

## **PERFORMANCE WORK STATEMENT (PWS)**

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**NASA/Armstrong Flight Research Center**

**Occupational Health Services**

**Performance Work Statement**

**Revision 4: March 13, 2025**

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## 1.0 BACKGROUND

- 1.1 This Performance Works Statement (PWS) describes Occupational Health Services to be performed at the National Aeronautics and Space Administration (NASA) Neil A. Armstrong Flight Research Center (AFRC), located on Edwards Air Force Base (EAFB) in Edwards, California (CA) and its associated site in Palmdale, CA. The specific services covered are Occupational Medicine to include Occupational Medical Clinic and Health Education and Wellness Program, as well as Environmental Health (EH) to include Industrial Hygiene and Health Physics (Ionizing and Non-Ionizing Radiation) and oversight of the AFRC Food Safety Program. Services specifically EXCLUDED from this PWS are: Employee Assistance Program (EAP), Workplace Drug-Testing (including Specimen Collection and/or Medical Review for drug testing), Workers' Compensation Case Management, and Environmental Management.
- 1.2 AFRC, formerly known as the NASA Hugh L. Dryden Flight Research Center, is located approximately 80 miles northeast of Los Angeles, CA. An AFRC component facility (Building 703) supports the AFRC Science Mission Directorate aircraft, and is located in Palmdale, CA, approximately 50 miles northeast of Los Angeles, CA and 32 miles from EAFB. Overall, AFRC conducts aeronautical research and testing, along with airborne science operations, in accordance with NASA's strategic mission, utilizing about 1,100 on-site personnel—to include Civil Servants, Contractor personnel and other visitors.
- 1.3 The Contractor's primary requirement under this contract is to ensure the safety and health of workers through compliance with all applicable laws, regulations, policies standards as well as NASA's and Center Procedural Requirements. NASA has defined the requirements for an Occupational Health Program under NASA Procedural Requirement (NPR) 1800.1, entitled, "Occupational Health Program Procedure". Many of these requirements reflect or expand upon other Federal requirements as promulgated through the Occupational Safety and Health Administration (OSHA), the Federal Aviation Administration (FAA), the Federal Motor Carrier Safety Administration (FMCSA), and various other organizations responsible for establishing industry standards such as the American Conference on Governmental Industrial Hygienists (ACGIH), American National Standard Institute (ANSI) and Institute of Electrical and Electronics Engineers (IEEE). The PWS outlines what objectives the Contractor shall accomplish to fulfill the specific elements of NPR 1800.1 and related Center documents. For the purposes of this requirement, the term 'Occupational Medicine' shall include the Occupational Medical Clinics and the Health Education and Wellness Program, unless otherwise noted. The term "Environmental Health" Program shall include Industrial Hygiene and Health Physics (Ionizing and Non-Ionizing Sources), unless otherwise noted.

## 2.0 OBJECTIVES

### 2.1 OCCUPATIONAL MEDICINE

The objectives of the Occupational Medicine function are accomplished through primary (e.g., job certification, fitness center or travel medical examinations), secondary (e.g. medical surveillance examinations) and tertiary (e.g. illness and injury management, medical emergency response) prevention activities. The Occupational Medicine function also promotes the health of the AFRC workforce through the operation and management of an on-site Fitness Center and wellness campaigns (e.g., flu vaccinations, blood pressure checks). The Contractor's Occupational Medicine staff shall provide services and materials to meet requirements in the following functional areas:

- 2.1.1 Job Certification Medical Examinations (e.g., Respirator Use, Crane/Equipment Operation, Aircrew Medical Examinations, etc.)
- 2.1.2 Federal Aviation Administration (FAA) Medical Examinations (to include First-Class medical certification)
- 2.1.3 Department of Transportation (DOT) Medical Examinations, i.e. Federal Motor Carrier Safety Administration (FMCSA) Medical Examinations
- 2.1.4 Travel Clearances and Travel Medical Examinations
- 2.1.5 Medical Surveillance Examinations (e.g. Audiometry, Lead Exposure Monitoring, Laser Eye Exams, Methylene Chloride medical surveillance, etc.)
- 2.1.6 Occupational Illness and Injury Examinations
- 2.1.7 Preventive Health Examinations
- 2.1.8 Fitness Center Medical Clearances
- 2.1.9 Health Promotion Activities, such as didactic educational events, blood pressure screenings, staffing a health promotion booth at Safety Day, Vaccination campaigns, etc.
- 2.1.10 Health-Related Education and Training (e.g. Hearing Conservation, Blood-Borne Pathogens, etc.)
- 2.1.11 Infection Control
- 2.1.12 Medical Emergency Response, to include Basic Life Support (BLS) and the initial steps of Advanced Cardiovascular Life Support (ACLS)

- 2.1.13 Automated External Defibrillator (AED) Program Management. See section 4.1.12 and 4.1.15.
- 2.1.14 Fitness Center Management (Formal class instruction and/or personal training services are EXCLUDED). See section 4.1.11.
- 2.1.15 Medical support to the crew and support staff of a commercial space vehicle during simulation exercises and test landings at Edwards AFB, conducted in coordination through NASA AFRC.
- 2.1.16 Performance of NASA Pilot medical examinations and determination of medical qualification for flight in accordance with NASA and FAA standards.
- 2.1.17 Performance of FAA First, Second and Third Class Medical Certification examinations.
- 2.1.18 Identification of medical condition requiring waiver, and preparation of the aeromedical documentation to support a waiver request (if justified) or for FAA Medical Certification exam cases will follow FAA requirements for FAA Special Issuance.
- 2.1.19 Preparing aeromedical summaries for presentation to the NASA Aerospace Medicine Board, 2) preparing occupational medicine FMCSA NASA equivalence case summaries (Doctor and NP), 3) presenting cases to FMCSA to NASA HQ Occupational Medicine Board (Doctor and NP) and 4) presenting cases to the NASA Aerospace Medicine Board (Doctor and Doctor for NP). AFRC Chief Medical Office shall approve documentation format and contents for NASA Aerospace Medicine Board (AMB) presentation narrative summaries.
- 2.1.20 Review of flight medical questionnaires of qualified non-crewmembers to determine medical qualification for flight.
- 2.1.21 Review of occupational audiograms to determine work-related hearing loss and OSHA recordability.
- 2.1.22 Medical direction and quality assurance review of the clinical activity of the Nurse Practitioner.
- 2.1.23 Serve as a technical expert in answering medical questions posed by NASA Center management.
- 2.1.24 Provide pharmacy services of a California Board licensed medical doctor who serves as the lab's director, including any required signatures, as well as the requisitioning or purchase, storage,

safeguarding, accountability, and dispensing of all pharmacy supplies, drugs, and medicines necessary for the operation of the medical services facilities at AFRC Main Campus.

## 2.2 ENVIRONMENTAL HEALTH (EH)

The objectives of Environmental Health (EH) are accomplished through the anticipation (e.g. document reviews and permits), recognition (e.g. workplace exposure assessment), evaluation (e.g. appropriate sampling, surveillance and analysis of workplace hazards) and control (e.g. recommendation of workplace controls, as well as education, training and certification) of workplace health hazards. Controls generally include: 1) Elimination or substitution; 2) Engineering controls to prevent or minimize exposure to workers; 3) Administrative or work practice controls to prevent or minimize exposure to workers; and/or 4) Appropriate use of personal protective equipment by the worker. The Contractor's EH staff shall provide support and services based on NPR 1800.1 and other Federal and NASA Requirements such as the following functional areas:

- 2.2.1 Hazard Communication/ Global Harmonization System (GHS)
- 2.2.2 Control of Hazardous Substances
- 2.2.3 Asbestos
- 2.2.4 Heavy Metals such as: Hexavalent Chromium (Chromium VI), Lead, Cadmium, Beryllium, Mercury, etc.
- 2.2.5 Benzene
- 2.2.6 Formaldehyde
- 2.2.7 Methylene chloride
- 2.2.8 Blood Borne Pathogens and Biosafety
- 2.2.9 Additive Manufacturing
- 2.2.10 Reproductive and Developmental Health
- 2.2.11 Hearing Conservation
- 2.2.12 Ergonomics
- 2.2.13 Indoor Air Quality
- 2.2.14 Thermal Stress
- 2.2.15 Local Exhaust Ventilation

- 2.2.16 Respiratory Protection
- 2.2.17 UV Safety Program
- 2.2.18 Ionizing Safety Radiation
- 2.2.19 Radiofrequency and Microwave Safety Radiation
- 2.2.20 Laser and Non-Laser Optical Radiation Safety
- 2.2.21 Vector Related Disease (e.g. hantavirus, histoplasmosis)
- 2.2.22 Silica Dust
- 2.2.23 Food Safety Program
- 2.2.24 Cryogen Safety
- 2.2.25 Illumination
- 2.2.26 Water Quality
- 2.2.27 Hydrazine safety

### 3.1 SCOPE

#### 3.2 OCCUPATIONAL MEDICINE (OM)

- 3.2.1 Size - The medical facility at AFRC is referred to as the “Health Unit” (bldg. 4822). The AFRC Health Unit is located on the main campus. Additionally, the AFRC Fitness Center (bldg. 4877) is a 4,350 square foot facility, which has two large fitness areas (one primarily for equipment, the other for stretching, aerobics and group exercise); the facility includes men’s and women’s locker rooms and shower facilities, as well as an administrative office. On average, 25-30 employees (Civil Servant and Contractor) utilize the facility each workday.
- 3.2.2 Job Certification Physical Examinations: Job certification physicals address the question of whether an employee is medically qualified to perform a specific job or function. These examinations assure the employing organization (as well as the individual and the individual’s Supervisor) that the individual is medically qualified to perform the job, or a specific aspect of the job (e.g. respirator use). Job certification examinations are provided by NASA at no cost to the employee (Civil Servant or Contractors). Many of these exams are accomplished in accordance with guidance from OSHA, NASA, or other regulatory authorities. Communication of the assessment is made to the responsible

parties (usually the Supervisor and employee) in written format (e.g. the AFRC “Request for Medical Clearance” form).

- 3.2.3 **Medical Surveillance Examinations:** Medical surveillance exams address the question of whether the work or its environment is producing deleterious health effects on the employee. As such, medical surveillance examinations are a type of monitoring tool for health and safety in the workplace. At AFRC, various environmental health programs include requirements for medical surveillance, such as Hearing Conservation Program, Respiratory Protection Program, Bloodborne Pathogen Program, Confined Space Program, OSHA specific chemical hazards (e.g. Lead and methylene chloride), Laser Safety Program and Radiation Safety Program. A communication of certification examinations is made to the responsible parties in written format.
- 3.2.4 **Periodic Health Maintenance Examinations** Preventive Health Examinations (also referred to as “Executive Physicals”) consist of screening observations or tests to detect disease in an early, more treatable phase, before symptoms manifest and are more detrimental. Periodic health maintenance examinations are offered to Civil Servants as a benefit of their employment; however these exams are voluntary. The scope and frequency of the exam is specified in NPR 1800.1.
- 3.2.5 **Fitness Center Management:** Contractor will manage the operation of the Fitness Center and provide medical clearance for use of the Fitness Center
- 3.2.6 **Travel Clearance** NASA Civil Servants who are traveling overseas shall receive a medical evaluation and clearance performed in accordance with NPR 1800.1. When requested or when the Health Unit recognizes the need, the Occupational Health Contractor shall perform travel medical evaluations and provide recommended travel preventive medicine services, meeting the United States Centers for Disease Control recommendations, to other NASA resident contractors traveling outside the United States.
- 3.2.7 **Qualifying Non-Crew Member (QNC) clearance:** for AFRC personnel (Civil Servants and Contractors) who perform QNC duties, contractor will perform in-person examinations and ensure appropriate occupational health needs of these QNC workers.  
Non-AFRC workers who request QNC clearance will be cleared by review of QNC medical questionnaires and further clarifying medical information will be requested from the worker when needed based on the responses to the questionnaire.
- 3.2.8 **Occupational Illnesses & Injuries:** The Occupational Medical staff shall treat and manage the occasional work-related injury or illness. All AFRC personnel (Civil Servants and Contractors) with occupational illnesses or

injuries may be initially treated within the capabilities of the AFRC Health Unit. There is no on-site X-ray or laboratory capability, so more complicated or serious injuries and illnesses are referred to the patient's private medical provider off-site. Both Civil Servants and Contractor employees have a choice as to who their treating doctor (Medical Doctor-Doctor of Medicine or DO-Doctor of Osteopathic Medicine) will be for an occupational illness or injury, i.e. the employee is encouraged, but not required, to go to the AFRC Health Unit for their illness or injury. Contractors may have their own "preferred providers" for injured or ill employees, separate from the AFRC Health Unit. More detailed procedures for addressing workplace (occupational) injuries, illnesses, and communicating such information to the employer (i.e. the Supervisor) are provided in specific NASA and AFRC guidance.

- 3.2.9 Non-Occupational Injuries & Illnesses: The NASA Occupational Health Program dictates that Health Unit staff **WILL NOT** act as the employee's personal medical doctor (PMD) or primary care provider. The AFRC Health Unit generally does not address, treat or dispense medications for non-occupational illnesses and injuries. When in the best interests of NASA, the Health Unit may address and treat—on a one-time basis—non-occupational illnesses and injuries of AFRC Civil Servants, (e.g. respiratory infections, gastroenteritis or non-work-related injuries). All follow-up or ongoing care shall be provided by the employee's PMD.

Contractor employees must see the PMD for all non-occupational medical needs unless it is an urgent or emergent condition (e.g. heart attack, stroke, etc.)

- 3.2.10 Medical Emergency Response: Although the AFRC Health Unit does not operate formal ambulance service, Health Unit staff shall respond to medical emergencies during regular duty hours that occur at AFRC main campus. On main campus, the staff shall use the Medical Emergency Response Vehicle (MERV). The scene may be an industrial area such as an aircraft hangar, or elsewhere within a building. The Health Unit staff shall **NOT** proceed into an area or structure unless it is safe. The determination of an area's safety, when not obvious, will be made by the On-Scene Commander (e.g. Fire Chief, Safety, Health and Environmental Officer, Protective Services, etc.). Contractor personnel shall **NOT** drive the AFRC MERV off the confines of Edwards Air Force Base.
- 3.2.11 NASA Mishap Information System (NMIS): NASA has various safety reporting systems. The contractor's Occupational Health staff shall ensure all occupational medical related incidents be entered into NMIS following NASA's NPR 8621.1C- NASA Procedural Requirement for Mishap and Close Call Reporting, Investigating, and Record Keeping.
- 3.2.12 Administrative and Medical Record/Document support: The AFRC Health unit (HU) medical services and Clinic Director require the support



of a technical/clinical documents/medical records information specialist. This specialist will do at minimum the following:

- 3.2.6.3 Coordinate with AFRC civil servant and contract employees to set-up appointments for visits to the HU in support of required occupational health certifications/approvals.
- 3.2.6.4 Updating clients' medical records in the NASA Occupational Health electronic health record system.
- 3.2.6.5 Updating clients' training records for required occupational health trainings.
- 3.2.6.6 Coordinating appointments for AFRC civil servants' executive medical examinations.
- 3.2.6.7 Assisting Nurse Practitioner/Physician Assistant/or Doctor (MD or DO) with the coordination of Wellness Campaigns and management of the Fitness Center.
- 3.2.6.8 Compiling metrics data from several Occupation health programs, including participation in activities or use of the AFRC Fitness Center.
- 3.2.6.9 Assisting and managing with the coordination and Center logistics of all Occupational Health audit visits, including the tri-annual O HMO audit (rooms, phones, computers, and setting up of Center Management meetings/ presentations in support of the audit visit).

### 3.3 ENVIRONMENTAL HEALTH (EH)

- 3.3.1 Size: The AFRC main campus occupies approximately 880 acres, and consists of buildings with approximately 900,000 square feet of structural floor space. Overall, AFRC structures include cafeteria, gift shop, aircraft hangars, industrial shops, fuel stations, a motor pool, research engineering workshops, flight simulation facilities, fabrication shop, research aircraft platforms, fiber optics labs, material testing lab, ejection seat maintenance shop, communication and telemetry facilities, a mirror coating facility, an airborne science integration facility, an occupation health clinic, and office space. AFRC has a workforce composed of approximately 533 Civil Servants and 786 on-site contractors, as well as a few visiting researchers and investigators.
- 3.3.2 Hazardous Operation review/evaluation and permitting: Various work processes and hazardous operations may have a need for Environmental Health reviews and evaluations, and in some cases, formal permitting. Various workgroups throughout the Center will often utilize regulated chemicals or have other hazardous operations. These may require the issuance of an Evaluation and Recommendation/Requirements Report, as well as formal permits/authorizations (e.g. Class IIIB or 4 lasers, Ionizing Radiation and Radio Frequency Devices, nuclear gauge permits). In addition, Changes to the infrastructure, facilities or work processes can potentially expose workers to health hazards not previously identified or

mitigated (e.g. new chemicals, unforeseen ergonomic challenges, increases in power of radiation devices, etc.) and these will require Environmental Health evaluations. There are also isolated incidents (e.g. foul smell in the work area, unusual taste to the drinking water, etc.) that occasionally require prompt IH evaluations and recommendations.

- 3.3.3 Exposure Assessments: Exposure assessments are a proactive method by which the IH staff evaluate a functional work area with regards to the hazards and programs identified in Section 2.2. In this on-going process the presence, or absence, of the specific hazard for a given work area is documented, and if present, its potential hazard to workers is assessed in a quantifiable manner. Workers potentially exposed to the hazard(s) are identified, and mitigation steps are developed. These steps may include required training, medical examination, engineering or administrative controls, and/or the use of personal protective equipment (PPE).
- 3.3.4 Sampling and Surveillance: AFRC utilizes two common sampling techniques: a) surveys and monitoring of exposure conducted with direct reading instruments or passive samplers and b) sampling of specific substances, with subsequent shipping to an appropriate laboratory for processing and analysis. The various equipment and instruments used for surveying and sampling must be maintained on a regular basis, bump-tested on a regular schedule and calibrated to established standards. Environmental Health contract staff shall maintain such equipment and instruments according to established standard operating procedures, and ensure items are bump tested and calibrated on the prescribed schedule per standards and NASA requirements. Contractor shall also maintain associated logs, records and databases. NASA will provide the actual equipment or instruments. NASA will also perform and/or coordinate the calibration. Contract staff will coordinate the with NASA AFRC's Calibration group. NASA will provide any additional costs of maintenance beyond normal inspection and care of the equipment or instrument.
- 3.3.5 Dosimetry and Direct Readers for Radiation Exposure: The AFRC Radiation Safety Program provides Optically Stimulated Luminescent (OSL) dosimeters to all applicable radiation workers as designated by the RSO. The Environmental Health contractor shall coordinate and implement the OSL program, which consists of processing new program participant requests, "Safe Use of OSL" training, quarterly OSL exchanging, retrieving OSLs from employees leaving the OSL program, and providing each employee with their individual annual exposure reports.
- 3.3.6 Reports: A variety of reports or other methods of documentation are produced by the Environmental Health group. These include: survey reports, evaluations, exposure assessments, annual program self-assessments, data analysis, trending analysis, deficiencies within regulatory requirements,

document reviews, mishap reports, progress and metric reporting, improvement and recommendation/requirements reporting, and detail requirements for mitigation and control of the potential hazard(s). In addition, the Radiation Safety Program has an annual requirement for a report based on a comprehensive review of the ionizing and non-ionizing radiation program.

3.2.6.1 The contract Environmental Health personnel shall provide the appropriate draft reports (information, requirements and recommendations) to the responsible NASA AFRC Program Manager for IH or HP for their review and concurrence thus facilitating informed decisions that minimize health risk of center personnel. NASA will provide the contractor with any required templates and/or format for these reports.

3.2.7 Implementation and Coordination of Hazard Controls:

There may be the need for the coordination and implementation of hazard controls based on surveys, assessments, and evaluations. The Environmental Health Contractor shall provide the IH and HP PM with viable options for the coordination and/or implementation of EH controls. For example, training, signage, permits and engineering controls. The contractor shall support the implementation of these controls.

3.2.8 Education and Training: The AFRC workplace safety and health program requires specific training to be accomplished by the worker. Some training can be accomplished online through the NASA-provided online learning system. However, some training must be accomplished in-person (e.g. respirator use and fit-testing).

3.2.8.1 The Environmental Health staff shall provide required training, as defined within their areas of responsibility, in accordance with nationally recognized standards. In addition, the contractor staff shall coordinate two annual awareness training campaigns for Center employees. Campaign subject will be coordinated with the AFRC EH Program Managers. One of these may be in conjunction with the AFRC Safety Day Activities.

3.2.8.2 The Environmental Health Staff will track and document training.

3.2.9 Recordkeeping:

The AFRC EH Program requires accurate and updated record keeping information. NASA has a prescribe Record Management Program for these functional areas. The contractor is to ensure that all EH records are kept in accordance with NASA Record Management requirements NPR 1440.61.

### 3.2.10 Database Development and Management System

The EH program is intensively regulated with very prescribe requirements that may have prescribed schedules. The Environmental Health Contract Staff is to develop a management scheduling database for the EH Program that may include, among its functional components: EH equipment maintenance, bump-test and calibration schedules, regular exposure surveys and assessments (e.g. x-ray cabinet annual surveys, x-ray producing devices, x-ray vault annual survey, noise surveys, and chemical surveys), area radiation surveys, leak tests, annual radiation areas and devices inspections, exposure assessment schedule, dosimetry schedule, AFRC permit schedules, updating of AFRC's radiation devices inventories (RF, Laser and Ionizing Radiation), training schedule, annual awareness trainings (RF, lasers, asbestos, lead) and EH facility inspections.

### 3.2.11 Utilize various methods (e.g., educational presentations, awareness information [e.g., AM3 notes, promotional material, SharePoint], health fairs, screenings, and individual counseling services) to ensure, annually, at least four health and wellness topic-specific activities are conducted.

3.2.11.1 A minimum of 1-2 health clinics are conducted per year. (e.g., Vaccination clinics, blood pressure screening, diabetes screening, etc.)

3.2.11.2 Activities and information materials shall be planned throughout the year and not all in one quarter.

3.2.11.3 Promotion of exercises and fitness Center usage for health benefit shall be at least one of these activities.

3.2.11.4 All activities covered by this section, shall be approved by the COR.

## 4.0 Requirements

### 4.1. Occupational Medicine (OM), the Contractor shall:

4.1.1. Operate the AFRC Health Unit at Edwards campus in accordance with the operational hours and work schedule for AFRC, provided under the Section entitled, "Standard Work Hours".

4.1.2. The AFRC Edwards Campus will operate with **a minimum of one (1) Licensed Medical Professional (LMP) between the hours of 07:00 - 07:30 AM, and 4:00 – 4:30 PM (3:00 – 3:30 PM on working Fridays) on workdays.**

4.1.3. The AFRC Edwards Campus will operate with **a minimum of two (2) licensed Medical Professionals (LMP) required on working weekdays**

**Monday - Thursday (8:00-4:00pm):**

1. (e.g. A Nurse Practitioner/ Physician Assistant and one Registered Nurse or one Paramedic/Rescue Specialist (Military trained USAF PJ, USA 18D, USN Seal Medic, USMC Marsoc Medic) with a doctor available for consultation when needed.  
or
  2. A doctor (MD or DO) and one Registered Nurse  
or
  3. A doctor (MD or DO) and one Paramedic/ Rescue Specialist (Military trained USAF PJ, USA 18D, USN Seal Medic, USMC Marsoc Medic)
- 4.1.4. A doctor (MD or DO) shall be the Medical Director of the Health Unit and shall perform, as needed, aviation medical examinations including NASA First, Second, and Third Class Aviation Medical Exams, FAA First, Second, and Third Class medical certification exams (i.e. must be a FAA Senior Aviation Medical Examiner), and NASA Qualified Non-crewmember certification, in addition to other duties consistent with required qualifications for the doctor (MD or DO) position
  - 4.1.4.1. Contractor responsibilities at BLDG 703 will continue for the AED program until BLDG 703 is closed and AEDs are retrieved.
- 4.1.5. Prepare a variety of medical presentations such as: aeromedical summaries for presentation to the NASA Aerospace Medicine Board, 2) occupational medicine FMCSA NASA equivalent case summaries (Doctor and NP/PA), 3) presenting cases for FMCSA to NASA HQ Occupational Medicine Board (Doctor and NP), and 4) presenting cases to the NASA Aerospace Medicine Board (Doctor and Doctor for NP).
- 4.1.6. Coordinate the disposal of regulated medical waste and expired pharmaceuticals with a disposal contractor. The government will pay all costs associated with disposal.
- 4.1.7. Perform work-related medical examinations in accordance with NPR 1800.1 and other applicable regulatory agencies. The Contractor shall provide staff who possess the knowledge, skills and abilities to perform medical examinations, to include:
  - 4.1.7.1. Vital Signs (i.e. height and weight measurement, blood pressure measurement using an automated sphygmomanometer, oral temperature using an automated oral probe, respiratory rate and

- heart rate);
- 4.1.7.2. Pure-Tone Audiometry;
  - 4.1.7.3. 12-lead Electrocardiography (EKG);
  - 4.1.7.4. Phlebotomy;
  - 4.1.7.5. Intravenous (IV) Line Insertion and Maintenance;
  - 4.1.7.6. Spirometry (Pulmonary Function Testing);
  - 4.1.7.7. Vision Testing (Using a standard Optec® or Titmus® Vision Testing Machine provided by NASA);
  - 4.1.7.8. Urine Dipstick Analysis;
  - 4.1.7.9. Finger stick glucose sample collection and analysis as well as;
  - 4.1.7.10. FMCSA Medical Certification;
  - 4.1.7.11. FAA Aviation Medical Certification, to include First-Class, Second-Class and Third-Class Medical Certifications (FAA Senior Aviation Medical Examiner is required to perform First-Class exams and certifications).
  - 4.1.7.12. NASA First, Second, and Third-Class Aviation Medical Examinations (FAA Senior Aviation Medical Examiner is required to perform NASA First Class exams and certifications)
  - 4.1.7.13. Qualified Non-crewmember Certifications [A doctor (MD or DO) is required to perform these certifications].
- 4.1.8. Review appropriate tests and laboratory results required by such exams (e.g. hearing tests, pulmonary function tests, laboratory tests, etc.), and direct appropriate follow-up as indicated.
  - 4.1.9. Assess, treat and manage workplace illnesses and injuries within the purview of the Health Unit (i.e. there is no "STAT" lab capability except for dip urinalysis and finger stick glucose, no radiology capability, and no inpatient capability on-site).
  - 4.1.10. Assess and treat (within the Clinician's scope of practice and within the purview of the Health Unit) urgent or emergent conditions, such as acute coronary syndrome, acute myocardial infarction, or cerebrovascular accident

(stroke) on an initial (i.e. urgent or emergence) basis. The staff shall immediately arrange urgent/emergent transport of the patient to higher levels of care via ambulance when the need is identified.

4.1.11. Respond immediately to 911 emergency calls in accordance with the Center's Emergency Preparedness and Response Plan. The response shall specifically include:

4.1.11.1. The cessation of all current activities (assuming they are not themselves life-saving activities);

4.1.11.2. Acquiring the necessary emergency information for response;

4.1.11.3. Loading the MERV with pre-determined bags and equipment (NASA will determine the medications and equipment in these bags);

4.1.11.4. Driving the MERV in an emergency manner (i.e. emergency lights and siren, if indicated—with due regard for safety) to the scene of the emergency;

4.1.11.5. Stabilizing the patient(s) to the extent possible in accordance with standard BLS and/or ACLS protocols;

4.1.11.6. Ensuring patients needing further care are transported to an off-site hospital using the paramedic ambulance service, i.e. the Edwards Air Force Base Paramedic Ambulance Service (AFRC Main Campus), as outlined in AFRC guidance.

4.1.12. Respond to all Center Mass Casualty Emergencies following AFPL8710.1-001-Emergency Management.

4.1.13. Assess non-work-related illnesses. The Clinician shall not prescribe or furnish medications unavailable in the Health Unit.

4.1.13.1. Medications will only be furnished from the AFRC Health Unit in accordance with Health Unit policies and protocols. Medications shall be furnished in dosages routinely prescribed, when indicated and appropriate for the patient. No prescriptions shall be written by the Contractor Clinician. Drug, strength and directions for use shall be documented in the electronic health record system, and patients shall be provided with the appropriate educational information regarding furnished drugs or devices. The medications available in the Health Unit will be determined by NASA. The Contractor shall be provided access

to NASA Occupational Health Databases used in the performance of these requirements (e.g. Electronic Health Record System).

4.1.14. The Contractor will support the operations of the AFRC's Fitness Center by performing the following:

- 4.1.14.1. Conduct a walk-through each morning of the Fitness Center during the regular workweek to check on AEDs, 911 phones and general facility.
- 4.1.14.2. Evaluate employees' medical clearances required to use the Fitness Center facility. Clearances are valid for one year.
- 4.1.14.3. Grant card reader access via NAMS to the Fitness Center, only to participants that hold a current medical clearance.
- 4.1.14.4. Coordinate with AFRC (Code 220 Facility) for any custodial or maintenance issue regarding the Fitness Center building. Provide the AFRC Fitness Center Program Manager (FC PM) with information regarding:

- Any new or existing, equipment placement and/or rearrangement within the facility;
- Routine quarterly AFRC safety inspections, weekly fitness center visual inspection using the OCHMO checklist and coordinating the maintenance and service equipment inspections.

Participate, as part of the Fitness Center Safety Team, and providing feedback to the AFRC FC PM on any safety issues to include any acquisition recommendations for new equipment or the removal of any malfunctioning, recalled or broken equipment. These will be as-hoc meetings, only call upon when needed.

4.1.14.4.1. NASA will review, approve, and procure (when feasible) any required purchase or maintenance services.

4.1.14.4.2. The Contractor shall be responsible for notifying the FC PM if/when equipment is not functional and place a "OUT OF ORDER" sign at the site of the equipment.

- If equipment is deemed unfeasible to maintained or repair and needs to be excessed



or disposed, the contractor will coordinate the excessing and disposal process.

- If the equipment is deemed to need repair services, the contractor will request approval, from the FC PM, and coordinate the service call and visit. For issues identified in the regular safety inspection or any other audit, the contractor will coordinate, with the FC PM, the resolution of any finding or issues.

- 4.1.14.5. The contractor will ensure appropriate safety/health signage is posted at the Fitness Center.
- 4.1.14.6. The Contractor shall be responsible for notifying the Government if/when equipment is not functional.
- 4.1.14.7. The Fitness Center is open 24 hours for employee use. However, the contractor is NOT required to supervise hourly activities at the fitness center.
- 4.1.14.8. Ensure all new Fitness Center participants get a tour of the facility and understand the general safety rules for the safe use of the equipment and the basic Fitness Center Etiquettes. The contractor will provide a list to the FC PM of needed bathroom/locker NPR 1800.1 requirement deficiencies to ensure locker/bathroom area is safe and functional. Contractor will coordinate with facilities/housekeeping to ensure these are properly installed. It is the Government responsibility to cover all expenses required to maintain bathroom/locker requirements, per NPR 1800.1. AFRC Housekeeping will perform the required routine cleaning of the facility.
- 4.1.14.9. Obtaining data from AFRC Security on the Fitness Center usage and analyze trends. These will be presented during the monthly OHM3 meetings.
- 4.1.15. The Contractor will provide an Automated External Defibrillator (AED) Coordinator to manage the AFRC AED Program in accordance with NPR 8100.1. Specifically, the AED Coordinator shall:
- 4.1.15.1. Document the location of each AED on site;
- 4.1.15.2. Develop an inventory of all devices and their warranty expiration dates, dates of regular inspections, maintenance and any other required information;

- 4.1.15.3. Ensure each AED is checked on a periodic basis (no less frequently than quarterly) to determine if the signal light is blinking normally;
- 4.1.15.4. Document the lot number and expiration date of the batteries, the pads and the replacement pads (when applicable) to each defibrillator;
- 4.1.15.5. Coordinate with the designated point-of-contact for each defibrillator and alert that individual within three months of an expiration date of either the batteries or the pads. The point-of-contact shall be notified if there is a recall by the manufacturer of either the batteries or the pads. This notification shall be documented;
- 4.1.15.6. The Contractor shall be responsible for notifying the designated point-of-contact for each defibrillator or if the defibrillator is no longer usable (e.g. signal light not blinking, service alarm sounding, batteries or pads expired, etc.). Such notification shall be documented. The designated point-of-contact is responsible for replacing the batteries and/or removing the defibrillator from service; the Contractor is not responsible for ensuring the defibrillator is physically removed from service until it is again usable;
- 4.1.15.7. Coordinate an Annual AED AFRC Committee composed of members from Code 720 (Safety), Code 240 (Security) and the AED Coordinator;
- 4.1.15.8. Coordinate the acquisition and/or exchange of AEDs in designated areas. Contractor will not be responsible for funding the acquisition of the AEDs. AED Coordinator will provide suggested list to Chief Medical Officer for review and approval.
- 4.1.15.9. Provide AED/First Aid/CPR training in support of AFRC occupational requirements, missions and projects.
- 4.1.16. Emergency, Pandemic and Disaster Response
- The Contractor will provide Emergency, Pandemic and Disaster Response utilizing policy guidance from the NASA:
- Emergency Preparedness and Response- AFOP-8715.3 and Center Mishap Preparedness- AFPL-8621.01. In addition, the Contractor will also follow all guidance provided by NASA's Office of the Chief Medical Officer (OCHMO) regarding any emergency, pandemic and/or disaster

response.

- 4.1.16.1. Participate in Emergency and Disaster Response Exercises
    - 4.1.16.1.1. Arrange and participate in emergency response exercises (i.e. “Mock Codes”), on a quarterly basis at a minimum. These “Mock Codes” shall ensure the Health Unit staff is proficient at:
  - 4.1.16.2. Identifying the location of an emergency (when outside the Health Unit);
  - 4.1.16.3. Retrieving the required emergency response supplies;
  - 4.1.16.4. Conducting Basic Life Support (BLS);
  - 4.1.16.5. Calling for, and ensuring follow-on response, e.g. paramedic ambulance response service, is initiated; and
  - 4.1.16.6. Conducting the initial steps of Advanced Cardiovascular Life Support (ACLS), such as applying oxygen, starting an intravenous line, placing a cardiac monitor, and recognizing “shockable” from “non-shockable” cardiac rhythms.
- 4.1.17. Participate in other exercise (e.g. aircraft mishap exercises, earthquake drills, mass casualty exercise etc.) when scheduled, or as directed by the COR. Health Unit staff shall participate in After-Action Reviews, or other such performance review mechanisms (e.g. monthly staff meetings) as required, or as directed by the Chief Medical Officer.
- 4.1.18. Contractor will provide training required to AFRC personnel and contractors in Cardiopulmonary Resuscitation (CPR) and First-Aid/Automated External Defibrillation, in accordance with the standards of the American Heart Association to all employees required by their position and job related activities (e.g. Employees within the Blood Borne Pathogen Program, Safety, Security, etc.). Training will be scheduled and provided at the AFRC Main Campus, on a regular basis. In addition, the contractor will also provide CPR/AED/First Aid training to other AFRC personnel and contractors monthly at AFRC.
- 4.1.18.1. The Government shall provide the materials, e.g. books, and the equipment, e.g. manikins, to be used in the training. The Government shall also provide the supplies for cleaning the manikins after use.
  - 4.1.18.2. The Government shall provide (i.e. pay for) the course

completion cards for those successfully completing the course.

- 4.1.19. Participate in a structured Medical Quality Assurance and Peer Review program in which at least 10 selected charts between all LMPs, with a target of 3 charts per provider, to include the contract physician as well as the AFRC's CMO charts, are reviewed every quarter for accuracy (i.e. "Chart Reviews") and overall quality of care (i.e. "Peer Review of the contracted Health Unit Medical Director's charts may be performed by another physician on the contract and/or AFRC's Chief Medical Officer and a contract physician will review the AFRC CMO charts). All provider categories (physician, nurse practitioner/physician assistant/ nurse) must be represented as part of the 10 peer reviews per quarter.
- 4.1.20. Provide a designated "Infection Control Officer" (ICO) to implement the AFRC Infection Control Plan and provide training to members of the Infection Control Workgroup.
- 4.1.21. Document all patient contacts in the NASA-provided electronic health record system (EHRS) and shall complete all required forms in accordance with standard practice and specific NASA guidance.
- 4.1.22. Attend meetings at the AFRC as required, or as directed by the COR.
  - 4.1.22.1. Develop specific written standing orders and protocols for the Contractor Health Unit staff (to include the Nurse Practitioner and the Registered Nurses) to address medical examinations/operations from NPR 1800.1 Appendix C and OCHMO-STD-1880 requirements. These standing orders and protocols shall be a "living document" in that revisions shall be done any time NASA OCHMO and the center CMO provides new policies regarding examinations or clearances to the Center or a new NPR is in place. The initial standing orders and protocols as well as any revision or modification shall be drafted and signed by the Health Unit Medical Director and shall receive the written concurrence of the AFRC Chief Medical Officer (CMO) prior to contract implementation. An approved copy shall be provided to all LMPs and nursing staff. If during the course of the contract, there is a change in contract Health Unit Medical Director or NASA Chief Medical Officer, the Standing Orders/Protocols shall be re-submitted for concurrence to the CMO within 60 calendar days of the new CMO and/or contract Health Unit Medical Director start date. The Health Unit Director will ensure staff understanding and compliance to the orders.
  - 4.1.22.2. Support simulation tests and landing when required by NASA

AFRC. Specific Industrial Hygiene support measures will include those functions previously described in this Performance Work Statement. The exact amount and types of services (e.g. the type of staff and the hours required) required will be determined as needed; reimbursement to the Contractor will be accomplished a separate reimbursement mechanism.

#### 4.2. Health and Wellness

- 4.2.1. Contractor shall ensure All OCHMO Health and Wellness requirements, based on NPR 1800.1 and OCHMO Fitness Center audit questionnaire requirements are implemented. Managing informative poster and brochures throughout the Fitness Center regarding current health and wellness campaigns and general safety guidance.

#### 4.3. Environmental Health (Industrial Hygiene and Health Physics), the Contractor shall:

- 4.3.1. Develop an Environmental Health Program Orientation Handbook with the intent to help new EH contract personnel understand the different elements of the AFRC EH programs. Draft versions of the EH Program Orientation Handbook shall be submitted to the EH program manager for review and approval.
- 4.3.2. Conduct Environmental Health surveillance (e.g. “exposure assessments”, surveys) of facilities, work process, projects and health hazard generating equipment (e.g. ionizing and non-ionizing radiation, noise, etc.) materials using standard IH/HP equipment/instruments and standard IH sampling/surveillance techniques. NASA AFRC will provide equipment and supplies to support environmental surveillance. The Contractor shall prepare, review and/or modify all standard operating procedures for conducting environmental health surveillance based on approved consensus standards and NASA requirements.
  - 4.3.2.1. Contractor shall update individual branch codes exposure assessment summaries, annually. Initial exposure assessment summaries include a list of similar exposure groups (SEGs), what hazards each SEG is or may be exposed to, and the required training and medical surveillance programs associated with each hazard. Updates shall reflect the current EH department’s understanding of the hazards in each branch code. Updates may include (but are not limited to) adding new hazards identified, removing SEGs from certain medical monitoring programs, and an updated reproductive and development hazard chemical list. Contractor shall work with each respective branch manager, or designee, to verify all SEGs listed are current and identified and to verify if they know of any other hazards or concerns not already listed in the exposure assessment summary. The branch code exposure assessment summary format will be

provided by the NASA EH program managers. Updated exposure assessment summaries shall be approved by the NASA EH program managers prior to sending them out to the respective branch managers and other applicable personnel (e.g. other contractor safety representatives).

4.3.3. Surveillance shall be conducted on a regular schedule, as well as ad-hoc in support of specific AFRC missions or projects. Approved Survey protocols must be used by the contractor. Survey information and results will be documented using official AFRC survey forms. Upon direction by the COR, conduct or coordinate surveying or sampling of potential worksite health hazards. Routine requests shall be accomplished within thirty (30) calendar days; urgent requests shall be accomplished within one (1) business day.

4.3.3.1. Final Reports are due five (5) business days from the day the results are received at NASA AFRC. Reports will include the sampling results, analysis and recommendations, and will be provided to the HP and/or IH Program Manager for review and approval prior to providing information to AFRC customers.

4.3.4. The Contractors shall accomplish the following tasks, as applicable:

4.3.4.1. Sample various media (e.g. air, soil and/or water) for analysis;

4.3.4.2. Perform noise surveys and dosimetry. This also includes investigating non-age corrected standard threshold shifts (STS), temporary threshold shifts (TTS), and age corrected STS;

4.3.4.3. Perform ventilation surveys;

4.3.4.4. Perform illumination surveys;

4.3.4.5. Perform ionizing radiation surveys;

4.3.4.6. Perform non-ionizing radiation surveys (to include RF and UV surveys);

4.3.4.7. Monitor and report heat stress conditions (if necessary);

4.3.4.8. Reproductive and Developmental hazard surveys;

4.3.4.9. Perform Ergonomic surveys;

4.3.4.10. Indoor Air Quality Survey; and

4.3.4.11. Compliance surveys.

4.3.5. Conduct internal reviews (i.e. “program self-assessments”), within twelve (12) months of being scheduled. The self-assessments shall include the following areas:

4.3.5.1. Asbestos;

4.3.5.2. Hearing Conservation and Noise;

4.3.5.3. Cryogenics;

4.3.5.4. Hexavalent Chromium;

4.3.5.5. Lead;

4.3.5.6. Hazard Communication (Global Harmonization System);

4.3.5.7. Non-Ionizing (Radiofrequency and Microwave) Radiation);

4.3.5.8. Ionizing Radiation;

4.3.5.9. Laser and High Radiant Optical Device Safety;

4.3.5.10. UV Safety Program;

4.3.5.11. Respiratory Protection;

4.3.5.12. Local Exhaust Ventilation;

4.3.5.13. Blood-Borne Pathogens;

4.3.5.14. Thermal Stress;

4.3.5.15. Ergonomics;

4.3.5.16. Heavy Metals (as appropriate);

4.3.5.17. Reproductive and Developmental Hazard program;

4.3.5.18. Hydrazine Program; and

- 4.3.5.19. Any other OSHA specific health hazard that may be present in the AFRC workplace.
- 4.3.6. Maintain an inventory of all IH/HP sampling/surveillance equipment. Contractor will ensure associated equipment logs are completed and maintained.
- 4.3.6.1. Perform routine field calibration, and ensure all instruments receive respective calibration in accordance with the manufacturer's recommended schedules.
- 4.3.6.2. Perform check source test for all ionizing radiation survey equipment.
- 4.3.6.3. Record all bump test.
- 4.3.6.4. Contractor will coordinate with NASA metrology and/or vendor for instruments that will require outside calibrations. Including shipment of instruments.
- 4.3.7. Coordinate with NASA and outside vendors to provide health, and environmental analytical laboratory services for sampled items. Contractor will coordinate with NASA's logistics for the shipment of such samples. These services will be at the Government's expense and shall be coordinated through the COR.
- 4.3.8. Food Safety Program- The contractor will also evaluate and support all other food related programs as identified in the NPR 1800.1. Documentation of such review will be placed in the AFRC I drive. EH Contract will perform the OCHMO required annual self-review and will participate in the AFRC Tri-annual OCHMO audit.
- 4.3.9. Provide technical consultation services, including reviewing and commenting on various technical documents (e.g., Chemical Purchase Reviews, project plan reviews) concerning proposed construction projects, aircraft research projects, or other projects, for compliance with applicable IH/HP requirements. These reviews shall be accomplished within 10 business days of request submitted to AFRC Environmental's chemical license coordinator.
- 4.3.10. Support the implementation, compliance and requirements of the AFRC Radiation Safety Programs to include: Ionizing Radiation Safety, Laser and Optical Safety, UV safety and Radio Frequency Safety Programs with NPR 1800.1, NRC and California Title 17. Contractor employee shall become the AFRC's alternate RSO, LSO and RfSO.



4.3.11. The contractor shall:

- 4.3.11.1. Obtain the required certifications to become Radiation Safety Officer (RSO), Laser Safety Officer (LSO) and Radio Frequency Safety Officer (RfSO) Certifications.
- 4.3.11.2. Develop and implement the required Radiation safety Training to all ionizing and non-ionizing radiation workers at AFRC.
- 4.3.11.3. Perform exposure Surveys and Leak tests on any rad source on site. Exposure Survey data will be used to calculate potential annual exposures and a report provided to operators.
- 4.3.11.4. Perform radiation exposure surveys on the source material packages when received at NASA AFRC logistics or via any other transportation mode.
- 4.3.11.5. Perform a radiation exposure survey on the AFRC radiography vault annually or as required if modifications to the vault or use deem it to require a new survey.
- 4.3.11.6. Ensure program has the required equipment to support appropriate surveys. Contractor will provide information on suggested new equipment needed, to the IH/HP Program Manager. The contractor will not be responsible for purchasing new equipment. However, will be responsible for bumping, calibration and coordination of maintenance of all radiation equipment.
- 4.3.11.7. Manage and coordinate the Dosimetry program. Contractor shall coordinate the issuance, retrieval of radiation badges for monitored personnel as well as providing the required annual exposure reports to operators. Dosimeters will be obtained through a contract, at the Government's expense.
- 4.3.11.8. Maintain and update the AFRC Laser, RF and Ionizing Radiation Inventory.
- 4.3.11.9. Develop evaluation, assessment and recommendation reports and permits, if necessary, of required radiation sources within NASA AFRC's purview. This will include lasers, Rf and ionizing radiation sources brought on-site by NASA employees, contractors or collaborators or for the use in science missions inside any of our airborne platforms. Templates for the reports will be provided by AFRC Health Physics Program Manager.

- 4.3.11.10. Review of 1707 form- Special Approvals and Affirmations of Requisition (code 720) for source purchases for recommendation approval.
- 4.3.11.11. Provide ionizing and non-ionizing (lasers, UV and Rf) permits within 10 calendar days of request. Contractor is to develop an annual permit list for each program.
- 4.3.11.12. Provide professional advice to Facilities (Code 220) and other organizations for the installment and implementation of IH/HP hazard controls- to include engineering, administrative and PPE controls in coordination with the NASA AFRC Health Physics Program Manager.
- 4.3.11.13. Perform investigations for all incidents and accidents and provide report to HP program Manager.
- 4.3.11.14. Perform Annual visual inspections and prepare annual Radiation Safety Program review report. Template for report will be provided by NASA's AFRC.
- 4.3.11.15. Provide input to the OCHMO's annual self-assessment checklists and documentation.
- 4.3.11.16. Support the preparation and participation in the Tri-annual OCHMO audit.
- 4.3.12. Perform Respirator Fit Testing and Ear plug Fit testing.
- 4.3.13. Provide support for AFRC's Annual Safety Day. Create a display on an IH/HP topic each year. Display topic shall be approved by the COR.
- 4.3.14. Perform office and Industrial Ergonomic Assessments.
  - 4.3.14.1. Contract staff is to perform evaluation, analyze information and offer viable options.
  - 4.3.14.2. Contractor will manager and coordinate the NASA Ergonomic Equipment Loaner Program and chair vendor visits.
  - 4.3.14.3. Contractor is to develop metrics for the Ergonomic Program.

4.3.14.3.1. Contractor is to coordinate with Code 700/NMIS to

understand the types of incidents that NASA AFRC is having that may be ergonomic in nature.

4.3.14.3.2. Contractor is to gather annual information from the NASA NSCC on the types of ergonomic stressors affecting AFRC and implement training and/or other effective controls to reduce the incidents.

4.3.15. Provide Indoor Air Quality (IAQ) assessments and evaluate building occupant complaints when directed by the COR.

4.3.16. When applicable, the contractor will inspect asbestos containing building materials for damage, annually. Contractor will provide a report to IH Program Manager with results and recommendations. (Note: a center-wide asbestos survey is expected to be completed, outside of this contract, which will provide a list of asbestos containing materials.)

4.3.17. Upon direction by the COR, conduct sampling of building materials specifically for asbestos or lead-based paint.

4.3.17.1. Contractor shall ensure that all asbestos-related work is performed under the direction of a Certified Asbestos Consultant, as defined by the State of California.

4.3.17.2. EH Contractors performing asbestos-related work shall be a Certified Asbestos Consultant (CAC), by the State of California. The above certifications shall be active, with the State of California, when conducting any asbestos related work.

4.3.17.3. The contractor shall assist the IH Program Manager with maintaining an inventory of known asbestos containing and lead containing products at the center.

4.3.18. Support preparedness and response to significant industrial incidents (e.g. hydrazine leak incident) and natural disasters as well as limited radiological surface contamination. Support shall be limited to evaluating hazards in the field, assessing the risk of performing entry and rescue operations, recommending appropriate personal protective equipment, using radiation decontamination kit, decontaminate surface of equipment to acceptable levels, and reporting information through the incident command structure. IH personnel shall **NOT** perform Hazardous Materials (HAZMAT) response activities.

4.3.19. Provide education and training for programs including, but not limited to, the following:

4.3.19.1. New employee/student orientation for interns and new NASA AFRC employees.

4.3.19.2. Hearing Conservation;

4.3.19.3. Respiratory Protection;

4.3.19.4. Hazard Communication/Global Harmonization System (GHS);

4.3.19.5. Blood-Borne Pathogens and Biohazards;

4.3.19.6. Lead, Asbestos;

4.3.19.7. Regulated Carcinogens;

4.3.19.8. Ergonomics;

4.3.19.9. Hydrazine;

4.3.19.10. Cryogen Safety;

4.3.19.11. Laser and Optical Device Safety

4.3.19.12. UV Safety training

4.3.19.13. Radiation Safety;

4.3.19.14. Radio Frequency and EMF Safety

4.3.20. Ensure implementation and documentation of NASA audits, to include an annual self-audit of affected areas, as well as a triennial audit conducted by the NASA Office of the Chief Health and Medical Officer (OCHMO).

4.3.21. Accomplish other non-program related EH tasks as required, such as reviewing aircraft payloads, hazardous material license review, and hazardous material control. In this capacity the Contractor shall provide technical expertise on general EH issues, and act as the subject matter expert for compliance with all applicable Federal, State and local laws, as well as NASA regulations and directives.

4.3.22. Attend in person or by phone meetings and participate in various committees, representing the AFRC EH, as directed by the COR. Specifically, such attendance shall at a minimum include the weekly Code 720 (Safety) meeting, the monthly EH meetings, various EH NASA working groups, the monthly Occupational Health Reporting Meeting (OHM), and the weekly EH Program Planning meeting.

4.3.23. Maintain and monitor government records by entering data into NASA- provided databases (or other appropriate information technology system), and interpretation of information to ensure that all program tasks comply with applicable regulatory and NASA's record management requirements. Such records include (but are not limited to) the following:

4.3.23.1. Compliance documentation;

4.3.23.2. Survey documentation;

4.3.23.3. Inspection Reports;

4.3.23.4. Performance Metrics;

4.3.23.5. Training Records;

4.3.23.6. Instrument and equipment maintenance and calibration records;

4.3.23.7. Permits;

4.3.23.8. Discrepancy records

4.3.24. The Contractor shall generate reports, within the general scope of duties outlined above, upon direction by the COR.

## 5.0 Audits, Self-Assessments, Inspections and Reviews

5.1 Conduct EH Annual Program Self-Assessments according to OCHMO guidance.

5.2 Prepare and participate in Tri-annual OCHMO audit package development.

5.3 Perform Annual OCHMO Self-Assessment package preparation.

5.4 Perform AFRC Policy/Procedures/Plan/Standards review to identify deficiencies when compared to the NASA NPR, OSHA, and other consensus standards. Contractor will provide revisions to address those deficiencies to the respective

Program Manager.

- 5.5 Perform Hazardous Operations Reviews (Organized by Code 720)
- 5.6 Provide input to the OSHA annual report narrative
- 5.7 Draft the Annual Radiation Safety Program Self-Audit/Inspection report for HP Program Manager review and approval.
- 5.8 Conduct Investigations and prepare report to include Root Cause Analysis and provide to IH/HP Program Manager or Chief Medical Officer for all Mishaps related to Occupational/Environmental Health.
- 5.9 Provide support and participate in all AFRC required audits pertaining to any aspect of the management and implementation of the Occupational and Environmental Health Programs.
- 5.10 Participate in applicable weekly safety inspections of buildings coordinated by Code 720. Identify EH deficiencies, provide report to Program Manager and enter finding in System for Tracking audits/assessments and review database (STAR) when applicable.
- 5.11 Participate in a structured Medical Quality Assurance and Peer Review program. See Section 4.1.16

#### 6.0 Installation-Accountable Government Property (IAGP)

- 6.1 The Government will provide all the required equipment and supplies for the contractor to use in support of this contract.
- 6.2 Access to NASA-provided occupational health databases used in the performance of these requirements (e.g. electronic health record system);
- 6.3 Training Information for NASA-required training modules (e.g. computer security training, fire extinguisher training, counter-terrorism briefings, computer security training, and other); of note, this is training that NASA requires of the Contractor personnel themselves required in the performance of this contract, and does not refer to the training provided by the Contractor personnel to other workers at AFRC;
- 6.4 Required Personal Protective Equipment (PPE); of note, this is PPE for the Contractor personnel themselves required in the performance of this contract and does not refer to PPE required by other workers (Civil Servants and other contractors) at AFRC.
- 6.5 Use of government owned vehicles, based upon COR approval, to transport contractor staff and equipment to a required worksite to support tasks under the

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contract.

## 7.0 Travel

- 7.1 There is no specific travel required by the Contractor. Attachment -06 lists examples of required certifications and licenses required by personnel on the contract. Many of these required certifications and licenses require specific face-to-face (i.e. “live”) training or testing provided by the issuing authority, and as a result, require travel on the part of the trainee. The costs of the required training, and any associated travel, shall be provided by the Contractor.

## 8.0 Other Unique Requirements

- 8.1 The Contractor shall have a designated Site Manager (SM), who shall provide the overall technical and administrative management for all the staff under this contract. These duties include such items as resolving conflicts involving daily activities, the planning of future operations, The SM shall be the responsible for ensuring the accomplishment of all contract requirements and is expected to regularly communicate with the CO/COR including notification of any issue that may affect the operation of the Contract. The SM shall be a medical professional (either medical doctor [MD or DO] or an RN). The CO and COR shall be notified, in writing, in advance, whenever SM responsibilities are changed or delegate
- 8.2 The SM shall coordinate with the COR the following activities:
- 8.2.1 Maintenance of the Fitness Center Facility Supplies and Equipment.
  - 8.2.2 Ordering of all medical supplies
  - 8.2.3 Coordination of medical waste management
  - 8.2.4 Coordination for the preparation and implementation of corrective action plans in response to all audits/reviews.
  - 8.2.5 The agenda for the monthly occupational health/medical metrics meetings (OM3)
  - 8.2.6 Review of all Quest Invoices for accuracy
  - 8.2.7 Coordination of the CLIA and CLR of the Health Unit
- 8.3 Professional Liability (Malpractice) Insurance: Evidence of current malpractice insurance coverage for the Occupational Medicine staff (e.g. Doctor (MD or DO), Nurse Practitioner, Registered Nurse, or other employees) shall be provided to the Government. The specific arrangement of such coverage is a matter solely between the Contractor and its employee; NASA is **NOT** responsible for the medical malpractice insurance coverage of the Contractor’s employees. EH Support staff shall also be covered by professional and general liability insurance. Evidence of this insurance shall also be provided to the government.
- 8.4 Credentials Verification: The Contractor shall verify the presence and validity of required credentials, certifications and licenses of all Contractor staff. The Doctor (MD or DO) may start performing based on a valid medical license verified by the state medical authority from any US states or US territory. The Doctor shall obtain

a valid and verified California medical license within 12 months from the start date of the contract. After the initial 12 months of the contract start date, any replacement Doctor shall meet the qualifications immediately. Prior to the performance of this contract, all source verification of credential is required for all medical personnel. A copy of these records shall be provided to NASA. All other EH certifications shall be provided to NASA within the first 4 months of the contract.

- 8.5 Employee Orientation: Due to the unique nature of the AFRC layout and location, all Contractor staff shall receive an orientation during the first three days of reporting to duty. This orientation will include: review of applicable operating procedures and guidance; familiarity with equipment and instruments; obtain appropriate identification badges for entry onto the facility; a tour of the AFRC facilities for familiarization of all locations the procedures for protection and response in the event of disasters, and a tour of the response routes.

8.6 Qualification of Staff:

- 8.6.1 The Contractor staff must be medically qualified to perform their respective roles without undue risk to themselves or others. Specifically, all Contractor personnel (Occupational Medical or Industrial Hygienist) must have the physical ability to stand or walk for the majority of a nine (9) hour workday, with occasional bending, stooping, squatting, twisting, and reaching. Staff must have the physical ability to occasionally work on irregular surfaces, occasionally lift objects weighing over 25 pounds, with frequent lifting of objects weighing 10-25 pounds.
- 8.6.2 All Occupational Medicine and Health Unit staff designated to operate the MERV are required to undergo an Equipment Operator physical examination prior to placement and periodically thereafter. The Health Unit staff shall be tested for Hepatitis B immunity status, upon employment, and will be offered the series of Hepatitis B immunization, if serology tests are negative for prior exposure. (NOTE: Evidence of prior Hepatitis B immunity and/or evidence of prior Hepatitis B Vaccination, e.g. an Immunization Record would supersede the requirement for Hepatitis B testing upon employment). An annual test for tuberculosis exposure (i.e. a TB skin test) shall be performed, and any positive reaction or change in status will be brought to the attention of the Contractor's Medical Director, who shall determine disposition. All Health Unit staff shall be offered the Influenza Immunization (i.e. the "flu shot") annually; however, acceptance of the flu shot is not mandatory, nor a condition of employment. All Health Unit staff shall be required to have current certification (i.e. medical clearance, training and fit-testing) in the use of an N-95 half-face respirator.



## 8.7 Minimum qualifications of the OHS Staff:

8.7.1 Contract Medical Doctor (i.e. MD or DO) shall be the Medical Unit Director. They shall be available to the Site Manager and/or to the Nurse Practitioner/Physician Assistant during the working hours of the health unit. Days scheduled for on-site work shall be coordinated with the NASA AFRC Chief Medical Officer. The contract medical doctor shall have, at a minimum, the following certifications/and licenses:

- 8.7.1.1 MD (Doctor in Medicine) or DO (Doctor in Osteopathy) State of California Medical License verified by the Medical Board of California. Note: State of California Medical License shall be obtained within 12 months from the start date of the contract. After the initial 12 months of the contract start date, any replacement Doctor shall meet the qualifications immediately;
- 8.7.1.2 Federal Aviation Administration Senior Aviation Medical Examiner designation;
- 8.7.1.3 Advanced Cardiovascular Life Support (ACLS) certification; and
- 8.7.1.4 Basic Life Support (Provider), certified by the American Heart Association.
- 8.7.1.5 If the Contract Staff does not include a Nurse Practitioner or a Physician's Assistant, the following certifications will also be required of the doctor;
- 8.7.1.6 Certified by the CAOHC (Council for Accreditation in Occupational Hearing Conservation).
- 8.7.1.7 Completion of the NIOSH (National Institute of Occupational Safety and Health) Spirometry Course; and
- 8.7.1.8 Certified, and Registered as an FMCSA (Federal Motor Carrier Safety Administration) Medical Examiner.

8.7.2 Nurse Practitioner/Physician's Assistant shall possess, at a minimum, the following certifications and licenses:

- 8.7.2.1 Basic Life Support (certified by the American Heart Association);
- 8.7.2.2 Advanced Cardiovascular Life Support (certified by the American Heart Association);
- 8.7.2.3 RN Nursing License (State of California) or PA license (State of California);
- 8.7.2.4 Certified by the CAOHC (Council for Accreditation in Occupational Hearing Conservation)
- 8.7.2.5 Completion of the NIOSH (National Institute of

Occupational Safety and Health) Spirometry Course;  
and

8.7.2.6 Certified, and Registered as an FMCSA (Federal Motor Carrier Safety Administration) Medical Examiner.

8.7.3 Registered Nurse (RN) shall possess, at a minimum, the following certifications and licenses:

8.7.3.1 Basic Life Support (certified by the American Heart Association);

8.7.3.2 Advanced Cardiovascular Life Support (certified by the American Heart Association);

8.7.3.3 RN Nursing License (State of California);

8.7.3.4 Certified by the CAOHC (Council for Accreditation in Occupational Hearing Conservation); and

8.7.3.5 Completion of the NIOSH (National Institute of Occupational Safety and Health) Spirometry Course.

Paramedic or Military Trained Rescuer Specialist (Military trained USAF PJ, USA 18D, USN Seal Medic USMC Marsoc Medic) shall possess at a minimum, the following certifications and licenses:

8.7.3.1 Basic Life Support (certified by the American Heart Association);

8.7.3.2 Advanced Cardiovascular Life Support (certified by the American Heart Association);

8.7.3.3 NREMT

8.7.4 **Environmental Health.** The contractor staff shall possess the required skillsets to competently perform all EH tasks requirements of this contract per NPR 1800.1. A competent person is one who has acquired through training, qualifications and experience the knowledge, skills, and professional judgement. Training costs, and associated travel costs, for these required skillsets shall be at the expense of the contractor.

8.7.4.1 Lead Industrial Hygienist (IH) with formal education in Health and Safety; and with at least six (6) years of employment in the professional practice of industrial hygiene and be currently engaged in active practice. A certified Industrial Hygienist (CIH) is preferred. To be recognized as "Professional level" the experience must meet the following four criteria:

8.7.4.1.1 Independence of actions. This relates to the amount of planning, self-direction, decision-making and autonomy involved in the work experience.

8.7.4.1.2 Depth of work. This relates to the extent

to which work experience requires data-gathering, analysis, and interpretation.

- 8.7.4.1.3 Level of interaction. This relates to the degree to which the individual interacts with a broad spectrum of contacts, including decision-makers.
- 8.7.4.1.4 Responsibility for work outcome. This relates to accuracy and extent to which the individual is held accountable for his or her work and decisions.

8.7.4.2 Health Physicist with formal and/or military education in health physics with at least four (4) years of experience in the professional practice of health physics. Contract employee must have served as a Radiation Safety Officer (RSO) and/or Laser Safety Officer (LSO) for a minimum of three years and have the required training, certifications, & experience as a Radiation Safety Officer (RSO), Laser Safety Officer (LSO), and Radio frequency Safety Officer (RfSO). If contract employee does not the RfSO or LSO certifications, they will be required to obtain the certification trainings within the first 3 months of the contract at the expense of the contractor.

8.7.4.3 Environmental Health Technician with TWO (2) years of experience in performing sampling methods within the IH and HP fields; or TWO (year) military training and experience as an IH/HP Technician. The EH Technician is required to have technical knowledge to collect all types of EH samples and perform surveys required by this PWS.

8.8 Standard Work Schedule: The AFRC (main campus) standard work schedule is in accordance with the “9/80” schedule, as shown in the Table below:

Table 1: AFRC Main Campus

<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
7:00 AM – 4:30 PM	7:00 AM – 4:30PM	7:00AM - 4:30PM	7:00 AM – 4:30 PM	7:00 AM – 3:30 PM
<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
7:00 AM – 4:30PM	7:00 AM – 4:30 PM	7:00 AM – 4:30PM	7:00 AM – 4:30PM	Regular Day Off

\*\* Regular Day Off (RDO)

- 8.9 The work shift shall include a 30-minute (unencumbered) lunch break.
- 8.10 Health Physicist employees are permitted to work an alternate schedule. These employees may work a 10-hour day, 4 days a week schedule.
- 8.11 Contractor shall ensure Industrial Hygiene support coverage for each AFRC standard work schedule day during the standard hours of 7:00 AM – 4:30PM. Contractor shall coordinate with the government EH managers to ensure adequate coverage during periods of increased workloads.
- 8.12 All work will normally be accomplished during a standard work shift; however, occasional situations may require the Contractor to perform tasks at times other than the standard work hours (e.g., personnel noise dosimetry for mechanics who start their workday at 6:00am, etc.) such as second or third shift, or during a non-standard work week. The Contractor shall adjust work shifts or working hours to meet mission requirements without incurring additional funding (e.g. overtime charges). Work shifts outside the standard work hours shall be communicated in advance to, and coordinated with the COR.
- 8.13 The following OHS contract positions shall be considered key positions:
- 8.12.1 Doctor (MD/DO) - Clinic Medical Director
  - 8.12.2 Site Manager (LMP)
  - 8.12.3 Nurse Practitioner/Physician Assistant
  - 8.12.4 Environmental Health Lead (CH/lead IH)
  - 8.12.5 Health Physicist

## 9.0 Period of Performance

- 9.1 The period of performance will consist of a one (1) year base period and four (4) one-year option periods for a total of five (5) years from the commencement of the contract.

## 10.0 Deliverables

- 10.1 Other than the services and documentation produced as a result of the requirements of the Occupational Medicine and the Environmental Health elements of this contract, the Contractor shall provide the data outlined on the Data Requirements Descriptions (DRD).

## 11.0 Performance Elements

- 11.1 The contractor will be graded on the following performance elements and in accordance with Quality Assurance Surveillance Plan.

Performance Objectives	Performance Requirement	Acceptable Quality/Timeliness Standards
Medical Contract Staffing	PWS 4.1.3	Number of working days (Monday-Thursday) per year with less than three contractor Licensed Medical Professionals onsite for the hours required.
Health Unit operations	PWS 4.1.3	Number of business days Health Unit is closed for operation due to contractor's staffing. (i.e., $\leq 1$ LMP)
Emergency Services	PWS 4.1.11	Number of business days contracting staff is unable to respond to a 911 emergency call.
Automated External Defibrillator (AED) Monitoring	PWS 4.1.15	Number of expired AEDs out in the field. An expired AED has some element that has expired (battery, pads, AED system etc.).
Peer Review	PWS 4.1.19	Number of quarters in the performance year with less than 10 (ten) peer reviews between all providers, with a target of 3 reviews per full-time provider per quarter. All provider categories (physician, nurse practitioner/physician assistant/ nurse) must be represented as part of the 10 peer reviews per quarter.
Standing Orders and Protocols	PWS 4.1.21.2	Number of calendar days standing orders and protocols are past due (60 calendar days) for resubmission to CMO either due to a change in contract physician Health Unit Director or a new government CMO.
Exposure Assessment	PWS 4.3.2.1 & DRD - M03	Number of branch code exposure assessments updated.
Surveys & Sampling - routine	PWS 4.3.3	Number of ROUTINE sampling/survey requests not accomplished within thirty (30) calendar days OR prior to mission project schedule deadline.
Surveys and Sampling - urgent	PWS 4.3.3	Number of URGENT sampling survey requests not accomplished within one (1) business day
Surveys and Sampling – turnaround time	PWS 4.3.3.1	Number of EH reports that were not submitted to NASA within 5 business days from the time the sampling results were received or when ergonomic assessment was conducted. (e.g., sampling listed in 4.3.4 & 4.3.11)
Internal Assessments	PWS 4.3.5	Number of EH Program Self-Review (i.e., Internal Assessments) not accomplished within fiscal year. 4.3.5.1 through 4.3.5.18.
Equipment Calibration	PWS 4.3.6	Number of equipment instrument items not submitted to metrology before the calibration expires.
Document & Chemical Reviews	PWS 4.3.9	Number of chemical/document reviews per year not accomplished within 10 calendar days
Surveys and Sampling - ionizing	PWS 4.3.11	Number of events late on completing required ionizing surveys. (e.g., incoming mail sources, leak test, X-ray cabinets, x-ray producing devices, and vault)
Permitting	PWS 4.3.11.1	Number of radiofrequency, microwave, and laser evaluations and/or permits not completed within 10 calendar days of request OR prior to mission/project schedule deadline.
Asbestos Certification	PWS 4.3.17.2	Number of calendar days IH's Asbestos Certification (State of California) is expired or IH is without Asbestos Certification.
Required Medical Licenses	PWS 8.7	Number of business days any Licensed Medical Professional (LMP) working has expired license
Required ACLS Certifications	PWS 8.7	Number of business days any assigned LMP to support the Health Unit, to include responding to a 911 medical emergency response does not have an active Advanced Cardiovascular Life Support (ACLS) certification
Required California Medical State license	PWS 8.7.1	Number of weeks passed the 12-month grace period, from the start of the contract, without a California State Medical License Doctor. After 12-month grace period the number of weeks without a California State Medical Licensed Doctor.
Required Licenses and Certifications – FAA Medical Examiner	PWS 8.7.1	Number of calendar days MD's Federal Aviation Administration Senior Aviation Medical Examiner designation is expired, or MD is without.
Key personnel	PWS 8.13	Number of calendar days per performance year, per position, with key personnel

Staffing		absent from contract position.
Data Requirement Descriptions (DRDs)	AFRC Occupational Health Services (OHS) - DRDs	Number of requirements not completed, as reported in monthly OHM3 (excluding M03).

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