-MIS to record, report, and trend OEH illness data. Other tools (e.g. ASIMS) are acceptable tools to use until the OEH-MIS includes all functional requirements.

5.7.5. BE and PH work cooperatively to complete the OEH illness investigation process.

5.7.5.1. PH performs the patient and workplace supervisor interviews.

5.7.5.2. BE accomplishes the workplace and environmental health investigation.

5.7.6. The IOEMC makes the final determination on the work-relatedness for a suspected OEH-related illness based on information provided by BE and PH.

5.7.7. The IOEMC will document the decision in the patient's medical records.

5.7.8. PH will forward occupational illness information to the OSHA 300 log via a web-based reporting system or via OSHA Form 301 (or equivalent) to the base safety office for inclusion into the installation OSHA 300 log.

5.8. Forms Prescribed. No forms are prescribed by this instruction.

5.9. Forms Adopted. OSHA Form 300, *Log of Work-Related Injuries and Illnesses*, OSHA Form 301, *Injury and Illness Incident Report*, and Air Force Form 469, *Duty Limiting Condition Report*.

JAMES G. ROUDEBUSH, Lieutenant General, USAF, MC, CFS
Surgeon General

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

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Abbreviations and Acronyms

ACGIH—American Conference of Governmental Industrial Hygienists

AFI—Air Force Instruction

AFIOH—Air Force Institute for Operational Health

AFMOA—Air Force Medical Support Agency

AFMS—Air Force Medical Service

AFOSH—Air Force Occupational and Environmental Safety, Fire Protection and Health

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AMC—Aerospace Medicine Council

ASIMS—Aerospace Information Management System

ATSDR—Agency for Toxic Substances and Disease Registry

BE—Bioenvironmental Engineering

BEE—Bioenvironmental Engineer

CCS—Command Core System

COCOM—Combatant Command

DNBI—Disease And Non-Battle Injury

DoD—Department of Defense

DoDD—Department of Defense Directive

DOEHRS-IH—Department of Defense Occupational & Environmental Health Readiness System-Industrial Hygiene

DRU—Direct Reporting Units

ESOH—Environment, Safety, and Occupational Health

FECA—Federal Employee Compensation Act

FHM—Force Health Management

FM—Flight Medicine

FOA—Field Operating Agency

FUG—Functional User Group

HAZCOM—Hazard Communication

HRA—Health Risk Assessment

ICPA—Installation Compensation Program Administrator

IOEMC—Installation Occupational & Environmental Medicine Consultant

IPE—Individual protective equipment

LAF—Line of the Air Force

LER—Longitudinal Exposure Record

MHS—Medical Health Service

MSDS—Material Safety Data Sheet

MTF—Medical Treatment Facility

NIOSH—National Institute for Occupational Safety and Health

OEH—Occupational & Environmental Health

OEHED—Occupational & Environmental Health Exposure Data

OEHME—Occupational & Environmental Health Medical Examination

OEH-MIS—Occupational & Environmental Health-Management Information System

OEHSA—Occupational & Environmental Health Site Assessment

OEHWG—Occupational & Environmental Health Working Group

OH—Occupational Health

ORM—Operational Risk Management

OSHA—Occupational Safety and Health Administration

PCM—Primary Care Manager

PH—Public Health

PHA—Preventive Health Assessment

PPBE—Planning, Programming, Budgeting, and Execution

PPE—Personal protective equipment

SEG—Similar Exposure Groups

SF—Standard Form

SG3PB—Bioenvironmental Engineering Division

SOH—Safety and Occupational Health

USAFSAM—United States Air Force School of Aerospace Medicine

Terms

Activity—See Process

Air Force Civilian—Senior executive service (SES), general manager (GM), general schedule (GS), and federal wage system (FWS) employees, including ANG and USAFR technicians; scientific and technical; administratively determined; US citizen employees in Panama; non-appropriated fund employees; Youth

and Student Assistance Program employees; and foreign nationals employed by the Air Force under a direct or indirect hire arrangement. *NOTE:* Excludes Army-Air Force Exchange Service (AAFES), Defense Commissary Agency (DeCA), and Defense Finance and Accounting Service (DFAS) employees.

Air Force Military—All military personnel on active duty with the US Air Force; Air National Guard and Air Force Reserve personnel on active duty or in drill status; US Air Force Academy cadets; Reserve Officers' Training Corps cadets when engaged in directed training processes; and foreign national military personnel assigned to the US Air Force.

Air Force Worker—Collective group comprised of Air Force Military and Civilian personnel.

Clinical Surveillance—The process by which workers receive Occupational & Environmental Medical Examinations, which are designed and conducted, based on an assessment of workers' identified OEH risks. The results of these examinations are analyzed to determine if Air Force operations are adversely affecting the health of the workers. 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 OEH hazard is being controlled.

Confidence in Hazard Characterization—A qualitative and/or quantitative determination of the adequacy of OEH hazard data for reaching sound conclusions regarding exposure.

Health Risk Assessment (HRA)—A HRA is the process of identifying, evaluating actual or potential health risks, and developing options for controlling environmental and occupational health (OEH) threats in specific populations or locations over time.

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

Occupational and Environmental Health Site Assessment (OESHA)—The OEHSA is the key operational health tool for producing data or information used for health risk assessments (HRA) and to satisfy OEH surveillance requirements. OEHSAs focus on collecting site-specific data to identify potential or actual exposure pathways during bed down, employ, and sustainment of air and space forces.

OEH-Related Illness or Injury—A suspected or confirmed adverse health event caused or aggravated by employment as described in Occupational Injury and Illness Reporting Guidelines for Federal Agencies (OMB 1200-0029). OEH-related illness or injury also includes biological changes indicative of overexposure to a hazard.

Process—Any item of work or situation that may pose a risk, and may require evaluation and control; 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.

Routine assessment—A qualitative and/or quantitative assessment that identifies health hazards and associated risks to focus limited resources in a prioritized manner.

Special assessment—Typically a quantitative assessment that focuses resources on OEH-related hazards that require additional evaluation or classification based on information gained during routine assessment.

Workplace—Any environment where a potential OEH exposure may occur. A workplace may be administrative, industrial, or all encompassing, e.g., any setting where an OEH exposure may occur while deployed.