



AFRL

HEXAVALENT CHROMIUM CTIM 2026

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USAFSAM OCCUPATIONAL MEDICINE CONSULTANT
MARCH 2026



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Objectives

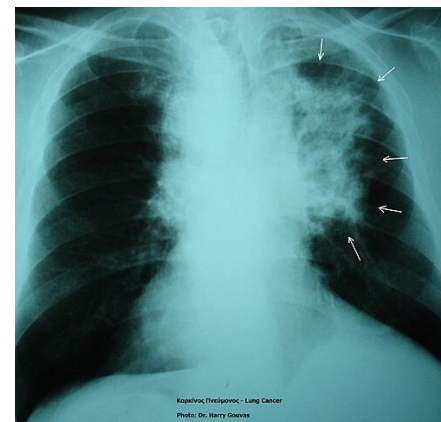
- Health Effects
- Medical Surveillance Exams (MSEs)
- Occupational and Environmental Health Exposure Data (OEHED)
- Clinical Occupational Health Exam Requirements (COHER)



Medical Management of Chromium

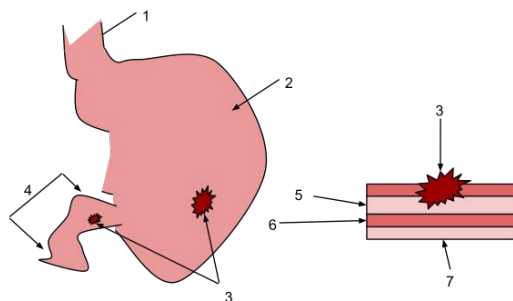
Health Effects

- **Cancer**
 - **Lungs**
 - **Nasal, Sinus**
- **Irritation of skin, eyes, nose**
 - **Dermatitis**
 - **Chrome holes, nasal septal perforation**
- **Acute or Chronic Liver, Kidney damage**
- **Lung disease**
 - **Occupational asthma**



Health Effects

- Gastrointestinal
 - Ulcers
- Cardiac (acute)
 - Cardiac arrest
 - Hypotension and arrhythmias
- Reproductive (Animal studies)
 - Increased spontaneous abortion
 - Decreased fetal weight
 - Decreased bone mass
- Blood
 - Decreased hemoglobin and hematocrit



Second-degree (partial) block



Atrial fibrillation



Ventricular tachycardia



Ventricular fibrillation



Third-degree block

Standards and Regulations

OSHA exam requirements to monitor health

- Pre-employment Medical Exam
- Annual Surveillance
 - Medical Surveillance Exams (MSEs)
 - Occupational Health Medical Exams (OHMEs)
 - Occupational Health Assessment (OHA)
 1. Occupational and Environmental Health Exposure Data (OEHED)
 2. Clinical Occupational Health Exam Requirements (COHER)
- Emergency Situations
- Termination

Chromium Standards:

- OSHA PEL – 5.0 $\mu\text{g}/\text{m}^3$ over an 8-hour TWA
- OSHA Action Level - 2.5 $\mu\text{g}/\text{m}^3$ over an 8-hour TWA
- NIOSCH REL – 0.2 $\mu\text{g}/\text{m}^3$ over an 8-hour TWA
- ACGIH – 0.2 $\mu\text{g}/\text{m}^3$ over an 8-hour TWA (inhalable fraction)



USAF Hazard Management Process for Hazards

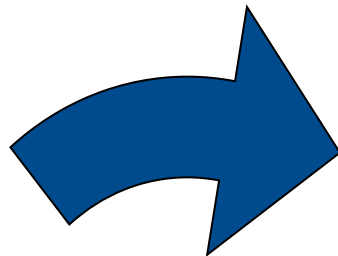
- Formulated
- Exam, Surveillance

- Hazards
- Exposures

COHERS

MSE

OEHD



- Surveillance
- PE's
- Testing
- Education

- Industrial Hygiene
- Shop Survey

CLINICAL OCCUPATIONAL HEALTH EXAMINATION REQUIREMENTS		WORKPLACE IDENTIFIER	9999	FASR	045A
Data As Of:	02/28/2024	BASE TRAINING AFB		ORGANIZATION: 999 MAINTENANCE SQ	
Edited By:	REYNOLDS.SIDNEY.RENEE.1546058839	WORKPLACE: 999 MXS/STRUCTURAL MAINTENANCE			
PEG:	Default	BLDG NO/LOCATION: 1356		ROOM/AREA: N/A	
Risk Category:	1 (High)				
EXAMINATION REQUIREMENTS: Required for selected personnel					
EXAMINATIONS	AGE START	AGE STOP	ONE TIME	FREQ	RATIONALE & NOTES
Acrylonitrile (Vinyl Cyanide) Hazard Questionnaire	0	0	<input type="checkbox"/>	12	Acrylonitrile: Exposure above Action Level without regard to RP use. A work history and medical history with special attention to skin, respiratory, and gastrointestinal systems, and those nonspecific symptoms, such as headache, nausea, vomiting, dizziness, weakness, or other central nervous system dysfunctions that may be associated with acute or with chronic exposure to AN. 29 CFR 1910.1045(v)(2)(ii), Acrylonitrile, 0501/2006
Audiogram	0	100	<input type="checkbox"/>	12	Noise: Exposure at or above an 8-hour time-weighted average of 85 decibels—29 CFR 1910.95(a)(1) Occupational Noise Exposure, DODM 6055.12, Hearing Conservation Program, para 8, DoDM 6055.05, Occupational Medical Examination: Medical Surveillance and Medical Qualification, para 5.8, DAFI 48-127, DAFI 48M2023-01, Occupational Noise and Hearing Conservation Program.
Chest Radiograph	0	100	<input checked="" type="checkbox"/>	0	Acrylonitrile: At or above Action Level without regard to respirator use. A 14" by 17" inch or other reasonably-sized standard film or digital posterior-anterior chest X-ray. 29 CFR 1910.1045(v)(2)(ii), Acrylonitrile, 0501/2006
Chromium (VI) Hazard Questionnaire	0	0	<input type="checkbox"/>	12	Chromium (VI): At or above Action Level for 30 or more days per year and/or Hazard not well characterized, and persons expected to occur 30 or more days per year. A medical and work history, with emphasis on: Past, present, and anticipated future exposure to chromium (VI); any history of respiratory system dysfunction; any history of asthma, dermatitis, skin irritation, or nasal septum perforation; and smoking status and history. 29 CFR 1910.1026(a)(2)(ii), Chromium (VI), 06/10/2010
Noise Hazard Questionnaire	0	0	<input type="checkbox"/>	12	Noise: Above 85 dBA (A) 8 hr TWA. An Audiometric Case History (AF Form 1353), Hearing Conservation Examination, Section I) will be completed on all reference audiograms (I-2). If more than 1-1 hearing levels are noted, or if personnel answer yes to asterisked questions, then a clinical examination is required, and the remainder of AF Form 1353 is to be completed. DAFI 48-127, DAFI 48M2023-01, Occupational Noise and Hearing Conservation Program.
Occ and Environmental Health Exposure Data	0	100	<input type="checkbox"/>	12	All Hazards: All workers enrolled in OEHD program. Ensure occupational and environmental health exposure data (OEHD) and clinical occupational health exam requirements (COHERS) are filed in patients' medical record (hard copy or uploaded to electronic health record (EHR)) upon each MSE requirements that are more than an annual audiogram. DAFMAN 48-146, Occupational Health Program Management, para 2.3.4, 2.5.6, 2.7.5, 5.6.4, 7.7.3
TYPED OR PRINTED NAME, AERO MED COUNCIL CHAIRMAN	SIGNATURE		DATE		
FIRST LAST, Lt Col, USAF, MC, SFS			08/19/2022		

- Formulation of
- Surveillance

United States Air Force					
Occupational and Environmental Health Exposure Data					
Reference: DAFI 48-145		Please give us feedback: https://forms.oua.apps.mil/rp/PLFLZ1019		Current as of Date: 18 Oct 2024	
Date Printed: 18 Oct 2024					
(CUI)					
Workplace	Risk Categorization	Installation	Organization	# of SEGs	# of Personnel
	2 - Medium Risk			1	113
NOTE: This report includes occupational health risk assessment data from the Defense Occupational & Environmental Health Readiness System for Industrial Hygiene (DOEHS-RI) database. Data is considered reviewed, approved and current by the below certifying authority as of the above Current as of Date.					
Exposure Group(s) Associated with Workplace					
Administrative Controls/Training					
Training - (Respiratory Protection (Respiratory Protection Program); Training - (Methylene Chloride (OCHA Methylene Chloride); Training - (Lead (29 CFR 1910 Subpart Z - Toxic and Hazardous Substances) (OCHA Lead); Training - (Hazardous Waste (Heat Stress); Training - (Hearing Conservation Program (HCP); Training - (Hazard Communication (HAZCOM)); Training - (Confined Spaces (Confined Spaces); Training - (Chromium and Chromates (OCHA Cr(VI)); Training - (Cadmium (OCHA Cadmium); Signal Distance - (Warning Signs (Hazardous Noise Area)); Miscellaneous - (Personal Hygiene (Personal Hygiene); Miscellaneous - (Housekeeping and Maintenance (Housekeeping (HAC)); Miscellaneous - (Housekeeping and Maintenance (Housekeeping-HEPA vacuum)); Laser - ANCI Class 1 - (Operated by Qualified and Authorized Personnel (Laser Etcher)					
Workplace Description					
Aircraft Structural Maintenance consists of 355 EMC and several 824th AWC (824K) personnel who perform aircraft corrosion control (painting, priming and sanding), sheet metal, bead blasting, and fiberglass repair work. These operations are performed on A/C, aerospace ground equipment, A-10, EC-130, and HH-60 aircraft and their parts. Sheet metal work is conducted in the main fabrication back shop of Bldg 5045, C-130 (topmost Bldg 129, A-10 (Phase Bldg 144) and on the flightline. Waterfall oversight of crew chiefs occurs at Bldg 4886, C-130 and Bldg 5414 (A-10, F-16, HH-60). Confined Spaces: Certain workers in the shop can augment the 355 CMC Fuel Cylinders shop to perform sheet metal repairs inside A-10 and EC-130 fuel cells (permits required). Workers apply paint stripper containing methylene chloride inside C-130 dry bays on a non-routine basis for the Aircraft Structure Integrity Program (ASIP). All entries are authorized as single fixed entry permits. Heat Stress: Personnel are exposed to extreme temperatures while working outdoors (flightline/phase dock work) and indoors during corrosion control work in full PPE. Ergonomic Hazards: Workers may also be exposed to ergonomic stresses such as repetitive motion (priming and other sheet metal work, hand-held spray gun application, bead blasting tool, sanding tools) and work in awkward positions (confined spaces, sanding aircraft). Hazardous Noise: Personnel are exposed to hazardous noise in 8-hour shifts and are monitored on the base Hearing Conservation Program. Respiratory Protection: Personnel are monitored on the base respiratory protection program. Personnel may wear a 3M 6000C full face respirator, 3M H-420 DART hood, or PurePro ESM-PR60 PAPR either in supplied air or air purifying mode when performing surface painting, priming, sanding, fuel cell, fiberglass graphic repairs and confined space work in accordance with their respiratory protection program written plan. A dust-supplied air blasting helmet is used in the walk-in bead blasting booth. Compressed breathing air is used in the walk-in paint booth, sanding booth and walk-in blasting booth. OCHA Substance Specific/Hazardous chemicals: Workers may be exposed to methylene chloride and heavy metals (lead, cadmium, chromium, cadmium, and lead) during paint stripping, sanding, and bead blasting activities. These chemicals require specific training (AW their respective OCHA standards on an annual basis. Personnel may augment the 355 CMC Fuel Cylinders shop and work around Jet A which contains less than 0.1% benzene. However, the OCHA regulation for benzene does not apply to work where the only exposure to benzene is from liquid mixtures containing 0.1% or less of benzene by volume. Formaldehyde is found in many sealants/primer used by the shop and may be generated during work with phenolic resin. Worst case exposure calculations and active air sampling data shows that products are not composed of more than 0.1% formaldehyde and exposure concentrations are below 0.1 ppm. Consequently, OCHA specific benzene and formaldehyde training is not required per OCHA 29 CFR 1910.1027 & 1048. Small quantities of chemical stripper containing methylene chloride is routinely applied to A-10 (top most) Bldg 129, 126, 144, and out on the flightline. Initial annual training is required for methylene chloride per 29 CFR 1910.1022. Regulated Areas: The walk-in bead blasting booth (currently INOP) and all confined spaces have been designated as regulated areas and require controlled access and proper signage. A housekeeping paint per AF 21-101 is mandated for the paint booth transition areas (Bldg 5255), fiberglass and blasting facility (Bldg 5254).					
Exposure Group:				# SEG Personnel:	114
Health Hazard	Regulatory Limit	Measured Exposure	Exposure Determination		
Page 1 of 8					



BIOENVIRONMENTAL ENGINEERS

OEHED



What is an OEHED?



United States Air Force Occupational and Environmental Health Exposure Data

Reference: AFI 48-145

Current as of Date: 01 Nov 2023

Date Printed: 01 Nov 2023



Workplace	Risk Categorization	Installation	Organization	# of SEGs	# of Personnel
3MUNS 477AFRC Armament (126A) (WPID: MXAR-126A)	2 - Medium Risk	Joint Base Elmendorf Richardson (JBER) (PACAF)	3 MUNITIONS SQ FFHHS1, AK	1	36

- OEHED = Occupational & Environmental Health Exposure Data
- Generated by Bioenvironmental Engineering, in DOEHRS (Defense Occupational & Environmental Health Readiness System)



What information does an OEHED provide?

- Shop demographics and description



United States Air Force
Occupational and Environmental Health Exposure Data
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NOTE: This report includes occupational health risk assessment data from the Defense Occupational & Environmental Health Readiness System for Industrial Hygiene (DOEHRS-IR) database. Data is considered reviewed, approved, and current by the below certifying authority as of the above Current as of Date.

Exposure Group(s) Associated with Workplace

126A Armament

Administrative Controls/Training

Training - (Heat/Cold Stress (Thermal Stress Training)); Training - (Hearing Conservation Program (Hearing Conservation Program)); Training - (Hazard Communication (Hazard Communication Program)); Training - (Ergonomics General Awareness (Ergonomics General Awareness Training)); Training - (Chromium and Chromates (OSHA Exp Std Training Chromium VI (1910.1028))); Signs/Distances - (Warning Signs (Hazardous Noise Warning Signs))

Workplace Description

Shop is comprised of Active Duty Military and 477th Reservists. Armament personnel maintain weapons systems for F-22 aircraft. Duties include removal, tear-down, cleaning, corrosion removal, soldering, parts inspection and reassembly of aircraft weapons and armament suspension equipment (pylons, bomb racks, launchers). Workers are also responsible for maintenance of Universal Ammunition Loading Systems (UALS).

EXPOSURE SUMMARY

HAZARDOUS NOISE: Noise dosimetry collected from indicates that workers are routinely exposed to hazardous noise. Seven representative samples were used to calculate a 95th percentile value of 99.5 dBA. Exposure are caused by routine use of hazardous noise-producing equipment as well as flightline operations. Dosimetry collected in 2018 represents equipment surveyed in 2019.

Ototoxins: Xylene and Toluene with exposures less than 50% of the OEL.

CONFINED SPACE: Personnel are not required to enter confined spaces.

ERGONOMICS: Personnel in this shop perform weapons systems maintenance which may cause ergonomic stress on their back due to awkward positioning and heavy lifting (>25 lbs). There are no worker complaints or recent injuries related to ergonomic stress. Personnel use multi-person lift and receive training on proper lifting technique.

BIOLOGICAL/BLOODBORNE HAZARDS: No source for occupational exposure.

RESPIRATORY PROTECTION: Personnel in this workplace are not enrolled on the Respiratory Protection Program, but are authorized to wear voluntary use FFPDs (dust masks) during Gun Barrel Maintenance.

Workplace Description

Shop is comprised of Active Duty Military and 477th Reservists. Armament personnel maintain weapons systems for F-22 aircraft. Duties include removal, tear-down, cleaning, corrosion removal, soldering, parts inspection and reassembly of aircraft weapons and armament suspension equipment (pylons, bomb racks, launchers). Workers are also responsible for maintenance of Universal Ammunition Loading Systems (UALS).



What information does an OEHED provide?

• Shop exposure data

EXPOSURE SUMMARY

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RESPIRATORY PROTECTION: Personnel in this workplace are not enrolled on the Respiratory Protection Program, but are authorized to wear voluntary use FFPDs (dust masks) during Gun Barrel Maintenance.

IONIZING RADIATION: N/A

NON-IONIZING RADIATION: N/A

VENTILATION: Shop possesses a bead blaster, paint booth, and downdraft table. Systems are not surveyed by BE except during air sampling.

THERMAL STRESS: Personnel are potentially exposed to cold stress while performing weapons systems maintenance outdoors during the winter months.

CHEMICAL EXPOSURES: Workers use lubricants, cleaning compounds, greases and sealants. Minor touch-up painting is done. Lead soldering is performed at low temperatures.

EXPANDED STANDARD CHEMICALS: The following expanded standard chemicals can be found in the workplace: lead (from solder - contact hazard only), and potentially hexavalent chromium from bead blasting during bomb rack maintenance. Air sampling for lead was accomplished during gun barrel maintenance but was below the limit of detection.



United States Air Force Occupational and Environmental Health Exposure Data

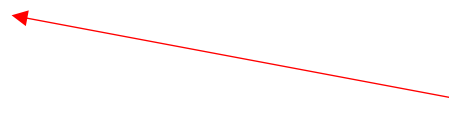
Reference: AFI 48-145

Current as of Date: 01 Nov 2023

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Workplace	Risk Categorization	Installation	Organization	# of SEGs	# of Personnel
3MUN0 477AFRC Armament (126A) (WPID: MXAR-126A)	2 - Medium Risk	Joint Base Elmendorf Richardson (JBER) (PACAF)	3 MUNITIONS SQ FFH01, AK	1	36
<i>NOTE: This report includes occupational health risk assessment data from the Defense Occupational & Environmental Health Readiness System for Industrial Hygiene (DOEHRS-IR) database. Data is considered reviewed, approved, and current by the below certifying authority as of the above Current as of Date.</i>					
Exposure Group(s) Associated with Workplace					
126A Armament					
Administrative Controls/Training					
Training - (Heat/Cold Stress (Thermal Stress Training)); Training - (Hearing Conservation Program (Hearing Conservation Program)); Training - (Hazard Communication (Hazard Communication Program)); Training - (Ergonomics, General Awareness (Ergonomics General Awareness Training)); Training - (Chromium and Chromates (OSHA Exp Oid Training Chromium VI (1910.1028))); Signs/Distance - (Warning Signs (Hazardous Noise Warning Signs))					
Workplace Description					
Shop is comprised of Active Duty Military and 477th Reservists. Armament personnel maintain weapons systems for F-22 aircraft. Duties include removal, tear-down, cleaning, corrosion removal, soldering, parts inspection and reassembly of aircraft weapons and armament suspension equipment (pylons, bomb racks, launchers). Workers are also responsible for maintenance of Universal Ammunition Loading Systems (UALS).					
EXPOSURE SUMMARY					
HAZARDOUS NOISE: Noise dosimetry collected from indicates that workers are routinely exposed to hazardous noise. Seven representative samples were used to calculate a 95th percentile value of 99.5 dBA. Exposures are caused by routine use of hazardous noise-producing equipment as well as flightline operations. Dosimetry collected in 2018 represents equipment surveyed in 2019.					
Ototoxins: Xylene and Toluene with exposures less than 50% of the OEL.					
CONFINED SPACE: Personnel are not required to enter confined spaces.					
ERGONOMICS: Personnel in this shop perform weapons systems maintenance which may cause ergonomic stresses on their back due to awkward positioning and heavy lifting (>25 lbs). There are no worker complaints or recent injuries related to ergonomic stress. Personnel use multi-person lift and receive training on proper lifting technique.					
BIOLOGICAL/BLOODBORNE HAZARDS: No source for occupational exposure.					
RESPIRATORY PROTECTION: Personnel in this workplace are not enrolled on the Respiratory Protection Program, but are authorized to wear voluntary use FFPDs (dust masks) during Gun Barrel Maintenance.					
IONIZING RADIATION: N/A					
NON-IONIZING RADIATION: N/A					
VENTILATION: Shop possesses a bead blaster, paint booth, and downdraft table. Systems are not surveyed by BE except during air sampling.					
THERMAL STRESS: Personnel are potentially exposed to cold stress while performing weapons systems maintenance outdoors during the winter months.					
CHEMICAL EXPOSURES: Workers use lubricants, cleaning compounds, greases and sealants. Minor touch-up painting is done. Lead soldering is performed at low temperatures.					
EXPANDED STANDARD CHEMICALS: The following expanded standard chemicals can be found in the workplace: lead (from solder - contact hazard only), and potentially hexavalent chromium from bead blasting during bomb rack maintenance. Air sampling for lead was accomplished during gun barrel maintenance but was below the limit of detection.					
Exposure Group: 126A Armament				# SEG Personnel: 36	





What information does an OEHED provide?

- DETAILED shop exposure data, process(es) and controls

Health Hazard	Regulatory Limit	Measured Exposure	Exposure Determination
CHROMIUM(VI) (Inhalation) (OSHA exp std)(TLV-A1: Confirmed Human Carcinogen)	0.005 mg/m3 (8 hr TWA)	0.029084 mg/m3 (Hazard Ratio: 5.82) (Cens)	Above OEEL
Existing Control(s)	Respirator - Respirator (Clemco Apollo 600 HP Abrasive Blasting Helmet); Gloves - Nitrile Rubber (Nitrile Rubber Gloves); Gloves - Leather (Leather Gloves); Body/Clothing - Coveralls, Tyvek® (Tyvek Coveralls); Body/Clothing - Coveralls, Leather (Clemco Leather Media Blasting Suit)		
Process(es)	Bldg 6263 - Walk-in Booth Media Blasting (2-3 Times/Week 6-8 hours)		

- Health hazard = **Red text** is a hazard with an OSHA standard
- Regulatory limit = Time-weighted average (TWA) vs short-term exposure limit (STEL)
- Measured exposure = objective data (hazard ratio, **red text** is > 1)
- Exposure determination = occupational & environmental exposure limit
 - Categories: < 10%, < 50%, 50-100%, > **OEEL**



PUBLIC HEALTH TEAM

COHER



What is a COHER?

CLINICAL OCCUPATIONAL HEALTH EXAMINATION REQUIREMENTS	WORKPLACE IDENTIFIER 0687	MXSM	803A
Data As Of: 10/04/2023	BASE Elmendorf AFB	ORGANIZATION 3 MAINTENANCE SQ	
Edited By: JONES.NATHAN.M.1462837034	WORKPLACE AIRCRAFT STRUCTURAL MX (ASM) NORTH		
PEG: Structural Activities Respirator	BLDG NO/LOCATION BLDG 17508		ROOM/AREA
Risk Category: 1 (High)			

EXAMINATION REQUIREMENTS: **Required for everyone**

- **COHER = Clinical Occupational Health Exam Requirements**
- **Generated by Public Health, in ASIMS**
 - Briefed by Public Health in OEHWG
 - **Approved and signed by IOEMC (DAFMAN48-146 2.5.3 & 2.7.4)**



What information does a COHER provide?

CLINICAL OCCUPATIONAL HEALTH EXAMINATION REQUIREMENTS	WORKPLACE IDENTIFIER 0687	MXSM	803A
Data As Of: 10/04/2023	BASE Elmendorf AFB	ORGANIZATION 3 MAINTENANCE SQ	
Edited By: JONES.NATHAN.M.1462837034	WORKPLACE AIRCRAFT STRUCTURAL MX (ASM) NORTH		
PEG: Structural Activities Respirator	BLDG NO/LOCATION BLDG 17508	ROOM/AREA	
Risk Category: 1 (High)			
EXAMINATION REQUIREMENTS: Required for everyone			

CLINICAL OCCUPATIONAL HEALTH EXAMINATION REQUIREMENTS	WORKPLACE IDENTIFIER 0687	MXSM	803A
Data As Of: 10/04/2023	BASE Elmendorf AFB	ORGANIZATION 3 MAINTENANCE SQ	
Edited By: JONES.NATHAN.M.1462837034	WORKPLACE AIRCRAFT STRUCTURAL MX (ASM) NORTH		
PEG: Structural Activities Respirator	BLDG NO/LOCATION BLDG 17508	ROOM/AREA	
Risk Category: 1 (High)			

EXAMINATION REQUIREMENTS: **Required for everyone**

EXAMINATIONS	AGE START	AGE STOP	ONE TIME	FREQ	PRE TERM	RATIONALE & NOTES
Audiogram	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	IAW AFI 48-127. See note 1
Benzene Hazard Questionnaire	0	0	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	
Chromium (VI) Hazard Questionnaire	0	0	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	
Isoyanates Hazard Questionnaire	0	0	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	
Medical History	0	100	<input type="checkbox"/>	12	<input type="checkbox"/>	29 CFR 1910.1026 DoD 6055.05-M. See note 3
Occ and Environmental Health Exposure Data	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	IAW AFI 48-145 paragraph 2.14.4
Physical Examination	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	29 CFR 1910.1026 DoD 6055.05-M. See note 2
Respirator Fit Test	0	100	<input type="checkbox"/>	12	<input type="checkbox"/>	IAW AFI 48-137. See note 4
Respirator Hazard Questionnaire	0	0	<input checked="" type="checkbox"/>	0	<input type="checkbox"/>	IAW AFI 48-137

IMMUNIZATIONS REQUIRED:

None

Noise ECL (in dbA) = 98.50

Requirements on COHER is based off of most recent OEHD dated 23 Aug 2023

- Hearing Conservation: Personnel are occupationally exposed to hazardous noise according to noise dosimetry conducted in 23 Aug 2023 recorded at 98.5 dBA.
- Physical Exam: Focus for Chrom VI exposures and Isoyanate - EXAMINATION OF THE SKIN AND RESPIRATORY TRACT (to include nostrils and other parts of body to detect ulceration). Isoyanate potential exposures are cause for concern for sensitization even at lower doses once sensitized. If member reports respiratory symptoms, examining provider should conduct a thorough past work history and if appropriate consider chest radiograph and spirometry. TERMINATION EXAM REQUIRED UNLESS LAST EXAM WAS DONE LESS THAN 6 MONTHS PRIOR TO DATE OF TERMINATION. (REFER 29 CFR 1910.1026 (K) (ii) (DoD 6055.05-M Table C2.T7. Chromium (VI) (PART 1910.1026 (k) of reference (f)
- Medical History: History of respiratory system dysfunction; any history of asthma, dermatitis, skin ulceration, or nasal septum perforation; smoking status and history. A PHYSICIAN'S WRITTEN OPINION OF THE MEDICAL EXAMINATION MUST BE PROVIDED TO THE EMPLOYEE WITHIN 15 DAYS OF THE EXAM AND TO THE EMPLOYER WITHIN 30 DAYS. WRITTEN OPINION MUST INCLUDE: Whether the employee has a medical condition placing the employee at increased risk from Chromium (VI) exposure- Any recommended protective measures or limitations for employee- Statement that employee has been informed of exam results and need for further evaluation/treatment. IF THERE ARE ANY DUTY LIMITATIONS, THE AF FORM 489 WILL BE USED FOR MILITARY MEMBERS AND THE SF 600 WILL BE USED FOR CIVILIANS.
- RESPIRATORY PROTECTION: Public Health initiates respiratory protection (RP) questionnaire which must be reviewed / approved by licensed health care professional (PLHCP). All follow-up exams (if any) are determined by reviewing PLHCP. The RP medical questionnaire does not need to be accomplished annually as outlined IAW AFI 48-137. However, BEE will ask worker if they are experiencing any difficulty wearing a respirator

TYPED OR PRINTED NAME, AERO MED COUNCIL CHAIRMAN Nathan Jones, Maj, USAF, MC	SIGNATURE JONES.NATHAN.M.1462837034	DATE 10/04/2023
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AF Form 2766 June 2008 - Computer Generated (ASIMS)



What information does a COHER provide?

EXAMINATIONS	AGE START	AGE STOP	ONE TIME	FREQ	PRE TERM	RATIONALE & NOTES
Audiogram	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	IAW AFI 48-127. See note 1
Benzene Hazard Questionnaire	0	0	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	
Chromium (VI) Hazard Questionnaire	0	0	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	
Isocyanates Hazard Questionnaire	0	0	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	
Medical History	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	29 CFR 1910.1026 DoD 6055.05-M. See note 3
Occ and Environmental Health Exposure Data	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	IAW AFI 48-145 paragraph 2.14.4
Physical Examination	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	29 CFR 1910.1026 DoD 6055.05-M. See note 2
Respirator Fit Test	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	IAW AFI 48-137. See note 4
Respirator Hazard Questionnaire	0	0	<input checked="" type="checkbox"/>	0	<input checked="" type="checkbox"/>	IAW AFI 48-137

CLINICAL OCCUPATIONAL HEALTH EXAMINATION REQUIREMENTS	WORKPLACE IDENTIFIER	0687	MXSM	803A
Data As Of: 10/04/2023	BASE	ORGANIZATION		
Edited By: JONES.NATHAN.M.1462837034	Elmendorf AFB	3 MAINTENANCE SQ		
PEG: Structural Activities Respirator	WORKPLACE AIRCRAFT STRUCTURAL MX (ASM) NORTH			
Risk Category: 1 (High)	BLDG NO/LOCATION BLDG 17508	ROOM/AREA		

EXAMINATION REQUIREMENTS: Required for everyone

EXAMINATIONS	AGE START	AGE STOP	ONE TIME	FREQ	PRE TERM	RATIONALE & NOTES
Audiogram	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	IAW AFI 48-127. See note 1
Benzene Hazard Questionnaire	0	0	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	
Chromium (VI) Hazard Questionnaire	0	0	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	
Isocyanates Hazard Questionnaire	0	0	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	
Medical History	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	29 CFR 1910.1026 DoD 6055.05-M. See note 3
Occ and Environmental Health Exposure Data	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	IAW AFI 48-145 paragraph 2.14.4
Physical Examination	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	29 CFR 1910.1026 DoD 6055.05-M. See note 2
Respirator Fit Test	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	IAW AFI 48-137. See note 4
Respirator Hazard Questionnaire	0	0	<input checked="" type="checkbox"/>	0	<input checked="" type="checkbox"/>	IAW AFI 48-137

IMMUNIZATIONS REQUIRED:
None

Noise ECL (in dBA) = 98.50

Requirements on COHER is based off of most recent OEHD dated 23 Aug 2023

- Hearing Conservation: Personnel are occupationally exposed to hazardous noise according to noise dosimetry conducted in 23 Aug 2023 recorded at 98.5 dBA.
- Physical Exam: Focus for Chrom VI exposures and Isocyanate - EXAMINATION OF THE SKIN AND RESPIRATORY TRACT (to include nostrils and other parts of body to detect ulceration). Isocyanate potential exposures are cause for concern for sensitization even at lower doses once sensitized. If member reports respiratory symptoms, examining provider should conduct a thorough past work history and if appropriate consider chest radiograph and spirometry. TERMINATION EXAM REQUIRED UNLESS LAST EXAM WAS DONE LESS THAN 6 MONTHS PRIOR TO DATE OF TERMINATION. (REFER 29 CFR 1910.1026 (K) (ii) (DoD 6055.05-M Table C2.T7. Chromium (VI) (PART 1910.1026 (k) of reference (f)
- Medical History: History of respiratory system dysfunction; any history of asthma, dermatitis, skin ulceration, or nasal septum perforation; smoking status and history. A PHYSICIAN'S WRITTEN OPINION OF THE MEDICAL EXAMINATION MUST BE PROVIDED TO THE EMPLOYEE WITHIN 15 DAYS OF THE EXAM AND TO THE EMPLOYER WITHIN 30 DAYS. WRITTEN OPINION MUST INCLUDE: Whether the employee has a medical condition placing the employee at increased risk from Chromium (VI) exposure- Any recommended protective measures or limitations for employee- Statement that employee has been informed of exam results and need for further evaluation/treatment. IF THERE ARE ANY DUTY LIMITATIONS, THE AF FORM 489 WILL BE USED FOR MILITARY MEMBERS AND THE SF 600 WILL BE USED FOR CIVILIANS.
- RESPIRATORY PROTECTION: Public Health initiates respiratory protection (RP) questionnaire which must be reviewed / approved by licensed health care professional (PLHCP). All follow-up exams (if any) are determined by reviewing PLHCP. The RP medical questionnaire does not need to be accomplished annually as outlined IAW AFI 48-137. However, BEE will ask worker if they are experiencing any difficulty wearing a respirator

TYPED OR PRINTED NAME, AERO MED COUNCIL CHAIRMAN Nathan Jones, Maj, USAF, MC	SIGNATURE JONES.NATHAN.M.1462837034	DATE 10/04/2023
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What information does a COHER provide?

Requirements on COHER is based off of most recent OEHD dated 23 Aug 2023

1. Hearing Conservation: Personnel are occupationally exposed to hazardous noise according to noise dosimetry conducted in 23 Aug 2023 recorded at 96.5 dBA.

2. Physical Exam: Focus for Chrom VI exposures and Isocyanate - EXAMINATION OF THE SKIN AND RESPIRATORY TRACT (to include nostrils and other parts of body to detect ulceration). Isocyanate potential exposures are cause for concern for sensitization even at lower doses once sensitized. If member reports respiratory symptoms, examining provider should conduct a thorough past work history and if appropriate consider chest radiograph and spirometry. TERMINATION EXAM REQUIRED UNLESS LAST EXAM WAS DONE LESS THAN 6 MONTHS PRIOR TO DATE OF TERMINATION. (REFER 29 CFR 1910.1026 (K) (ii) (DoD 6055.05-M Table C2.T7. Chromium (VI) (PART 1910.1026 (k) of reference (f)

3. Medical History: History of respiratory system dysfunction; any history of asthma, dermatitis, skin ulceration, or nasal septum perforation; smoking status and history. A PHYSICIANS WRITTEN OPINION OF THE MEDICAL EXAMINATION MUST BE PROVIDED TO THE EMPLOYEE WITHIN 15 DAYS OF THE EXAM AND TO THE EMPLOYER WITHIN 30 DAYS. WRITTEN OPINION MUST INCLUDE: Whether the employee has a medical condition placing the employee at increased risk from Chromium (VI) exposure- Any recommended protective measures or limitations for employee- Statement that employee has been informed of exam results and need for further evaluation/treatment. IF THERE ARE ANY DUTY LIMITATIONS, THE AF FORM 469 WILL BE USED FOR MILITARY MEMBERS AND THE SF 600 WILL BE USED FOR CIVILIANS.

4. RESPIRATORY PROTECTION: Public Health initiates respiratory protection (RP) questionnaire which must be reviewed / approved by licensed health care professional (PLHCP). All follow-up exams (if any) are determined by reviewing PLHCP. The RP medical questionnaire does not need to be accomplished annually as outlined IAW AFI 48-137. However, BEE will ask worker if they are experiencing any difficulty wearing a respirator

CLINICAL OCCUPATIONAL HEALTH EXAMINATION REQUIREMENTS	WORKPLACE IDENTIFIER 0687	MXSM	803A
Data As Of: 10/04/2023	BASE Elmendorf AFB	ORGANIZATION 3 MAINTENANCE SQ	
Edited By: JONES.NATHAN.M.1462837034	WORKPLACE AIRCRAFT STRUCTURAL MX (ASM) NORTH		
PEG: Structural Activities Respirator	BLDG NO/LOCATION BLDG 17508		ROOM/AREA
Risk Category: 1 (High)			

EXAMINATION REQUIREMENTS: Required for everyone

EXAMINATIONS	AGE START	AGE STOP	ONE TIME	FREQ	PRE TERM	RATIONALE & NOTES
Audiogram	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	IAW AFI 48-127. See note 1
Benzene Hazard Questionnaire	0	0	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	
Chromium (VI) Hazard Questionnaire	0	0	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	
Isocyanates Hazard Questionnaire	0	0	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	
Medical History	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	29 CFR 1910.1026 DoD 6055.05-M. See note 3
Occ and Environmental Health Exposure Data	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	IAW AFI 48-145 paragraph 2.14.4
Physical Examination	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	29 CFR 1910.1026 DoD 6055.05-M. See note 2
Respirator Fit Test	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/>	IAW AFI 48-137. See note 4
Respirator Hazard Questionnaire	0	0	<input checked="" type="checkbox"/>	0	<input type="checkbox"/>	IAW AFI 48-137

IMMUNIZATIONS REQUIRED:

None

Noise ECL (in dbA) = 96.50

Requirements on COHER is based off of most recent OEHD dated 23 Aug 2023

1. Hearing Conservation: Personnel are occupationally exposed to hazardous noise according to noise dosimetry conducted in 23 Aug 2023 recorded at 96.5 dBA.

2. Physical Exam: Focus for Chrom VI exposures and Isocyanate - EXAMINATION OF THE SKIN AND RESPIRATORY TRACT (to include nostrils and other parts of body to detect ulceration). Isocyanate potential exposures are cause for concern for sensitization even at lower doses once sensitized. If member reports respiratory symptoms, examining provider should conduct a thorough past work history and if appropriate consider chest radiograph and spirometry. TERMINATION EXAM REQUIRED UNLESS LAST EXAM WAS DONE LESS THAN 6 MONTHS PRIOR TO DATE OF TERMINATION. (REFER 29 CFR 1910.1026 (K) (ii) (DoD 6055.05-M Table C2.T7. Chromium (VI) (PART 1910.1026 (k) of reference (f)

3. Medical History: History of respiratory system dysfunction; any history of asthma, dermatitis, skin ulceration, or nasal septum perforation; smoking status and history. A PHYSICIANS WRITTEN OPINION OF THE MEDICAL EXAMINATION MUST BE PROVIDED TO THE EMPLOYEE WITHIN 15 DAYS OF THE EXAM AND TO THE EMPLOYER WITHIN 30 DAYS. WRITTEN OPINION MUST INCLUDE: Whether the employee has a medical condition placing the employee at increased risk from Chromium (VI) exposure- Any recommended protective measures or limitations for employee- Statement that employee has been informed of exam results and need for further evaluation/treatment. IF THERE ARE ANY DUTY LIMITATIONS, THE AF FORM 469 WILL BE USED FOR MILITARY MEMBERS AND THE SF 600 WILL BE USED FOR CIVILIANS.

4. RESPIRATORY PROTECTION: Public Health initiates respiratory protection (RP) questionnaire which must be reviewed / approved by licensed health care professional (PLHCP). All follow-up exams (if any) are determined by reviewing PLHCP. The RP medical questionnaire does not need to be accomplished annually as outlined IAW AFI 48-137. However, BEE will ask worker if they are experiencing any difficulty wearing a respirator

TYPED OR PRINTED NAME, AERO MED COUNCIL CHAIRMAN Nathan Jones, Maj, USAF, MC	SIGNATURE JONES.NATHAN.M.1462837034	DATE 10/04/2023
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AF Form 2766 June 2008 - Computer Generated (ASIMS)

TYPED OR PRINTED NAME, AERO MED COUNCIL CHAIRMAN Nathan Jones, Maj, USAF, MC	SIGNATURE JONES.NATHAN.M.1462837034	DATE 10/04/2023
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AF Form 2766 June 2008 - Computer Generated (ASIMS)



Medical Surveillance Exams



What is a Medical Surveillance Exam?

- Purpose

- “The goal of occupational medical surveillance is to **prevent or minimize adverse health effects** by identifying evidence of unexpected **exposures or overexposures** before they cause harm.” (DoDM6055.05 3.1.a)
- “The MSE is primarily to **determine if** similarly exposed workers are **adequately protected from exposures** of concern.” (DAFMAN48-146 5.6.2)
- Underlying question: “Is this person’s job making them sick?”
 - Vs qualification exam: “Can this person safely do the job?”



What is the justification for a Medical Surveillance Exam?

5 CFR § 339.205

- Agencies may establish periodic medical examinations, medical surveillance, or immunization programs by written policies or directives to safeguard the health of employees whose work may expose them or others to significant health or safety risks due to occupational or environmental exposure or demands.

Why are MSE's important? → Legally required (OSHA)

Protect worker health

- Identify:
 - Inadequate controls
 - Disease clusters
 - Sensitive workers

Metrics

- Compliance
- Inspections



How do I determine the content of an MSE?

- Content based upon:
 - **Workplace hazards**
 - Target organ systems
 - Legal/regulatory requirements
 - (DoDM6055.05 4.5.b)
- Examination requirements are driven by potential **workplace exposures**
 - (DAFMAN48-146 5.6.3.3)



USAF Hazard Management Process for Hazards

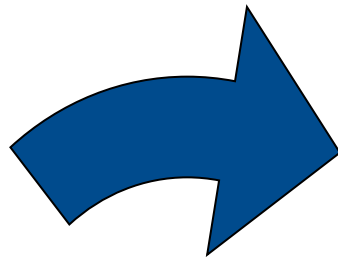
- Formulated
- Exam, Surveillance

- Hazards
- Exposures

COHERS

MSE

OEHD



- Surveillance
- PE's
- Testing
- Education

- Industrial Hygiene
- Shop Survey



- Formulation of
- Surveillance

CLINICAL OCCUPATIONAL HEALTH EXAMINATION REQUIREMENTS		WORKPLACE IDENTIFIER	9999	FASR	045A
Data As Of:	02/28/2024	BASE:	TRAINING AFB	ORGANIZATION:	999 MAINTENANCE SQ
Edited By:	REYNOLDS.SIDNEY.RENEE.1546058839	WORKPLACE:	999 MXS/STRUCTURAL MAINTENANCE		
PEG:	Default	BLDG NO/LOCATION:	1356	ROOM/AREA:	N/A
Risk Category:	1 (High)				
EXAMINATION REQUIREMENTS: Required for selected personnel					
EXAMINATIONS	AGE START	AGE STOP	ONE TIME	FREQ	RATIONALE & NOTES
Acrlylonitrile (Vinyl Cyanide) Hazard Questionnaire	0	0	<input type="checkbox"/>	12	<input checked="" type="checkbox"/> Acrylonitrile: Exposure above Action Level without regard to RP use. A work history and medical history with special attention to skin, respiratory, and gastrointestinal systems, and those nonspecific symptoms, such as headache, nausea, vomiting, dizziness, weakness, or other central nervous system dysfunctions that may be associated with acute or with chronic exposure to AN. 29 CFR 1910.1045(v)(2)(ii), Acrylonitrile, 0501/2006.
Audiogram	0	100	<input type="checkbox"/>	12	<input checked="" type="checkbox"/> Noise: Exposure at or above an 8-hour time-weighted average of 85 decibels—29 CFR 1910.95(a)(1) Occupational Noise Exposure, DODM 6055.12, Hearing Conservation Program, para 8, DoDM 6055.05, Occupational Medical Examination: Medical Surveillance and Medical Qualification, para 5.8, DAFI48-127, DAFI62023-01, Occupational Noise and Hearing Conservation Program.
Chest Radiograph	0	100	<input checked="" type="checkbox"/>	0	<input checked="" type="checkbox"/> Acrylonitrile: At or above Action Level without regard to respirator use. A 14" by 17" inch or other reasonably-sized standard film or digital posterior-anterior chest X-ray. 29 CFR 1910.1045(v)(2)(ii), Acrylonitrile, 0501/2006.
Chromium (VI) Hazard Questionnaire	0	0	<input type="checkbox"/>	12	<input checked="" type="checkbox"/> Chromium (VI): At or above Action Level for 30 or more days per year and/or Hazard not well characterized, and persons expected to occur 30 or more days per year. A medical and work history, with emphasis on: Past, present, and anticipated future exposure to chromium (VI); any history of respiratory system dysfunction; any history of asthma, dermatitis, skin irritation, or nasal septum perforation; and smoking status and history. 29 CFR 1910.1026(a)(3)(ii), Chromium (VI), 06/10/2010.
Noise Hazard Questionnaire	0	0	<input type="checkbox"/>	12	<input checked="" type="checkbox"/> Noise: Above 85 dBA (A) for TWA. An Audiometric Case History (AF Form 1153), Hearing Conservation Examination, Section I) will be completed on all reference audiograms (I-2). If more than 1-1 hearing levels are noted, or if personnel answer yes to asterisked questions, then a clinical examination is required, and the remainder of AF Form 1153 is to be completed. DAFI48-127, DAFI62023-01, Occupational Noise and Hearing Conservation Program.
Occ and Environmental Health Exposure Data	0	100	<input type="checkbox"/>	12	<input type="checkbox"/> All Hazards: All workers enrolled in OEHD program. Ensure occupational and environmental health exposure data (OEHD) and clinical occupational health exam requirements (COHERS) are filed in patients' medical record (hard copy or uploaded to electronic health record (EHR)) upon completion of MSE requirements that are more than an annual audiogram. DAFMAN 48-146, Occupational Health Program Management, para 2.3.4, 2.5.6, 2.7.5, 5.6.4, 7.7.3.
TYPED OR PRINTED NAME, AERO MED COUNCIL CHAIRMAN		SIGNATURE		DATE	
FIRST LAST, Lt Col, USAF, MC, SFS				08/19/2022	

United States Air Force					
Occupational and Environmental Health Exposure Data					
Reference: DAFI 48-145		Please give us feedback: https://forms.oua.apps.mil/rp/PLFLZ109		Current as of Date: 18 Oct 2024	
Date Printed: 18 Oct 2024					
(CUI)					
Workplace	Risk Categorization	Installation	Organization	# of SEGs	# of Personnel
	2 - Medium Risk			1	113
NOTE: This report includes occupational health risk assessment data from the Defense Occupational & Environmental Health Readiness System for Industrial Hygiene (DOEHS-RI) database. Data is considered reviewed, approved and carried by the below certifying authority as of the above Current as of Date.					
Exposure Group(s) Associated with Workplace					
Administrative Controls/Training					
Training - (Respiratory Protection (Respiratory Protection Program); Training - (Methylene Chloride (OCHA, Methylene Chloride); Training - (Lead (29 CFR 1910 Subpart Z - Toxic and Hazardous Substances) (OCHA, Lead); Training - (Hazardous Waste (Lead, Zinc)); Training - (Hearing Conservation Program (HCP); Training - (Hazard Communication (HAZCOM)); Training - (Confined Spaces (Confined Spaces); Training - (Chromium and Chromates (OCHA Cr(VI)); Training - (Cadmium (OCHA Cadmium); Signal Distance - (Warning Signs (Hazardous Noise Area)); Miscellaneous - (Personal Hygiene (Personal Hygiene)); Miscellaneous - (Housekeeping and Maintenance (Housekeeping (HAC)); Miscellaneous - (Housekeeping and Maintenance (Housekeeping-HEPA vacuum)); Laser - ANCI Class 1 - (Operated by Qualified and Authorized Personnel (Laser Emitter))					
Workplace Description					
Aircraft Structural Maintenance consists of 355 EMC and several 824m M/C (824K) personnel who perform aircraft corrosion control (painting, priming and sanding), sheet metal, bead blasting, and fiberglass repair work. These operations are performed on A/C, aerospace ground equipment, A-10, EC-130, and HH-60 aircraft and their parts. Sheet metal work is conducted in the main fabrication back shop of Bldg 5045, C-130 (top level) Bldg 129, A-10 (Phase Bldg 144) and on the flightline. Waterfall overcoat of crew chiefs occurs at Bldg 4886, C-130 and Bldg 5414 (A-10, F-16, HH-60). Confined Spaces: Certain workers in the shop can augment the 355 CMC Fuel Systems shop to perform sheet metal repairs inside A-10 and EC-130 fuel cells (permits required). Workers apply paint stripper containing methylene chloride inside C-130 dry bays on a non-routine basis for the Aircraft Structure Integrity Program (ASIP). All entries are authorized as single fixed entry permits. Heat Stress: Personnel are exposed to extreme temperatures while working outdoors (flightline phase dock work) and indoors during corrosion control work in full PPE. Ergonomic Hazards: Workers may also be exposed to ergonomic stresses such as repetitive motion (priming and other sheet metal work, hand-held spray gun application, bead blasting tool, sanding tools) and work in awkward positions (confined spaces, sanding aircraft). Hazardous Noise: Personnel are exposed to hazardous noise in a routine basis and are monitored on the base Hearing Conservation Program. Respiratory Protection: Personnel are monitored on the base respiratory protection program. Personnel may wear a 3M 6000C full face respirator, 3M H-420 DART hood, or PuroFo ESM- PF60 PAPR either in supplied air or air purifying mode when performing surface painting, priming, sanding, fuel cell, fiberglass graphic repairs and confined space work in accordance with their respiratory protection program written plan. A dust-supplied air blasting helmet is used in the walk-in bead blasting booth. Compressed breathing air is used in the walk-in paint booth, sanding booth and walk-in blasting booth. OCHA Sustained Specific/Hazardous chemicals: Workers may be exposed to methylene chloride and heavy metals (lead, cadmium, chromium, cadmium, and lead) during paint stripping, sanding, and bead blasting activities. These chemicals require specific training (AW their respective OCHA standards on an annual basis. Personnel may augment the 355 CMC Fuel Systems shop and work around Jet A which contains less than 0.1% benzene. However, the OCHA regulation for benzene does not apply to work where the only exposure to benzene is from liquid mixtures containing 0.1% or less of benzene by volume. Formaldehyde is found in many sealants/primers used by the shop and may be generated during work with phenolic blocks. Worst case exposure calculations and active air sampling data shows that products are not composed of more than 0.1% formaldehyde and exposure concentrations are below 0.1 ppm. Consequently, OCHA specific benzene and formaldehyde training is not required per OCHA 29 CFR 1910.1027 & 1048. Small quantities of chemical stripper containing methylene chloride is routinely applied to A-10 (top level) Bldg 5255, 126, 128, 144) and out on the flightline. Initial annual training is required for methylene chloride per 29 CFR 1910.1022. Regulated Areas: The walk-in bead blasting booth (currently INOP) and all confined spaces have been designated as regulated areas and require controlled access and proper signage. A housekeeping pan per AFI 21-101 is mandated for the paint booth transition areas (Bldg 5255, fiberglass and blasting facility (Bldg 5254).					
Exposure Group: [REDACTED]				# SEG Personnel: 114	
Health Hazard	Regulatory Limit	Measured Exposure	Exposure Determination		
			Page 1 of 8		



Summary

- Health Effects
- Medical Surveillance Exams (MSEs)
- Occupational and Environmental Health Exposure Data (OEHED)
- Clinical Occupational Health Exam Requirements (COHER)



Questions?



Publications Referenced

- 5 CFR 339 (Medical Qualification Determinations)
- DoDM 6055.05 (Occupational Medical Examinations: Medical Surveillance and Medical Qualification)
- DAFMAN48-146 (Occupational Health Program Management)
- Schwaid, G. (2017). Occupation and Aerospace Medicine. In Board review in preventive medicine and public health: Questions and answers (1st ed., pp. 233-234). San Diego, CA: Elsevier.
- OSHA Factsheet of Hexavalent Chromium
- Agency for Toxic Substances and Disease Registry, Medical Management Guidelines for Chromium, CAS # 7440-47-3
- ATSDR, Course:WB 1466 What are to physiologic effects of chromium exposure?
- UNITED STATES DEPARTMENT OF LABOR. (n.d.). Hexavalent Chromium Retrieved from <https://www.osha.gov/SLTC/hexavalentchromium/index.html>