

CHAPTER 15

RESPIRATORY PROTECTION

1501. Discussion

a. This chapter establishes requirements and responsibilities for COMNAVREG SW's Respiratory Protection Program.

b. COMNAVREG SW Safety Headquarters is responsible for establishing a comprehensive Respiratory Protection Program (RPP) and appointing a qualified Regional Respiratory Protection Program Manager (RPPM). Assigned Assistant Respiratory Protection Program managers (ARPPMs) are responsible for implementation, execution, and auditing of the Regional RPP at their site. The customer activity's designated Respiratory Protection Program Assistant (RPPA) is responsible to administer and coordinate the Regional RPP at the workcenter level.

c. Many of the repair and maintenance activities performed by COMNAVREG SW facilities generate air contaminants that can be dangerous, if inhaled. The best means of protecting employees from exposure to such potentially hazardous materials is through the use of engineering control measures, such as local exhaust ventilation. When effective engineering controls are not feasible, or while activities are in the process of instituting them, appropriate respiratory protection shall be used.

d. When respiratory protection is required, COMNAVREG SW customer activities shall comply with the regional respiratory protection program per this chapter and references 15-1 and 15-10.

1502. Applicability

a. The provisions of this chapter shall apply to all COMNAVREG SW customer commands. The Respiratory Protection Program Manager (RPPM), Assistant Respiratory Protection Manager (ARPPM) and the Respiratory Protection Program Assistant (RPPA) shall maintain a listing of employees requiring respiratory protection, and shall authorize those employees to wear respiratory protective equipment. Customer activities shall purchase and provide appropriate respiratory protection equipment to their employees.

b. The provisions of this chapter do not apply to:

(1) Contractors.

(2) Personnel wearing respiratory protection for the sole purpose of protection against airborne radioactive contamination associated with the Naval Nuclear Propulsion Program, which is governed by NAVSEA 389-0288 (Radiological Controls)

c. Respirator Use for Documented Health Hazards. Respiratory protection shall only be issued to the following personnel:

(1) Employees in areas known to have contaminant levels requiring the use of respiratory protection or in which contaminant levels requiring the use of respiratory protection may create a hazard without warning (e.g., emergency purposes such as hazardous material spill responses).

(2) Employees performing operations documented as an inhalation hazard and in the immediate vicinity where operations generate hazardous levels of contaminants.

(3) Employees in suspect areas or performing operations suspected of being health hazardous, but for which adequate sampling data does not exist.

(4) Employees performing operations for which the Occupational Safety and Health Administration (OSHA) requires respiratory protection.

(5) Employees performing operations where OSHA permits the employee to choose to use a respirator (i.e. Lead).

(6) Any other employee for whom the use of respiratory protection is deemed appropriate by the RPPM or ARPPM - for humanitarian or morale use - (voluntary respirator use).

d. Voluntary Respirator Use. When respirators are not required, voluntary use of respiratory protection is allowed, if the respirators are issued and controlled by the ARPPM or RPPA and the following criteria are met.

(1) Annually provide respirator users with training, fit testing and a medical evaluation. **Personnel may not supply their own respirators.**

(2) NIOSH or NIOSH/MSHA approved respirators must be selected for the perceived hazard. **Only elastomeric respirators** (facepieces that are made of rubber-like synthetic polymer, such as silicone rubber) may be selected, approved and issued with the appropriate respirator cartridge for the perceived hazard.

(3) Filtering facepiece respirators (air-purifying respirators) with facepieces consisting of filter media are prohibited for use.

(4) Issuance of voluntary use respirators shall not be used as a justification for avoiding further evaluation of health hazards.

(5) Surgical masks do not provide protection against air contaminants and shall NEVER be used in place of a respirator.

1503. Selection of Respirator Cartridges and Gas Mask Canisters

a. The cognizant Industrial Hygiene survey shall be used to determine the proper respirator and cartridge selection whenever possible. Navy policy no longer permits reliance on odor threshold and other warning properties as the sole basis for determining that an air-purifying respirator will afford adequate protection against exposure to gas or vapor contaminants.

b. The RPPM shall ensure that the respiratory protection program provides a change schedule for chemical canisters/cartridges based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life per reference 15-1.

1504. Breathing Air Requirements

a. Compressed breathing air shall meet at least the minimum requirements for Grade D breathing air described in references 15-2 and 15-3.

b. Customer activities shall fund as necessary monitoring of the breathing air quality at least quarterly.

1505. Respirator Selection Considerations

a. Only respirators that are currently approved by National Institute for Occupational Safety and Health (NIOSH) or NIOSH/Mine Safety and Health Administration (MSHA) shall be used. The RPPM or ARPPM shall select respiratory protection equipment using the most current NIOSH Certified Equipment List and the most conservative assigned protection factors listed in references 15-4 and 15-5.

b. The Defense General Supply Center (DGSC) issues specific national stock numbers (NSNs) for NIOSH approved respirators (see reference 15-6).

c. As a minimum, the RPPM or ARPPM shall consider the following factors to correctly assess the nature of the hazard requiring respiratory protection:

(1) The current workplace evaluation conducted by the cognizant industrial hygienist.

(2) The chemical, physical, and toxicological properties of the contaminant such as:

(a) Warning properties of the contaminant gas or vapor (smell, taste, eye irritation, or respiratory irritation).

(b) Whether employees can absorb the contaminant through the skin.

(c) Whether any of the contaminants are Immediately Dangerous to Life or Health (IDLH) or whether the contaminant would produce injurious effects after prolonged exposure.

(3) Concentration of the contaminant in the atmosphere.

(4) Permissible exposure limit (PEL) for the contaminant(s).

(5) Whether an oxygen-deficient or oxygen-rich atmosphere exists or may be created.

(6) Whether toxic, flammable, or explosive by-products are present or may be produced.

(7) The nature, extent, and frequency of operations personnel will be performing (e.g., welding, painting, etc.) in the course of this employment.

(8) Sorbent efficiency of cartridge or canister.

(9) Any possibilities of high heat reaction with sorbent material in the cartridge or canister.

(10) Any possibility of shock sensitivity (explosion hazard) of the substances absorbed on the cartridge or canister sorbent.

(11) Respirator assigned protection factor or degree of protection provided per Navy Environmental Health Center (NEHC) Technical Manual, Industrial Hygiene Field Operations Manual, latest revision.

d. Respirators for entry into IDLH atmospheres. Should it become necessary to enter an oxygen deficient atmosphere (<19.5 percent oxygen) or an IDLH atmosphere, only the following types of respirators may be used:

(1) Full facepiece, open circuit, pressure demand Self Contained Breathing Apparatus (SCBA) with an air cylinder rated for at least 30 minutes.

(2) Full facepiece, closed circuit, pressure demand (SCBA) (the lowest rated service life of these devices is 60 minutes).

(3) A full facepiece combination pressure demand supplied-air respirator equipped with an auxiliary self contained air supply of 15 minutes to ensure escape from the IDLH area. The auxiliary self-contained air supply may only be used for egress purposes. If the self-contained air supply (15-minute supply) is insufficient to ensure escape, then a SCBA must be used.

e. Refer to Chapter 27 for safe entry procedures into IDLH atmospheres.

f. Respiratory protection for firefighting: Full facepiece, open circuit, pressure demand, SCBA approved by NIOSH and NFPA that is equipped with an air cylinder rated for at least 30 minutes.

g. Issuance of Respirators. The respirator user's supervisor or designated RPPA will order and issue the appropriate respiratory protection equipment. Respiratory equipment will not be issued for use until verification of successfully completing the following items:

(1) Periodic medical evaluation

(2) Annual Training

(3) Annual fit testing

1506. Respirator Fit Testing

a. The RPPM, ARPPM, and RPPA shall maintain a list of all personnel enrolled into the RPP. Supervisors shall ensure their employees are current with the required medical certification and shall schedule fit testing on an annual basis. The servicing Site

Safety office will be fully responsible to provide ALL initial and annual fit testing requirements.

b. All tight-fitting positive and negative pressure respirators shall be either qualitatively or quantitatively fit tested by the ARPPM initially and annually. To wear full face, negative pressure, air purifying respirators in atmospheres up to their assigned protection factor of 50, as required by reference (1), personnel must be quantitatively fit tested and the respirator must achieve a fit factor of at least 500, which equates to a safety factor of 10.

c. Qualitative Fit Testing. The respirator is not functioning properly unless the air comes only from the cartridge(s), canister, or airline in the case of supplied-air respirators. The ARPPM or RPPA shall fit test each individual who is required to use a respirator at the time of initial fitting and annually thereafter. The ARPPM or RPPA shall document and perform fit testing per reference 15-2. Individuals shall not wear respiratory protection equipment when:

(1) Facial hair comes between the sealing surface of the facepiece and the face, or interferes with valve function.

(2) Any condition that interferes with the face-to-facepiece seal or valve function. In addition, if any employee wears corrective glasses or goggles or other personal protective equipment, the employer shall ensure that such equipment is worn in a manner that does not interfere with the seal of the facepiece to the face.

d. Quantitative Fit Testing. The ARPPM shall quantitatively fit test respirators where regulations require, such as when employees use respirators for protection against lead or asbestos (references 15-7 and 15-8). They shall conduct testing per the test equipment manufacturer's instructions and references 15-4 and 15-8.

1507. Inspection and Cleaning of Respirators

a. Respirators issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintained in a sanitary condition. Respirators issued to more than one person or for emergency purposes shall be cleaned and disinfected after each use.

b. Respirators must be checked for missing, deteriorated, and/or non-functioning parts.

c. Designated employees, such as the RPPA(s), shall inspect each emergency respirator after use or at least every month and maintain a record of inspection dates, findings, etc., per reference 15-2.

d. Storage area shall be clean, cool, dry, and away from damaging or contaminating chemicals and particulates (i.e. dusts and dirt).

1508. Respiratory Protection Training. While selecting a respirator for a given hazard is important, equally important is the proper use of the respirator. The servicing Site Safety Office shall ensure proper use by providing all customer activity personnel, their supervisors, persons issuing respirators, and emergency rescue teams with training per reference 15-4, and applicable OSHA standards for specific chemicals. Training shall be conducted initially and annually thereafter, unless OSHA standards specify otherwise. Training shall include, as a minimum, the following:

- a. The nature and degree of respiratory hazards.
- b. Respirator selection, based on specific hazards.
- c. Why the respirator is necessary and how improper fit, usage or maintenance can compromise the protective effect of the respirator.
- d. The limitation and capabilities of the respirator.
- e. How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions.
- f. How to inspect, put on and remove, use and check the seals of the respirator.
- g. The procedures for maintenance and storage of the respirator.
- h. How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
- i. Wearing contact lenses in contaminated atmospheres with respiratory protection is permitted.
- j. The general requirements of the respiratory standard.

1509. RPPM and ARPPM Training Because of the large variation in quality of respiratory protection training available for RPPMs and ARPPMS and because of the complexity of respiratory protection, the Navy has defined minimum acceptable training for RPPMs and ARPPMs in reference 15-1.

1510. Responsibilities

a. Regional Respiratory Protection Program Manager (Headquarters):

(1) Develop training lesson plans and associated information.

(2) Evaluate annually, the regional respiratory protection program to ensure compliance with OPNAVINST 5100.23 (series), COMNAVREGINST 5100.11 (series), 29 CFR 1910.134 and 42 CFR 84.

(3) Establish and maintain current a COMNAVREGSW Respiratory Protection Guide.

(4) Ensure that the respiratory protection program provides a change schedule for chemical canisters/cartridges based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life.

b. Regional Safety Training Department (Headquarters). Distribute training materials to the Site Safety Offices.

c. Regional Metrics Department (Headquarters). Audit the effectiveness of the respiratory protection program at each Site.

d. Assistant Respiratory Protection Program Managers (Site Safety Office):

(1) Ensure that Respiratory Protection Program Assistants (RPPAs) are appointed in writing and qualified.

(2) Evaluate and document annually, the respiratory protection program at their Site to ensure compliance with OPNAVINST 5100.23 (series), COMNAVREGINST 5100.11 (series), 29 CFR 1910.134 and 42 CFR 84.

(3) Review and approve respiratory protection equipment purchase order requests including respirators issued for humanitarian / morale purposes (voluntary respiratory use).

(4) Conduct initial and annual refresher training and/or fit testing of all respirator users including respirators issued for humanitarian / morale purposes (voluntary respirator use).

(5) Conduct training for all designated RPPAs.

(6) Develop, in coordination with the RPPAs, Standard Operating Procedures (SOPs) governing the selection, care, issue and use of respirators.

(7) Coordinate with the servicing Industrial Hygiene Department to ensure they provide support to evaluate applicable work operations and processes requiring change schedules for chemical canisters/cartridges.

(8) Input all respirator data into the "OSHMAP" program, (i.e. medical exam date, training date, fit test date, respirator type, model, size and stressors exposed to requiring respirator usage).

(9) Provide a current Respirator User Roster to RPPAs, as required by the **"10 Section Notebook"**.

(10) Evaluate, with the assistance of the designated RPPA and the Industrial Hygienist, all operations that may cause or create respiratory hazards to determine the extent of hazards present and the need for respiratory protection.

e. Customer Activities / Program Managers / Department Managers:

(1) Appoint, in writing, a Respiratory Protection Program Assistant (RPPA) to act as the activity's workcenter program coordinator.

(2) Ensure compliance with the CNRSW Respiratory Protection Program.

(3) Fund and purchase approved respiratory protection equipment.

(4) Arrange for, and fund, quarterly monitoring of compressed breathing air supplies (when applicable).

f. Respiratory Protection Program Assistants (Workcenter Program Coordinators):

(1) Complete Regional RPPA course (one time course, no periodic refresher required).

(2) Establish, staff, and maintain respirator equipment issue points ensuring proper storage.

(3) Issue only respirators and equipment that are currently approved by the National Institute for Occupational Safety and Health (NIOSH) or NIOSH/Mine Safety and Health Administration (MSHA) including respirators issued for humanitarian / morale purposes (voluntary respirator use).

(4) Ensure the servicing Site Safety Office Assistant Respiratory Protection Program Manager (ARPPM) approves purchase requests prior to ordering. One-time review and approval for recurring items.

(5) Inspect, maintain and store all respiratory protection equipment in a clean and sanitary condition.

(6) Track and monitor compliance with the recommended change schedules for chemical canisters/cartridges ensuring that canisters and cartridges are changed before the end of their service life.

(7) Track and schedule periodic medical examinations.

(8) Complete and sign the Medical Evaluation Form.
(Forward completed copy to Site Safety Office.)

(9) Ensure that all employees required to wear a respirator have been trained and fit tested prior to wearing a respirator and annually thereafter.

(10) Perform and document annual refresher training and qualitative fit testing. (Forward completed copy of roster to Site Safety Office.)

NOTE: Training provided to RPPAs will **ONLY** qualify them to conduct annual refresher training and fit testing, **NOT initial** training and/or fit testing. However, it is **NOT REQUIRED** of them to conduct, but provides activities the option for efficiency (i.e.. Not having employees to leave the job site and travel to classroom), at the request of several activities. This includes training for personnel who are issued respirators for humanitarian/morale purposes (voluntary respirator use).

(11) Maintain training rosters and fit test cards for all qualified employees.

(12) Maintain workcenter respiratory protection program **"10 Section Notebook"** as instructed during RPPA training.

(13) Develop, in coordination with the Assistant Respiratory Protection Program Manager (Site Safety Office), worksite standard operating procedures (SOPs) and ensure that they are posted at the worksite.

(14) Where necessary, ensure that quarterly monitoring of grade D breathing air is performed.

(15) Evaluate all operations, with the assistance of the Assistant Respiratory Protection Program Manager and the Industrial Hygienist, that may cause or create respiratory hazards to determine the extent of hazards present and the need for respiratory protection.

g. Supervisory Personnel:

(1) Ensure that all respirator users under their jurisdiction are provided with and wear the proper type of respiratory protection.

(2) Ensure that all respirator users are scheduled for medical appointments and attend respirator training and fit test.

(3) Ensure that all personnel issued respiratory protection equipment for humanitarian / morale purposes (voluntary respirator use) receive initial and annual training, fit testing and medical evaluations.

(4) Attend an initial Regional Respiratory Protection for Users course and annually thereafter.

(5) Inspect worksites to ensure that respiratory equipment is being used in accordance with the requirements of COMNAVREGSWINST 5100.11 (series).

(6) Ensure compliance with the recommended change schedules for chemical canisters/cartridges ensuring that canisters and cartridges are changed before the end of their service life.

h. Employees:

(1) Attend an initial Regional Respiratory Protection for Users course and annually thereafter.

(2) Use only the respiratory protection equipment approved by the Assistant Respiratory Protection Program Manager (Site Safety Office ARPPM).

(3) Follow the recommended change schedules for chemical canisters/cartridges ensuring that canisters and cartridges are changed before the end of their service life.

(4) Inspect, use, and maintain respiratory protection equipment as instructed during training received.

(5) Inspect respiratory protection equipment before and after each use and return equipment to the RPPA when no longer required or when any malfunction is noted.

(6) Attend scheduled medical appointments, respirator training, and fit testing.

(7) Perform user seal checks every time the respirator is donned (when applicable).

i. Cognizant Servicing Medical Treatment Facility

(1) Ensure that the medical qualification requirements of the Respiratory Protection Program (RPP) are met per reference 15-1.

(2) Provide occupational health professional support to evaluate applicable work operations and processes to develop required change schedules for chemical canisters/cartridges based on objective information or data.

CHAPTER 15

REFERENCES

- 15-1 OPNAVINST 5100.23 (Series), Navy Occupational Safety and Health (NAVOSH) Program Manual Ashore
- 15-2 29 CFR 1910.134 (as amended)
- 15-3 Compressed Gas Association, Inc. Commodity Specification for Air, Pamphlet G-7.1-1989 (American National Standard Commodity Specification for Air, ANSI/ CGA G-7.1-1989)
- 15-4 American National Standards Institute (ANSI), American National Standard, Practices for Respiratory Protection, Z88.2-1992 (NOTAL)
- 15-5 NIOSH Respirator Decision Logic, NIOSH Publication 87-108, May 1987 (NOTAL)
- 15-6 Defense General Supply Center (DGSC) Paperless Order Placement System (POPS) Commercial Item Catalog (NOTAL)
- 15-7 29 CFR 1910.1025, Appendix D (as amended)
- 15-8 29 CFR 1910.1001, (as amended)
- 15-9 COMNAVREG SW Respiratory Protection Program Guide
- 15-10 COMNAVREG SW Procedures and Guidelines Governing the CNRSW Regional Respiratory Protection Program

APPENDIX 15A

MEDICAL EVALUATION FORM FOR RESPIRATOR USE

(Upon completion of Occupational Health Evaluation, forward a copy of form to the Site Safety Office)

Employee _____ SSN _____ Date of Birth _____

Supervisor _____ Phone # _____ Command _____

Circle the type or types of respirator(s) to be used:

Air-supplied (tight-fitting) Air Purifying (powered)(hooded)
Air-supplied (hooded) Air-Purifying (powered) (tight-fitting)
Open-circuit (SCBA) Air-Purifying (non-powered): (Specify)
Closed-circuit (SCBA) Filtering Facepiece or elastomeric
Combination Airline/SCBA N, R, P 95, 99, 100
Other: _____ Type Chemical Cartridge _____

Specific hazard(s): Fiberglass Organotin Welding
Abrasive Dust Silica Carbon Monoxide Lead
Ammonia Chromate Nuisance Dust Otto Fuel
Asbestos Formaldehyde Metal Fumes Pesticides
Beryllium Hydrogensulfide(H2S) Organic Vapor
Other: _____ Isocyanates

Level of work effort (circle one):

Light Moderate Heavy Strenuous

Extent of usage:

Length of time: _____ hours/day

- 1. On a daily basis
2. Occasionally (more than once a week)
3. Rarely (less than once a week) - or emergency use only

Special considerations:

extreme temperature confined spaces
isolated duty oxygen deficient IDLH (immediate danger to life)

Respiratory Protection Program Assistant (RPPA) Phone # _____
or Employee's Supervisor Signature

OCCUPATIONAL HEALTH EVALUATION

(Employee has been given a copy of this recommendation.)

- 1. No restrictions on the respirator circled above
2. Respirator use with some restrictions (Noted Below)
3. No respirator use is allowed
4. Alternate respirator recommended

Restriction(s): _____

Re-evaluation due: _____ (under 35) (35-45) (over 45)
5 yrs 2 yrs 1 yr

Health care professional's signature

Date