



WASHINGTON MILITARY DEPARTMENT PROCEDURE

Safety Procedure Number 01-050-05

RESPIRATORY PROTECTION

RESPIRATORY PROTECTION. The Department is committed to protect employees from the airborne exposure hazards associated hazardous atmospheres that contain gases, vapors, or other particulates and oxygen deficiency, by providing them the means and methods to effectively utilize provided respiratory protection.

1. RESPONSIBILITIES:

a. Respirator Program Administrator.

- (1) Ensure requirements in this Policy are met.
- (2) Ensure that only approved respirators are selected and provided.
- (3) Identify and maintain a list of the proper type of respirator for each hazard.
- (4) Ensure that maximum use limit of filter, cartridge, or canister is not exceeded.
- (5) Ensure that American National Standards Institute (ANSI) standards are met for positive pressure/supplied air and Self-Contained Breathing Apparatus (SCBA) respirators consistent with WAC 296-842-200.
- (6) Assist Supervisors in the establishment of a routine respirator maintenance program for respirator equipment that meets the requirements of WAC 296-842-170.
- (7) Maintain fit testing records, employee training records, and inspection records for no less than 3 years.
- (8) Ensure compliance with substance-specific regulations requiring medical and bioassay surveillance (i.e., asbestos, lead, etc.), consensus recommendations from Centers for Disease Control (CDC), National Institute of Occupational Safety and Health (NIOSH), Occupational Safety and Health Act (OSHA), and/or the Washington Industrial Safety and Health Act (WISHA) about such surveillance, and any new data on specific chemicals that indicates medical and bioassay surveillance may be necessary.
- (9) Review individual fit testing records, medical approval status, wearer acceptance of respirators, and inspect the respirator program operation, and evaluate overall policy implementation to determine the effectiveness of the respirator program. Appropriate action shall be taken to correct defects found in the program.
- (10) Ensure that SCBA respirators are inspected monthly. Inspections shall be recorded on Inspection Record - Self Contained Breathing Apparatus (SCBA) (MIL FORM 905).
- (11) Ensure that non-disposable respirators used in industrial/maintenance applications are cleaned and inspected after each use. Cleaning and inspections shall be recorded on Industrial Respirator Cleaning and Inspection Log (MIL FORM 904).
- (12) Maintain all respirator inspection records.
- (13) Conduct frequent, random inspections of respirator wearers to ensure that respirators are properly selected, used, cleaned, and maintained.

b. Supervisor:

- (1) Ensure the adequate protection of employees while performing tasks in hazardous atmospheres that exceed Permissible Exposure Limit (PEL) or Immediately Dangerous to Life and Health (IDLH) atmospheres. Supervisors shall ensure all respirator wearers apply respirator care and use concepts on a daily basis.
- (2) Ensure each respirator is inspected monthly to verify proper maintenance. Take action to confirm that respirators are used, worn properly, and are in good working condition.
- (4) Monitor respirator wearers to ensure that other personal protective equipment does not interfere with an adequate respirator face seal. Any reported problems of this nature must be corrected before the wearer shall be allowed to use or continue to use a respirator.
 - (a) Whenever a respirator wearer advises of a condition in which it is believed continued respirator use may be harmful, respirator use shall be discontinued. The supervisor shall direct the wearer to the Physician or appropriate Licensed Health Care Provider (PLHCP) for medical release before further use shall be authorized.
 - (b) Supervisors shall ensure that any restrictions on respirator use indicated by a PLHCP are strictly followed.
- (5) Periodically monitor work environments to evaluate:
 - (a) Respirator fit;
 - (b) Appropriate respirator selection for the hazard;
 - (c) Appropriate use of respirator under workplace conditions;
 - (d) Respirator maintenance; and
 - (e) Wearer feedback as to the effectiveness of the respirator program.
- (6) Maintain a copy of the manufacturer's manual for each make and model of respirator being used, for reference by wearers.
- (7) Ensure that the service life of each respirator and maximum use limit of filter, cartridge, or canister is not exceeded. Service life and maximum use limit information may be available in the manufacturer's manual.
- (8) Coordinate shop/Department respirator activity with the Respirator Program Administrator.
- (9) Designate Respirator Storage Area(s). Supervisors shall establish a clean, sanitary, and secure storage location for respirator protective equipment that is convenient to the work being performed, Per WAC 296-842-17005.

c. Respirator Wearers

- (1) Seal check the seal of the respirator by procedures recommended in training and by the manufacturer prior to each use by one of the following methods:
 - (a) Positive Pressure Test: Close the exhalation valve and exhale gently into the face piece. The face piece fit is considered satisfactory if a slight positive pressure can be built-up inside the face piece without evidence of outward leakage of the seal area.
 - (b) Negative Pressure Test: Close off inlet opening of the canister or cartridge(s) by covering it with the palm of the hand(s). Inhale gently so that the face piece collapses slightly. Hold your breath for approximately

10 seconds. If the face piece remains in its collapsed condition and no inward leakage of air is detected, the fit is satisfactory.

- (c) Manufacturer's Instructions: Follow the directions provided by the respirator manufacturer.
- (2) Be clean-shaven in the sealing periphery of the respirator face piece and shall not have facial hairstyles that could interfere with respirator fit, form, or function.
- (3) Inspect the respirator prior to each use to ensure that it is in proper working condition. If found to be damaged, soiled, or grossly contaminated, it shall be reported to the immediate Supervisor and the respirator shall not be used until it has been repaired or replaced.
- (4) Regularly maintain the respirators to retain their original effectiveness and inspect per manufacturer's guidelines. Wearers shall ensure maintenance of respirators after use.
 - (a) Maintenance shall include: Washing, sanitizing, rinsing, and drying procedures consistent with the respirator cleaning procedures mandated in WAC 296-842-17005;
 - (b) Inspection for defects; including straps, *face piece*, and valve(s) filters;
 - (c) Replacement of worn and defective parts;
 - (d) Repair when necessary;
 - (e) Storage to protect against dust, moisture, damaging chemicals, sunlight, excessive heat and/or cold, and physical damage; and
 - (f) Labeling by Storage Bags to identify the wearer.

2. RESPIRATOR SELECTION:

- a. Only respirators approved by the NIOSH, the Mine Safety and Health Administration (MSHA), the U.S. Department of Labor, jointly by NIOSH and MSHA under the provisions of Title 30, Code of Federal Regulations, Part 1, or those approved through a variance application shall be used. Modification(s) to a respirator are prohibited and may result in corrective/disciplinary action.
- b. The atmosphere shall be considered Immediately Dangerous to Life and Health (IDLH) whenever it is difficult to identify or reasonably estimate the employee exposure.
- c. Respirators shall be selected based upon the hazard assessment and equipment selection criteria consistent with WAC 296-842-13005.
- d. The respirator protection device shall be selected according to the nature of the hazard involved, capabilities and limitations of the respirator, and ability of each respirator wearer to obtain a satisfactory fit.
- e. Individuals shall not use any respiratory protection equipment that is not provided by the Department. Additional factors for determining the selection of respirators includes:
 - (1) Comfort;
 - (2) Breathing resistance;

- (3) Performance;
- (4) Fatigue;
- (5) Peripheral vision impairment;
- (6) Restriction of movement;
- (7) Interference with job; and
- (8) Overall user satisfaction and confidence

3. STANDBY PROCEDURES FOR IMMEDIATELY DANGEROUS TO LIFE AND HEALTH SITUATIONS (IDLH):

Standby person(s) shall be available whenever an individual is working in IDLH atmospheres.

- a. One standby person is permitted when the IDLH atmosphere is well identified and hazards are addressed and s/he can adequately:
 - (1) Monitor the person(s) in the IDLH atmosphere;
 - (2) Implement communication activities; and
 - (3) Initiate rescue duties.
- b. Visual, voice, or signal line communication must be maintained between the individual(s) inside the IDLH atmosphere and the person(s) outside the IDLH atmosphere.
- c. Persons outside the IDLH atmosphere must be trained and equipped to provide effective emergency rescue.
 - (1) A second standby person shall be outside the IDLH atmosphere before the first standby person enters the IDLH atmosphere to provide emergency rescue.
 - (2) The second standby person must provide necessary assistance appropriate to the situation.
- d. Standby person(s) located outside the IDLH atmosphere must be equipped with:
 - (1) Pressure demand or other positive pressure Self-Contained Breathing Apparatus (SCBA);
 - (2) A pressure demand or other positive pressure supplied-air-respirator with auxiliary SCBA; and
 - (3) Either appropriate retrieval equipment for removing the person(s) who enter(s) the hazard atmosphere where retrieval equipment would contribute to the rescue of the individual(s) and would not increase the overall risk resulting from entry; or equivalent means for rescue where retrieval equipment is not necessary.

4. MEDICAL EVALUATION:

- a. The individual's ability to wear a respirator shall be medically evaluated by a physician or licensed health care professional designated by management at no cost to the employee before initial fit testing occurs. WISHA Respirator Medical Evaluation Questionnaire (MIL FORM 900) shall be completed by each respirator wearer prior to initial fit testing. This form shall be kept confidential once completed.

- b. The completed WISHA Respirator Medical Evaluation Questionnaire (MIL FORM 900) shall be sent to the selected licensed medical doctor, physician's assistant, or nurse practitioner referred to as the PLHCP.
- c. The Physician or Licensed Health Care Provider (PLHCP) Information and Response (MIL FORM 901) shall be filled out by the Supervisor or Respirator Program Administrator and submitted to the PLHCP.
- d. PLHCP shall:
 - (1) Conduct the initial review of WISHA Respirator Medical Evaluation Questionnaire (MIL FORM 900);
 - (2) Certify staff for fit testing based on the responses to the Questionnaire utilizing Physician or Licensed Health Care Provider (PLHCP) Information and Response Sheet (MIL FORM 901).
 - (3) Recommendations shall include any limitations on respirator use related to:
 - (a) The medical condition of the individual;
 - (b) Workplace conditions in which the respirator will be used; and
 - (c) Whether or not the individual is medically able to use a respirator.
 - (4) Provide a copy to Respirator Program Administrator. Once notification is received, fit testing and respirator issuance can proceed consistent with this Policy.
 - (5) Provide additional medical evaluations as indicated.
- e. The completed WISHA Respirator Medical Evaluation Questionnaire (MIL FORM 900) will be retained by the PLHCP.
- f. A copy of the Physician or Licensed Health Care Provider (PLHCP) Information and Response Sheet (MIL FORM 901) shall be filed in the Employee Occupational Health Record.
- g. Whenever the PLHCP changes, the new PLHCP shall be provided all information identified in this Policy.
- h. Whenever the PLHCP finds a medical condition that may place the individual's health at increased risk if the respirator is used, a Positive Air Purifying Respirator (PAPR) shall be used. If a subsequent PLHCP evaluation finds that the individual is medically able to wear a negative pressure respirator, a PAPR is no longer required. Additional Medical Evaluations are required whenever:
 - (1) An employee reports medical signs or symptoms related to his or her ability to wear a respirator;
 - (2) A PLHCP, supervisor, or the Respirator Program Administrator determines that an employee needs to be reevaluated;
 - (3) Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation; or
 - (4) A change occurs in workplace conditions (i.e., physical work effort, protective clothing, and temperature) that may result in a substantial increase in the physiological burden placed on an employee.

5. RESPIRATOR FIT.

- a. Fit Testing. A minimum standard for fit testing negative pressure respirators shall be qualitative fit testing.
 - (1) When a disposable respirator is worn, qualitative fit testing occurs following the manufacturer's fit-testing protocol. Qualitative fit tests shall be recorded on Qualitative Respirator Fit Testing Record (MIL FORM 902).
 - (2) Quantitative fit testing must be used when atmospheric concentrations are at or above 10 times the PEL.
 - (3) If an individual notifies the PLHCP or his/her supervisor that the fit of the respirator is unacceptable, a reasonable attempt will be made to select a different respirator face piece and the new respirator shall be re-tested.

- b. Fit testing Preparation Procedures
 - (1) Prior to the selection process, the individual shall be shown how to don a respirator and assess comfort.
 - (2) The respirator wearer shall be clean-shaven in the sealing periphery of the respirator face piece and shall not have facial hairstyles that could interfere with respirator fit, form, or function.
 - (3) Assessment of comfort shall include reviewing the following points with the respirator wearer:
 - (a) Chin properly placed;
 - (b) Positioning of mask on nose;
 - (c) Strap tension;
 - (d) Fit across Nose Bridge;
 - (e) Room for safety glasses;
 - (f) Distance from nose to chin;
 - (g) Room to talk;
 - (h) Tendency to slip;
 - (i) Cheeks filed out;
 - (j) Self-observation in mirror; and
 - (k) Adequate time for assessment.
 - (4) The respirator wearer shall conduct the conventional negative and positive pressure fit checks. Before conducting the negative or positive-pressure checks, the respirator wearer shall be told to "seat" the mask by rapidly moving the head side-to-side, up and down, and taking a few deep breaths. The respirator wearer is now ready for fit testing

- c. Exercise Regimen. The respirator wearer shall perform a series of exercises which simulate work movements:
 - (1) Normal breathing;
 - (2) Deep breathing;
 - (3) Turning head side-to-side;
 - (4) Moving head up and down;
 - (5) Reading;
 - (6) Grimacing;
 - (7) Bending over and touching toes; and
 - (8) Jogging in-place.

- d. Testing Frequency
 - (1) Each respirator wearer shall receive initial fit testing:
 - (a) Prior to their initial use of respirator; or
 - (b) Whenever a different respirator face piece (i.e., size, style, model, or make, etc.), is used.
 - (2) Annual fit testing shall occur for all respirator wearers who use one of the following respirators:
 - (a) SCBA;
 - (b) Full-face masks; and
 - (c) Half-mask respirators.
 - (3) Respirator wearers shall submit to fit-testing whenever the following has occurred:
 - (a) Obvious change in body weight;
 - (b) Significant facial scarring in the area of the face piece seal;
 - (c) Significant dental changes (i.e., multiple extractions without prosthesis or acquiring dentures);
 - (d) Reconstructive or cosmetic surgery; or
 - (e) Any other condition that may interfere with face piece sealing.

6. TRAINING:

- a. Individuals issuing or required to wear respirators and their Supervisors shall receive proficiency training for each respirator. Training shall be documented on the Respirator Training Record (MIL FORM 903).
- b. Training shall include the following elements:
 - (1) The reason for respiratory protection;
 - (2) The nature, extent and affects of respiratory hazards the person may be exposed to, including routine, non-routine, and reasonably foreseeable rescue situations;
 - (3) Why engineering controls are not adequate;
 - (4) Why the provided respirator has been selected;
 - (5) The operation, capabilities, and limitations of the provided respirator;
 - (6) Instruction in inspecting, donning, checking the fit, and wearing the respirator;
 - (7) An opportunity for each respirator wearer to handle the respirator, learn how to don and wear it properly, check its seal, wear it in a safe atmosphere, and wear it in a test atmosphere;
 - (8) Procedures on cleaning, disinfecting, storing, inspecting, repairing, discarding, and otherwise maintaining respirators;
 - (9) Instructions on how to recognize and cope with emergency situations; and
 - (10) Regulations concerning respirator use.
- c. Refresher training/seal-testing for all respirator wearers shall be conducted annually and recorded on the:
 - (1) Respirator Training Record (MIL FORM 903); and
 - (2) Documented in the HRDIS System utilizing HRDIS Code 0107ST3A.
- d. Respirator training is also required when:

- (1) Changes in the workplace or the type of respirator render previous training obsolete or incomplete.
- (2) The employee's knowledge or use of the respirator indicates that the employee has not retained the understanding or skill or knowledge as required in WAC 296-842-160.
- (3) Retraining appears to be needed.

7. DEFINITIONS

- a. Approved - Tested and listed as satisfactory by the National Institute for Occupational Safety and Health (NIOSH) of the U. S. Department of Health and Human Services or the Mine Safety and Health Administration (MSHA) of the U. S. Department of Labor or jointly by NIOSH and MSHA under the provisions of Title 30, Code of Federal Regulations, Part 11.
- b. Bioassay - A determination of the concentration of a substance in a human body by an analysis of urine, feces, blood, bone, or tissue.
- c. Canister (air-purifying) - A container with a filter, sorbent, or catalyst, or any combination thereof which removes specific contaminants from the air drawn through it.
- d. Cartridge (air-purifying) - A small canister.
- e. Contaminant - A harmful, irritating, or nuisance material that is foreign to the normal atmosphere.
- f. Corrective Lens - A lens ground to the wearer's individual corrective prescription to permit normal visual acuity.
- g. Exhalation Valve - A device that allows exhaled air to leave a respirator and prevents outside air from entering through the valve.
- h. Face piece - That portion of a respirator that covers the wearer's nose and mouth in quarter-mask (above the chin) or half-mask (under the chin) face piece or that covers the nose, mouth, and eyes in a full face piece. It is designed to make a gas-tight or particle-tight fit with the face and includes the headbands, exhalation valve(s), and connections for an air-purifying device or respirable gas source, or both.
- i. Filter - A media component used in respirators to remove solid or liquid particles from the inspired air.
- j. Hazardous Atmosphere - Any atmosphere, either immediately or not immediately dangerous to life or health, which is oxygen deficient or which contains a toxic or disease-producing contaminant.
- k. Physician or other licensed health care professional (PLHCP) – an individual whose legally permitted scope of practice (for example, license, registration, or certification) allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the health care services required in this policy.

- l. Immediately Dangerous to Life and Health (IDLH) - Any atmosphere that poses an immediate hazard to life or produces immediate irreversible debilitating effects on health.
- m. Negative Pressure Respirator - A respirator in which the air pressure inside the respiratory-inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere and negative during inhalation in relation to the air pressure of the outside atmosphere.
- n. Permissible Exposure Limit (PEL) - The legally established TWA concentration or ceiling concentration of a contaminant that shall not be exceeded.
- o. Positive Pressure Respirator - A respirator in which the air pressure inside the respiratory-inlet covering is positive in relation to the air pressure of the outside atmosphere.
- p. Qualitative Fit-Testing - Respirator testing designed to determine if leakage occurs.
- q. Quantitative Fit-Testing - Respirator testing designed to measure the amount of leakage.
- r. Rescue Respirator Use - Wearing a respirator for entry into a hazardous atmosphere to rescue a person(s) in the hazardous atmosphere.
- s. Respirator - A device designed to protect the wearer from the inhalation of harmful atmospheres.
- t. Respiratory-Inlet Covering - That portion of a respirator which connects the wearer's respiratory tract to an air-purifying device or respirable gas source, or both. It may be a face piece, helmet, hood, suit, or mouthpiece/nose clamp.
- u. Sanitization - The removal of dirt and the inhibiting of the action of agents that cause infection or disease.
- v. Service Life - The period of time that a respirator provides adequate protection to the wearer.
- w. Time-Weighted Average (TWA) - The average concentration of a contaminant in air during a specific time period.
- x. Window Indicator - A device on a cartridge or canister that visually denotes the service life of the cartridge or canister.

This procedure will be reviewed and updated on a regular as needed basis.


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Date