



2600SEG205 RESPIRATORY PROTECTION STANDARD

1.0 PURPOSE

A wide array of industrial, construction and slip repair activities are conducted at Panama Canal Authority (ACP) installations which liberate contaminating substances in the air at work sites, which due to their nature, are not easily removed using technical control methods. Contaminants in the air may cause harm and chronic deterioration of the respiratory tract. The ACP provides its employees with a variety of types and brands of respiratory protection devices to Project the health of those employees exposed to hazardous work environments. These activities include, but are not limited to, welding work; painting; sandblasting; work in confined spaces; bat and bird guano; and manipulation of toxic substances such as asbestos, PBC, solvents for cleaning machinery parts, degreasers, and chemical substances for wood treatment, pesticides and herbicides. The purpose of this regulation is to standardize practices to protect those workers who carry out activities that generate contaminants in their work sites.

2.0 BACKGROUND

This Standard replaces the safety policy and procedures contained in Appendix S of the former Panama Canal Commission Personnel Manual (*PCPM*), chapter 790.

3.0 SCOPE

This Standard applies to all employees of the Panama Canal Authority (ACP), contractors and third parties within installations, industrial shops and working areas under ACP responsibility.

4.0 LEGAL FOUNDATION

This Standard is established pursuant to Agreement No. 12 of the Panama Canal Authority Board of Directors, Risk Control and Occupational Health Regulations, Chapter I, Articles 8 and 16.

5.0 DEFINITIONS

At the time of drafting this regulation, all words and terms were of all users' knowledge.

6.0 GENERAL

6.1 EQUIPMENT REQUIREMENTS

6.1.1 Procurement

6.1.1.1 The Inventory Management Section (FAAI) Manager is responsible for ensuring that the respiratory protection equipment procured and standardized by the Inventory Management Section (FAAI) inventory system is certified by the National Institute for Occupational Safety and Health (NIOSH). Prior to its acquisition, the Supervisor of the Safety and Industrial Hygiene Unit, shall approve the respiratory equipment to make sure that it is standard and complies with specifications and shall oversee this task.

6.1.1.2 When purchases are not conducted through FAAI, unit managers shall be responsible for guaranteeing that the acquired product complies with the above-mentioned specifications.

6.1.2 Selecting the Respirator



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6.1.2.1 The selection of the respirator shall be based on the specific type of toxic substance to be handled, its concentration in the environment and work conditions.

6.1.2.2 Before assigning an employee a negative or positive pressure respirator, a seal test shall be conducted using a respirator of the same made model and size to be used by the employee.

6.1.2.3 Supervisor and others using negative pressure respirators shall consult the selection guidelines prepared by the Safety and Industrial Hygiene Unit (RHSH), included in this regulation as an annex, to obtain information on available filters and cartridges. Supervisors shall consult these guidelines whenever requesting respirators from the Warehousing Section (FAAL); see Appendix A: <http://imcd-fsw-01.acp/es/ess/normas/205-a.pdf> and Appendix B <http://imcd-fsw-01.acp/es/ess/normas/205-b.pdf> of this regulation.

6.1.2.4 Industrial Hygienists in the area are available for advice.

6.1.3 General Guidelines for Use

6.1.3.1 Employees using negative pressure protective masks must be perfectly shaved with no sideburns to make sure the mask has no obstacles for sealing against the face. Beard and sideburn growth make negative pressure masks work ineffectively.

6.1.3.2 Glasses, safety glasses and protective goggles shall be used worn in such a way that they do not alter or break the seal mask against the face.

6.1.4 Mask Maintenance and Care

6.1.4.1 Units shall have written procedures for the proper maintenance and care of the masks, and they should be posted on bulletin board and be easily available at each site where masks are kept.

6.1.4.2 Users shall routinely check their masks looking for defects before and after each use and after cleaning them.

6.1.4.3 User shall clean and disinfect the mask using water and soap after each use and keep it in a sealed plastic bag.

6.1.4.4 Units shall assign storage sites for the masks and keep them clean and well disinfected. These sites shall be protected from dust, sun rays, extreme heat, excessive humidity and harmful chemical substances.

6.1.4.5 Each operating unit shall conduct inspections and maintenance of mask storage areas.

6.1.4.6 The masks shall be maintained in such a way that they keep their original look and effectiveness. Masks shall be fixed or replaced as soon as any part of the body is damaged. Masks shall be fixed using spare parts and shall not be replaced unless the body is damaged. The Warehousing Section has enough spare parts for the existing standard makes and models.

6.1.4.7 For purposes of liability, maintenance and care, the masks shall be assigned individually to the employees who must use them daily.



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6.1.4.8 Whenever masks are assigned to multiple users, the person designated by the Unit shall be responsible for overseeing that the masks are adequately saved and disinfected and distributed accordingly. The responsible party shall only distribute the make and size masks for which the user has already passed an adjustment test and which has been already approved for his/her use.

6.2 INSPECTION

6.2.1 Supervisors at foreman or equivalent level or higher shall inspect employee masks at least four times a year. Users shall also inspect their masks seeking for leaks and defects before each use and after each cleaning.

6.2.2 The person designated by the unit as the responsible party shall inspect the masks used for emergency situations at least once a month.

6.2.3 Inspections conducted by the Safety and Industrial Hygiene Unit (RSH) shall confirm compliance with this regulation. RSH personnel shall inspect the masks during unannounced site inspections and/or during testing.

6.3 TRAINING

6.3.1 Training for users. Supervisors shall be responsible for training all mask users one a year and for overseeing proper selection and use of masks. Contractor shall provide training for their own employees.

6.3.2 Training for supervisors. The Industrial and Safety Training Unit (RHSI) shall provide initial training and annual refresh courses, including training packages for supervisors. Divisions shall coordinate this training with the RSH.

6.3.3 Contents of the course. The technical contents of the training course for users and supervisors shall be coordinated with RSH. As a minimum, training shall include the following:

6.3.3.1 Purpose of mask sealing and respiratory protection.

6.3.3.2 Proper selection and use of respirators.

6.3.3.3 Proper selection of filters or cartridges according to the specific hazardous substance found at the work site.

6.3.3.4 Respirator limitations in highly hazardous atmospheres.

6.3.3.5 Proper care, maintenance, repair and storage of respirators.

6.3.3.6 Factors affecting proper mask-face seal.

6.4 MEDICAL SURVEILLANCE

6.4.1 The Health, Wellness and Labor Welfare Unit (RHSS) shall conduct breathing sufficiency tests for employees who have undergone the fitting test to make sure that they are fit to use negative pressure respirators.

6.4.2 Those workers who may have difficulty breathing with the masks shall be referred to RHSS for evaluation.



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6.5 SEALING TEST

6.5.1 RSHS shall conduct mask fitting quantitative or qualitative tests every two years for all respirator users, depending on the hazards they need to be guarded from. The day of the test, users shall bring the masks they have been assigned for RSHS personnel to inspect them and assess the employee's skill to put it on. The list of employees who have undergone the fitting test shall be submitted to RHSS to conduct breathing sufficiency tests to the listed employees.

6.6 ENVIRONMENTAL SURVEILLANCE

6.6.1 RSHS shall conduct the required environmental surveillance to establish levels of concentration of polluting agents in the air and inform the different units about the need for respiratory protection according to the samples collected. A copy of this report shall be submitted to RHSS, whenever conditions that may affect workers' health are detected.

6.7 AIR QUALITY AND SUPPLY

Whenever compressed breathing air is used for personnel supply, the air shall comply with requirements for quality and purity appropriate for human use. The equipment used to supply this air shall also comply with ACP's **BREATHABLE COMPRESSED AIR STANDARD 2600SEG210**.

6.8 FILE MAINTENANCE AND DATA ACCESS

6.8.1 RSHS keeps records of the respirator sealing tests as well as of inspections conducted by industrial hygienists; and RHSS keeps record of breathing tests and medical exams. Records of unit-conducted inspections shall be kept by the corresponding unit and shall be made available to industrial hygienists whenever required. Air quality records shall be kept by the division where the tests are conducted and RSHS.

Each instructor shall document and keep records of the training provided. The record shall include the date, place and contents of the training session, as well as the names of the instructor and the employees who attended. Employees may be required to sign form No. 2536 (RSHS), Record of Safety and Health-Related Activities of the Unit, or equivalent form of the unit, indicating that they attended specific sessions.

6.8.2 These records may be made available to the employees in accordance to applicable ACP regulations.

6.9 INDUSTRIAL HYGIENE SUPPORT

6.9.1 Questions regarding the application of this procedure shall be referred to the industrial hygienist.

7.0 RESPONSIBILITIES

The responsibilities for ensuring compliance with this Standard are described in the Occupational Health and Safety Management Standard 2600SEG101.

8.0 INQUIRIES

All information or clarification regarding the contents or application of this Standard shall be requested in writing to RSHS.



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9.0 EXCEPTIONS

Temporary deviations or exceptions from compliance with this regulation shall be requested in writing to RSHS.

10.0 TERM

This Standard shall remain in force until amended or revised.

11.0 REFERENCES

- 11.1 File Retention Tables, Records Management Section, Panama Canal Authority.
- 11.2 ANSI Z88.2.
- 11.3 NIOSH. National Institute for Occupational Safety and Health.