

2600ESS-225 STANDARD FOR THE APPLICATION OF PESTICIDES

1.0 PURPOSE

In the Panama Canal Authority (ACP), pesticides are used for such purposes and operations as the vector and insect control. Inhalation and contact with pesticides can cause damage to the lungs, liver, and nervous system. The purpose of this policy is to provide uniform measures for the safety and health of employees in the application of pesticides and thereby prevent associated adverse effects.

2.0 BACKGROUND

This Standard replaces the safety policy and procedures contained in Appendix N of the Panama Canal Commission Personnel Manual (PCPM), Chapter 790.

3.0 SCOPE

This Standard applies to all Panama Canal Authority personnel, contractors and third parties that are within the facilities, industrial shops, and areas under ACP responsibility.

4.0 LEGAL FOUNDATION

This Standard is established pursuant to Agreement No. 12 of the Board of Directors of the Panama Canal Authority (ACP), Safety and Health Regulations, Chapter I, Article 8 and 16. Executive Order N° 386 of 1997 published in Official Gazette N° 23374.

5.0 DEFINITIONS

5.1 Application: All manual or mechanical operations intended for pesticide utilization.

5.2 Ultra-Low Volume Machine (ULVM): Is the equipment utilized during the application of pesticides that nebulizes the product into particles fluctuating in sizes of 100 to 400 microns. It is also known as a nebulizer or fogger.

5.3 Parasiticide / Pesticide: Any substance or mixture of substances aimed at preventing, destroying or controlling whichever plagues, including vectors of human or animal illnesses and unwanted plant or animal species causing damage.

6.0 GENERAL

6.1 WORK PROCEDURES

6.1.1 Preventive measures

6.1.1.1 When working with liquid pesticides wear long-sleeved overalls, safety glasses with face shield or chemical-splash goggles, hard hat, and a respirator with chemical cartridge. In addition, when loading the spraying equipment, wear nitrile or rubber gloves and rubber safety boots. When using an ultra-low volume machine, also known as fogging machine, wear ear muffs.

6.1.1.2 When working with powder or pulverized pesticides, wear long-sleeved overalls, safety goggles, a face shield, helmet, and respirator with chemical cartridge and powder pre-filter. While carrying equipment, also wear nitrile or rubber gloves and safety rubber boots.

6.1.1.3 Fixed or portable facilities must be readily available for eyewashes and showers.

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6.1.1.4 Inside the pesticide deposits, storage of materials and products shall be adequately maintained, with containers not showing signs of deterioration, and labels kept with their respective codes in place.

6.1.1.5 Pesticide deposits and formulation areas shall have signs available indicating the types of products stored and the required PPE; they shall also have adequate ventilation and, where required, an extraction system to prevent the buildup of vapors.

6.1.1.6 Pesticide deposits must have a containment structure (dike), in the event of spills or filtrations. Walls shall have a smooth finish that allows for adequate cleanup, and shall be painted in a light flat color. Floors shall be solid, have a smooth finish, and be impermeable to allow for satisfactory cleanup.

6.1.1.7 The stations utilized for the preparation of pesticides shall be equipped with:

6.1.1.7.1 Normal drinking water installation with sufficient pressure.

6.1.1.7.2 Necessary hygienic facilities (showers, dressing rooms, dining rooms, hand-wash basins, toilets, among others) in accordance with the number of people and activities performed by diverse crews.

6.1.1.7.3 A sink, preferably made of stainless steel, without drainage for washing the equipment and work accessories that converts to a reusable water deposit.

6.1.1.8 Access to storage areas shall be limited only to authorized personnel.

6.1.2 Work Practices

6.1.2.1 Do not wear street clothing under protective clothing. Follow the preventive measures indicated in point **6.1.1**.

6.1.2.2 Do not eat, drink, or smoke when handling pesticides. Wash hands before eating or smoking, and shower after working with pesticides.

6.1.2.3 Apply only those pesticides which are approved, and follow the instructions on container labels for mixing and applying pesticide chemicals. Do not use crankcase oils or transformer oils as pesticides.

6.1.2.4 Take care to prevent spatters, spills or dispersions when pouring pesticide liquids or powders.

6.1.2.5 Do not clear blocked hoses, nozzles, or lines of dispensing pesticide with mouth.

6.1.2.6 Immediately wash your body of any pesticide spills or splatters.

6.1.2.7 Remove contaminated clothing or equipment and place it in a receptacle for washing. Do not wash pesticide-contaminated clothing together with other articles. Laundering contaminated clothing on the worksite is permitted.

6.1.2.8 Material Safety Data Sheets (MSDS) for hazardous materials shall be readily available, and container labels must be in good, legible condition.

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6.1.2.9 All contracts for the application of pesticides shall be coordinated with the Sanitation, Control of Vectors and Vegetation Unit (OPEM-S).

6.1.3 Spill Response Procedure to Pesticide

6.1.3.1 All non-essential personnel must be evacuated immediately from leak or spill areas. Only personnel with appropriate personal protective equipment and training in emergency procedures may clean spill tasks, and control or repair leaks.

6.1.3.2 In the case of major spills, consult with an Industrial Hygienist in the Safety and Industrial Hygiene Unit (RHSH) to obtain additional guidance regarding the different types of respirators and protective gear.

6.1.3.3 Liquid chemical pesticides must be collected or absorbed with industrial products designed for such purpose.

6.1.4 Waste handling

6.1.4.1 The disposition of pesticides must be executed in a manner guaranteeing that empty containers are not reutilized for storing drinks or food as it would affect the workers' health.

6.1.4.2 Once emptied, pesticide containers

6.1.4.2.1 will be deposited in areas designated for that purpose;

6.1.4.2.2 that are 5-, 2.5- and 1-gallon capacity will be rinsed three times and then pierced; and

6.1.4.2.3 55-gallon tanks will be drained and pierced before delivery to sanitary landfills.

6.1.4.3 Waste water from washing work equipment or containers which had pesticide contents shall not be allowed to be discharged into streams.

6.1.4.4 Controls shall be maintained that allow for adequate final disposition of contaminated waste.

6.1.4.5 Final disposition of containers with waste from pesticide products shall be coordinated with OPME-S.

6.2 MEDICAL SURVEILLANCE

6.2.1 Exposure Evaluation

6.2.1.1 Employees working with pesticides will undergo blood analysis every six months for cholinesterase activity, arranged for by the Health, Wellness and Labor Welfare Unit (RHSS). They will also receive periodic physical examinations in RHSS. In the case of an unusual exposure level, the employee, immediately after showering, the employee will be referred to the ACP Occupational Health Center (or to another appropriate medical facility after regular working hours) for evaluation.

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6.2.2 Follow-up Procedure

6.2.2.1 When blood analysis reveals depressed cholinesterase levels or the physician considers follow-up is indicated, the employee will be relieved of work with pesticides and will be provided serial blood analysis through RHSS. The employee will resume working with pesticides only when the physician once again reports normal levels.

6.2.3 Training

6.2.3.1 Employees who will be involved in the application of pesticides must be instructed on the pesticide standard as to the toxicity of pesticides used, the adequate disposition of containers contaminated with these products, the required respiratory protection, the Material Safety Data Sheets (MSDS) of hazardous materials and label indications, the measures of personal hygiene to be followed, the procedures on spills response, and the need for medical evaluation. Such training will be provided by OPEM-S and the OPEM-S certified applicators. ACP pesticide applicators must be listed with OPEM-S. Contractor shall provide training for their own employees.

6.3 RECORDKEEPING AND ACCESS TO DATA

6.3.1 Records pertaining to applicators and application contracts will be maintained by OPEM-S.

6.3.2 Test and analysis records are maintained by the RHSS.

6.3.3 The units must maintain records of the training provided to their employees. The providing units must also maintain such records.

6.3.4 These records will be made available to employees in accordance with ACP regulations.

6.4 INDUSTRIAL HYGIENE ASSISTANCE

6.4.1 Questions regarding applicability of these procedures should be referred to an 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 must be requested in writing to RSHS.

9.0 EXCEPTIONS

Deviations or temporary exceptions in complying with this Standard shall be requested in writing to RSHS.

10.0 TERM

This Standard shall remain in force until amended or revised.

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11.0 REFERENCES

- 11.1 *Tablas de Retención de Archivos, Sección de Administración de Archivos, ACP.*
- 11.2 Standard 2600SEG201, HAZARDOUS MATERIAL INFORMATION STANDARD.
- 11.3 Standard 2600SEG213, PROTECTIVE CLOTHING STANDARD.
- 11.4 Standard 2600SEG121, *Norma de Seguridad de Señalización y Barricadas.*
- 11.5 Standard 2600SEG285, WORK SITE HOUSEKEEPING AND SANITATION STANDARD.