

**1 November 1999**

**Aerospace Medicine**

**RESPIRATORY PROTECTION PROGRAM**



**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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OPR: 913 SPTG/SGPB (Mr. James K. Brown)  
Supersedes 913 AWI 48-101, 1 June 1998

Certified by: 913 SPTG/CC (Col Dana S. Marsh)

Pages: 11

Distribution: F

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This instruction implements Air Force Policy Directive 48-1, Air Force Occupational Safety and Health (AFOSH) Standard 48-137, Air Force Occupational Safety and Health Standard 48-8, 29 CFR Part 1910.134 and Technical Order (TO) 1-1-3. It establishes responsibilities and outlines procedures for conducting the base respiratory protection program. This instruction applies to Department of the Air Force civilian employees and U.S. Air Force Reserve (USAFR) members assigned to the Willow Grove Air Reserve Station, Pennsylvania.

**SUMMARY OF REVISIONS**

This instruction has been globally changed to reflect new procedures as designated in AFOSH Standard 48-137 and 29 CFR 1910.134. A (I) indicates a revision from previous edition.

**1. Objectives.** The purpose of the respiratory protection program is to provide a healthful work environment for WGARS personnel who are potentially exposed to contaminants exceeding the occupational exposure limit, work in oxygen-deficient atmospheres, or work in confined spaces. Respiratory protection is only an interim, short-term solution when present engineering or administrative controls are inadequate to lower contaminant concentrations to permissible levels and to protect workers in oxygen-deficient atmospheres.

**2. Application.** Respirators will be considered an acceptable method of protecting the health of WGARS personnel under the following circumstances:

- 2.1. When approved by Bioenvironmental Engineering Services (BES)(913 SPTG/SGPB).
- 2.2. When it has been determined that no feasible engineering or work practice controls can be used to adequately control the hazard.
- 2.3. During intermittent non-routine operations (1 hour per week).

- 2.4. During interim periods when engineering controls are being designed, installed or repaired.
- 2.5. In emergency situations (Rescue, evacuation, etc.).

**3. Definitions.** Definitions are listed in AFOSH Standard 48-137.

**4. Responsibilities:**

4.1. 913 AW Commander will:

- 4.1.1. Ensure the WGARS respiratory protection program complies with AFOSH Std 48-137 and OSHA publications.
- 4.1.2. Ensure WGARS personnel are adequately protected with respirators when the circumstances of paragraph 2 are encountered.

4.2. Bioenvironmental Engineering Services will:

- 4.2.1. Serve as the installation medical authority on respiratory selection, use, fit-testing, limitations and maintenance.
- 4.2.2. Interpret Air Force and OSHA standards applicable to respiratory protection and ensure compliance.
- 4.2.3. Train and fit-test all personnel on the respiratory protection program initially and annually.
- 4.2.4. Identify work areas and specific tasks that require respiratory protection to include type of respirator required. See attachment 1.
- 4.2.5. Provide a copy of the respiratory fit-test results to the respirator wearer's supervisor upon satisfactory completion of respiratory protection training. This documentation must be renewed annually.
- 4.2.6. Identify respiratory protection areas to commanders, directors, Civilian and Military Personnel Branches and Ground Safety. See attachment 1.
- 4.2.7. Perform annual site visit to respiratory protection areas.

4.3. Supervisors Will:

- 4.3.1. Maintain AFOSH Standard 48-137, this publication and shop operation instruction (OI). See attachment 2.
- 4.3.2. Ensure all respirator guidelines/requirements are being met.
- 4.3.3. Write specific shop OI based on BES evaluations and recommendations, situations requiring the use of respirators, respirator inspection, cleaning, storage, maintenance, annual training requirements and fit-testing.
- 4.3.4. Document initial and annual training on AF Form 55, Employee Safety and Health Record or electronic equivalent.
- 4.3.5. Ensure that respirator breathing air (if required) meets established standards (T.O. 42B-22 and 42B6-1-1).
- 4.3.6. Ensure compressors used with supplied air are located in a position to prevent entry of contaminated air into the system.

4.3.7. Verify and update a list annually of all assigned personnel required to wear respirators. Include the following: functional address symbol (FAS), full name, date of birth, grade, job series code and/or AFSC, SSN, building number, shop phone number, supervisor's phone number. Include the Privacy Act Statement in the OI. Provide a copy of this list to BES as it is updated.

4.3.8. Send written requests for surveys to 913 SPTG/SGPB when changes in respiratory protection requirements are suspected.

4.3.9. Annotate in Part D, all appropriate Standard Forms 52, Request for Personnel Action, any need for use of respirators for the position being filled. No placement or reassignment action will be completed until the individual under consideration has been medically certified as physically and physiologically able to perform work while wearing the prescribed respiratory protection.

4.3.10. Ensure all respirators are inspected immediately before use and after cleaning and sanitizing.

4.3.11. Ensure only government-provided respirators are used in the workplace and that no worker wears a respirator unless required or recommended by BES.

4.4. Chief, Aeromedical Services will:

4.4.1. Provide professional guidance on the medical aspects of the respiratory protection program in accordance with AFOSH Std 48-137.

4.4.2. Evaluate Medical Evaluation Questionnaires for employees required or recommended to use respiratory protection. Ensure they are medically qualified for fit-testing and use of a respirator to perform their assigned jobs.

4.4.3. Notify BES, RPP Administrator of any employees they feel need further evaluation before they are approved for fit-testing and respirator wear. Employees needing further evaluation will be referred to the Naval Air Station, Willow Grove Medical Clinic.

4.4.4. Ensure the Aeromedical Council establishes a medical evaluation protocol for respirator users.

4.5. The Physical Examinations Section of Aeromedical Services will arrange for and conduct initial and routine medical surveillance of respirator users required by this instruction and applicable OSHA Standards.

4.6. Respirator Users Will:

4.6.1. Wear the respiratory protection in accordance with the instructions and training received.

4.6.2. Will not wear respirator until annual fit testing and training are completed by SGPB. Complete the respiratory medical questionnaire and be medically cleared prior to using respiratory PPE.

4.6.3. Wear only the respirator approved and recommended by BES.

4.6.4. Maintain the NIOSH certification of respirators by not mixing parts from different manufacturers.

4.6.5. Clean, store, maintain and use respirators according to AFOSH Std 48-137 and established section or unit operating instructions.

4.7. Base Supply will:

- 4.7.1. Control the issue of respirators.
- 4.7.2. Ensure BES has approved respiratory protection requests before issuing respirators.
- 4.7.3. Ensure that "suitable substitute" respirators or parts are not issued.

CHARLES D. ETHREDGE, Colonel, USAFR  
Commander

## Attachment 1

## MASTER RESPIRATORY INVENTORY

Table A1.1. MASTER RESPIRATORY INVENTORY

WORKPLACE	TASK	CONTAMI-NANT	TYPE OF RESPIRATOR
<b>REQUIRED</b>			
Fuel Cell Repair (012B)	In-tank repairs	Confined Space where fuel was	3M Full face (7800S) supplied air with organic vapor (OV) cartridge. <i>Attendants/ Monitors</i> (during tank opening and foam removal) wear: 3M(7300/7800) ½ or Full face with OV cartridges.
Avionics Instrument-Auto Pilot (017B)	In-tank repairs of an electronic nature	Confined Space where fuel was	3M Full face (7800S) supplied air with OV cartridge.
Structural Maintenance (006B)	Spray painting with isocyanates	Isocyanates	3M H-400 Hoods with continuous flow air-line.. NOTE: 3M 7800 Full-face <i>air-filtering</i> respirator (OV & N100 prefilter) can be used instead of the airline <b>ONLY</b> for touchup or stenciling <b>OUTDOORS</b> .
	Other spray painting ops.	Toluene, Xylene, etc.	3M ½ face or full face(7300/7800) with OV cartridge.
	Sanding ops.	Particulates	3M ½ face or full face(7300/7800) with HEPA cartridge.
	Media Blasting	Particulates	CLEMCO supplied-air respirator, Type CE, 10505 HP helmet NIOSH TC# 19C-338
		Clean-up	Bullard MB 30 Series Type C & CE continuous flow. NIOSH TC-19C-314
Inspection Dock (002B)	Control Rod lubrication	Lead Dust.	3M Half/Full face respirator (7300/7800series) with OV & HEPA/P100 filter. " <i>Required</i> " by OSHA law simply if employee chooses. Air sampling shows safe levels.
<b>RECOMMENDED</b>			

Metals Tech. (003B)	Welding	Comfort only (air sampling shows safe lev- els)	FULL TIME personnel- CABOT/AO5 50301
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Attachment 2

WORKPLACE WRITTEN RESPIRATORY PROTECTION PROGRAM

A2.1. \*Note [ ] means to fill in the space to meet local requirements.

BY ORDER OF THE CHIEF

[numerical designation]

(Shop Name)

20 OCTOBER 1995

Aerospace Medicine

[shop name] RESPIRATORY PROTECTION PROGRAM

OPR: Unit/FAS (Name)

Certifier: Unit/FAS

(Name)

Pages: 2

Distribution: F

Establishes and prescribes the procedures to ensure a comprehensive [shop name] respirator training program is conducted IAW the provisions of AFOSH Standard 48-1 and 913 AWI 48-101. All [shop name] personnel who may require respiratory protection in the performance of their duties will comply with this OI. The Bioenvironmental Engineering Services Office (BES, 913 SPTG/SGPB) is the OPR for the base RPP.

1. Approval: All [shop name] respiratory protection must be recommended for use by BES and be approved for use by the National Institute for Occupational Safety and Health (NIOSH) or the Mine Safety and Health Administration (MSHA). Cartridges used with respirators must also be approved by NIOSH and MSHA, and be the proper cartridge for the particular hazard.

2. Required Respiratory Protection: The following respiratory protection is required for [shop name] when performing the listed functions:

2.1. (CONTACT BES FOR INPUT)

2.2. The Following Items Interfere/Prevent an Effective Face to Respirator Seal and Must be Avoided:



4.3. Fit-test Results. [shop name] supervisors must keep worker's fit-test results with his/her AF Form 55.

5. Inspection and Maintenance:

5.1. Respirator. A respirator will only be fitted with attachments made specifically for that model respirator. No attachments from a different manufacture will be used.

Seal check. Employees must inspect and perform positive and negative pressure seal checks (see attachment 1) before and after each use. Respirators will also be inspected on a monthly basis and a record of these inspections should be maintained. AF Form 1071 could be used for this purpose.

5.3. Air-purifying respirators: Chemical cartridges will be replaced at established change-out schedules provided by the BEE office. The chemical cartridges will also be replaced if any of the following conditions exist or occur:

*(Your Unit/OI number, i.e., 913 LG/LGSP OI 48-101)*                      *(Date)*                      *(Page number)*

5.3.1. The cartridge gets wet.

5.3.2. The wearer can smell or taste the chemical.

5.3.3. The manufactures established duration for wearing that cartridge has elapsed.

5.3.4. The cartridge is damaged.

5.3.5. When the cartridge duration and conditions of prior use are unknown.

5.4. Servicing. Respirators must be cleaned and stored properly after each use. The respirator should be disassembled and washed in a mild soap and water and air dried before it is put back into the storage area.

5.5. Protection. Respirators must be placed plastic bag or box (original container etc.) and stored [enter location(s) in shop] that is secured from wetness, damaging equipment, extreme temperatures and chemical/biological contamination.

(shop supervisor signs the OI here)

[shop supervisor name and title block]

Attachment:

Seal checks (Positive and negative pressure)

*(Page number)*

*(Your Unit/FAS OI number)*

*(Date)*

(Attachment 1)

*A1. SEAL CHECKS*

A1.1. Positive Pressure

A1.1.1. Close (seal) the exhalation valve with your hand and gently exhale into the facepiece of the respirator. The fit is considered satisfactory if a slight positive pressure can be built inside the facepiece without any evidence of leakage around the face seal.

A1.2. Negative Pressure

A1.2.1. Create a seal around the inhalation valve (cartridge) with your hands. If you have a problem creating a seal you may need to use a piece of plastic or similar material to create the seal. After the seal is made attempt to gently inhale. This should create a negative pressure in the mask drawing the mask closer to your face. The seal is considered good if this negative pressure is maintained for a short period of time with no evidence of leakage around the face seal.

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