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#14
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Article 4. Fumigation

6780. General Fumigation Safe-Use Requirements.

(a) When fumigant concentrations cannot be controlled and an employee's exposure exceeds the Permissible Exposure Limit (PEL) as specified in Title 8, California Code of Regulations, Section 5155, Airborne Contaminants, or more stringent requirements by product labeling, the employer shall provide and require the employee to wear approved respiratory protective equipment.

(b) Whenever an employee may be exposed above an exposure standard to methyl bromide, sulfuryl fluoride, or any other fumigant for which only air-supplied respirator equipment is approved, the employer shall either:

- (1) Require the use of air-supplied respirator equipment,
- (2) Employ continuous monitoring to warn employees before the PEL is reached, or
- (3) Operate under the provisions of (c) below.

(c) Upon written application by an employer, the director will review, and may accept, a Fumigation Safety Program that describes methods, work practices, devices, or processes which the director determines will ensure that employees will not be exposed to concentrations of fumigants in excess of the PEL.

(d) The employer shall have an accident response plan at the worksite. The plan shall provide instructions to protect employees during situations such as spills, fire, and leaks. Employees shall be trained in accident management procedures based on the plan.

NOTE: Authority cited: Sections 11456 and 12981, Food and Agricultural Code.

Reference: Section 12981, Food and Agricultural Code.

6782. Fumigation of Enclosed Spaces.

Enclosed spaces include vaults, chambers, greenhouses, vans, boxcars, ships, planes, vehicles, and tarpaulin-covered structures and commodities. When fumigating tarpaulin-covered commodities inside buildings, and areas or things inside greenhouses, this Section applies to the entire structure.

(a) Whenever a pesticide is used for fumigation inside an enclosed space, at least two trained employees shall be present at all times when:

- (1) The fumigant is introduced into the enclosed space;

(A) Except, only one trained person is required to be present when solid fumigants (including aluminum phosphide, magnesium phosphide, and smoke cartridges) are introduced into the enclosed space from outside the enclosed space;

- (2) The enclosed space is entered for the purpose of facilitating aeration; and

(3) The enclosed space is entered to determine the concentration of the fumigant and personal protective equipment is required by pesticide product labeling or regulation.

(b) The second employee shall have immediate access to the personal protective equipment required by the pesticide product labeling for handlers in the event entry into the fumigated enclosed space becomes necessary for rescue.

(c) Prior to the commencement of fumigation, warning signs shall be posted in plainly visible locations on or in the immediate vicinity of all entrances to the space under fumigation and shall not be removed until fumigation and ventilation have been completed, and the premises are safe for reentering. Warning signs shall be printed in red on white background and shall contain, in English and Spanish, the following statement in letters not less than two inches in height: "DANGER-FUMIGATION". They shall also depict a skull and crossbones not less than one inch in height and shall state in letters not less than one-half inch in height the name of the fumigant, the date and time the fumigant was injected, and the name, address and telephone number of the applicator performing the fumigation.

(d) Employees shall not be allowed to enter fumigated enclosed areas, except to determine the fumigant concentration or facilitate aeration, unless the concentration in the area is known to be at or below the level specified in 6780(a) above.

(e) The fumigant shall not be released into an occupied work area.

(f) After completion of the fumigation, the treated area or products shall be managed so that employees entering the area or working with the treated products are not exposed to a concentration in excess of the level specified in 6780(a) above.

NOTE: Authority cited: Section 12981, Food and Agricultural Code.

Reference: Sections 12980 and 12981, Food and Agricultural Code.

6784. Field Fumigation.

(a) Signs required to be posted in accordance with section 6776(f) shall remain in place until aeration is complete.

(b) The provisions of this subsection pertain to field soil fumigations using methyl bromide applied pursuant to the fumigation methods described in section 6447.3.

(1) Employer Recordkeeping. The employer shall maintain records for all employees performing fumigation-handling activities. The records shall identify the person, work activity(ies), date(s), duration of handling, the U.S. Environmental Protection Agency Registration Number, and the brand name of the methyl bromide product handled. The employer shall maintain these use records at a central location for two years.

(2) Employee Protection Requirements.

(A) Employees involved primarily in shoveling shall work only at the ends of the application rows.

(B) At least two trained employees shall be present during introduction of methyl bromide and removal of tarpaulins, if used.

(C) When required by this section, employees shall wear National Institute for Occupational Safety and Health (NIOSH)-certified respiratory protection specifically recommended by the manufacturer for use in atmospheres containing less than five parts per million methyl bromide. Employees shall wear the required respiratory protection during the entire duration of the fumigation-handling activity. NIOSH-approved, air-supplying respiratory protection may be used in lieu of chemical cartridge respirators.

(3) Limited Work Hours and Workdays.

(A) No employee may work in fumigation-handling activities more than the hours specified in Table 1--Maximum Work Hours during the injection period and during the restricted-entry interval.

1. An employee may perform fumigation-handling activities without the work-hour limitations specified in Table 1--Maximum Work Hours if a full-face respirator is worn during the entire duration of the activity.

2. Multiple-Task Employees. An employee may work in more than one work task and/or application method in a 24-hour period as long as the employee's total work hours do not exceed

the lowest total hours specified in Table 1 - Maximum Work Hours for any one work task or application method performed.

(B) Notwithstanding subsection (b)(3)(A), an employee may work in fumigation-handling activities in a 24-hour period for the work hours specified in Table 2--Maximum Work Hours in a Maximum Three (3) Workdays Per Calendar Month during the injection period and during the restricted-entry interval, provided the employee's total workdays performing fumigation-handling activities do not exceed three days in a calendar month.

1. An employee may perform fumigation-handling activities without the work-hour limitations specified in Table 2-Maximum Work Hours in a Maximum Three (3) Workdays Per Calendar Month if a half-face respirator is worn during the entire duration of the activity.
2. Multiple-Task Employees. An employee may work in more than one work task and/or application method in a 24-hour period as long as the employee's total work hours do not exceed the lowest total hours specified in Table 2-Maximum Work Hours in a Maximum Three (3) Workdays Per Calendar Month for any one work task or application method performed.

Table 1. Maximum Work Hours

Fumigation Method/Activities	Maximum Application Rate (lbs.of actual methyl bromide)	Maximum Work Hours in a 24-Hour Period Wearing Half-Face Respirator During Entire Fumigation-Handling Activity
Nontarpaulin/Shallow/Bed Tractor Equipment Driving Supervising	200 lbs.	9* 9*
Nontarpaulin/Deep/Broadcast Tractor Equipment Driving Supervising	400 lbs.	10* no limitation ^{1/}
Tarpaulin/Shallow/Broadcast Tractor Equipment Driving Shoveling, Copiloting Supervising Tarpaulin Cutting Tarpaulin Removal	400 lbs.	8* 4* 4* no limitation ^{1/} no limitation ^{2/}
Tarpaulin/Shallow/Bed Tractor Equipment Driving Shoveling, Copiloting Supervising Tarpaulin Cutting Tarpaulin Removal	250 lbs.	no limitation 8* 8* no limitation ^{1/} no limitation ^{2/}
Tarpaulin/Deep/Broadcast Tractor Equipment Driving Shoveling, Copiloting Supervising Tarpaulin Cutting Tarpaulin Removal	400 lbs.	8* 4* 4* no limitation ^{1/} no limitation ^{2/}
Drip System - Hot Gas Applicators Supervising Tarpaulin Cutting Tarpaulin Removal	225 lbs.	5* 5* no limitation ^{1/} no limitation ^{2/}

^{1/}Exception: An employee may perform this activity without a half-face respirator provided the employee does not work more than one hour in a 24-hour period. The maximum one-hour work limitation may be increased in accordance with the formula located below.

^{2/} Exception: An employee may perform this activity without a half-face respirator provided the employee does not work more than three hours in a 24-hour period. The maximum three-hour work limitation may be increased in accordance with the formula located below.

*If the actual methyl bromide application rate is less than the maximum application rate shown in the table above for the particular fumigation method used, the maximum work hours may be increased in accordance with the following formula:

$$\begin{array}{rcl} & \text{maximum} & \text{revised maximum} \\ \text{maximum application rate for method} & \times \text{ work hours in a} & = \text{work hours in a} \\ \text{actual application rate} & \text{24-hour period} & \text{24-hour period} \end{array}$$

Table 2. Maximum Work Hours in a Maximum Three (3) Workdays Per Calendar Month

Fumigation Method/Activities	Maximum Application Rate (lbs. of actual methyl bromide)	Maximum Work Hours in a 24-Hour Period Without the Use of Respirators
Nontarpaulin/Shallow/Bed: Tractor Equipment Driving	200 lbs.	4*
Supervising		4*
Nontarpaulin/Deep/Broadcast: Tractor Equipment Driving	400 lbs.	4*
Supervising		7*
Tarpaulin/Shallow/Broadcast: Tractor Equipment Driving	400 lbs.	4*
Shoveling, Copiloting		3*
Supervising		3*
Tarpaulin Cutting		4
Tarpaulin Removal		7
Tarpaulin/Shallow/Bed: Tractor Equipment Driving	250 lbs.	4*
Shoveling, Copiloting		4*
Supervising		4*
Tarpaulin Cutting		4
Tarpaulin Removal		7
Tarpaulin/Deep/Broadcast: Tractor Equipment Driving	400 lbs.	4*
Shoveling, Copiloting		3*
Supervising		3*
Tarpaulin Cutting		4
Tarpaulin Removal		7
Drip System - Hot Gas: Applicators	225 lbs.	2*
Supervising		2*
Tarpaulin Cutting		4
Tarpaulin Removal		7

(C) No employee shall be allowed to alternate between the workday and work-hour requirements specified in subsection (b)(3)(A) and (B) unless the employee did not perform fumigation-handling activities during the previous 30 days.

(4) Tarpaulin Cutting and Removal Procedures

(A) Tarpaulin cutting and tarpaulin removal shall be discontinued if the presence of gas is readily evident (onset of eye irritation or odor).

(B) Tarpaulins used for broadcast fumigations shall be cut using only mechanical methods, including all-terrain vehicle or a tractor with a cutting wheel. Each tarpaulin panel used for broadcast fumigations shall be cut lengthwise.

(5) Tarpaulin Repair.

(A) The operator of the property shall assure that a "tarpaulin repair response plan" is provided to the commissioner. The tarpaulin repair response plan shall identify the responsibilities of the licensed pest control business and/or the permittee with regard to tarpaulin damage detection and repair activities. At a minimum, the tarpaulin repair response plan shall indicate the parties responsible for the repair and incorporate the applicable elements listed in (B) below.

(B) The "tarpaulin repair response plan" approved by the commissioner in the worksite plan must state with specificity the situations when tarpaulin repair must be conducted. The situations should be based on, but not limited to, hazard to the public, residents or workers; proximity to occupied structures, size of the damaged area(s); timing of damage; feasibility and response time of repair; and environmental factors such as wind speed and direction.

(C) The ambient air in the damaged areas of the tarpaulin to be repaired must be tested for methyl bromide concentration by a certified applicator of the licensed pest control business that made the application, or by a certified applicator employee of the permittee, or certified applicator permittee, using a testing device as specified by the labeling. The certified applicator must wear self-contained breathing apparatus when conducting these tests.

(D) All repair work areas must test less than five parts per million methyl bromide before any employee without respiratory protection shall be allowed to enter and conduct tarpaulin repair. Such employee is limited to one work hour in a 24-hour period, unless respiratory protection specified in subsection (b)(2)(C) is worn.