

TEXT OF MODIFIED REGULATIONS

Current wording is indicated by regular type.
Originally proposed deletions are indicated by ~~strikeout~~.
Originally proposed additions are indicated by underline.
New proposed deletions are indicated by ~~italics and strikeout~~.
New proposed additions are indicated by **bold double underline**.

DIVISION 6. PESTICIDES AND PEST CONTROL OPERATIONS
CHAPTER 1. PESTICIDE REGULATORY PROGRAM
SUBCHAPTER 1. DEFINITION OF TERMS
ARTICLE 1. DEFINITIONS FOR DIVISION 6

Amend section 6000, in alphabetical order, the following definitions:

6000. Definitions.

...

"**Buffer zone**" as used in sections ~~6450, 6450.1, and 6450.2~~ 6447, 6447.1, 6447.2, and 6447.3 means an area that surrounds a pesticide application block in which certain activities are restricted for a specified period of time to protect human health and safety from existing or potential adverse effects associated with a pesticide application.

"Ozone nonattainment area" means an area designated in Title 40, Code of Federal Regulations section 81.305 for the purpose of air quality planning within the chart titled "California – Ozone (1-Hour Standard)."

"Volatile organic compound (VOC)" means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, that participates in atmospheric photochemical reactions. This includes any organic compound other than those exempted by the U.S. Environmental Protection Agency pursuant to Title 40 of the Code of Federal Regulations section 51.100.

...

NOTE: Authority cited: Sections 11456, 11502, 12111, 12781, 12976, 12981, and 14005, Food and Agricultural Code. Reference: Sections 11408, 11410, 11501, 11701, 11702(b), 11704, 11708(a), 12042(f), 12103, 12971, 12972, 12973, 12980, 12981, 13145, 13146, and 14006, Food and Agricultural Code.

CHAPTER 2. PESTICIDES
SUBCHAPTER 4. RESTRICTED MATERIALS
ARTICLE 1. RESTRICTED MATERIALS

Amend section 6400 by adding to subsection (e) in alphabetical order:

6400. Restricted Materials.

The Director designates the pesticides listed in this section as restricted materials.

(a) Any pesticide labeled as a "restricted use pesticide" pursuant to section 3 of the Federal Insecticide, Fungicide, and Rodenticide Act (Title 7, United States Code, section 136a).

(b) Any pesticide used under an "emergency exemption" issued pursuant to section 18 of the Federal Insecticide, Fungicide, and Rodenticide Act (Title 7, United States Code, section 136p).

(c) Pesticides formulated as a dust, labeled to permit outdoor use, and packaged in containers of more than 25 pounds, except:

(1) products containing only exempt materials specified in section 6402; and

(2) products containing only carbaryl, disulfoton, endosulfan, lindane, strychnine, zinc phosphide or an active ingredient not otherwise included in this section, and labeled only for one or more of the following uses: home use, structural pest control, industrial use, institutional use, and use by public agency vector control districts pursuant to section 2426 of the Health and Safety Code.

(d) Pesticide products containing active ingredients listed in section 6800(a) (potential to pollute groundwater), when labeled for agricultural, outdoor institutional, or outdoor industrial use.

(e) Certain other pesticides:

Acrolein, when labeled for use as an aquatic herbicide

Aldicarb (Temik)

...

Dazomet (Basamid), when labeled for the production of agricultural plant commodities

...

Sodium tetrathiocarbonate (Enzone)

...

NOTE: Authority Cited: Sections 14004.5 and 14005, Food and Agricultural Code. Reference: Sections 14004.5 and 14005, Food and Agricultural Code.

ARTICLE 4. FIELD FUMIGATION USE REQUIREMENTS

Adopt section 6445 to read:

6445. Fumigation-Handling Activities.

For purposes of sections 6445.5, 6447-6447.3, and 6784(b), fumigation-handling activities are limited to employees involved in assisting with covering the tarpaulin at the end of the rows (shoveling); assisting in the overall operation, ensuring proper tarpaulin placement and condition, and changing cylinders (copiloting); operating tractor equipment (driving); supervising the fumigation operation; **operating chemigation equipment and** assisting in chemigation application and leak repair (chemigating); tarpaulin cutting; tarpaulin or

chemigation equipment removal prior to the expiration of the restricted entry interval; and other handling activities specified by the label.

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, and 14102, Food and Agricultural Code.

Adopt section 6445.5 to read:

6445.5. Field Fumigation Licensing Requirements.

*(a) Effective January 1, 2009, ~~all~~ **when a** field fumigation applications ~~must be~~ **is** made by a licensed pest control business, ~~The business must have a person holding a qualified applicator licensee holding a license or certificate with to perform work in the subcategory of field fumigation pest control subcategory supervising the work.~~*

(b) Effective January 1, 2009, a person holding a qualified applicator license or certificate with the field fumigation pest control subcategory shall be present at the application site during the entire time that involves fumigation handling activities, except chemigation equipment removal and tarpaulin cutting and removal.

NOTE: Authority Cited: Sections 11456, 11502, and 14005, Food and Agricultural Code. Reference: Sections 11501, 14001, and 14151, Food and Agricultural Code.

Renumber section 6450 to section 6447 and amend to read:

6450 6447. Chloropierin and Methyl Bromide-Field Fumigation - General Requirements.

The provisions of this section and sections ~~6450.1, 6450.2, 6450.3, 6447.1, 6447.2, 6447.3,~~ and 6784(b) pertain to field soil fumigation ~~use requirements~~ using methyl bromide, ~~singly or in combination with chloropierin or any other pesticide or a warning agent.~~ For purposes of these sections, field soil fumigation does not apply to golf courses, **replant of individual vine or tree-sites (tree holes) less than one contiguous acre, potting soil,** raised-tarpaulin nursery fumigations of less than one acre, **potting soil,** and greenhouses and other similar structures. ~~Fumigation handling activities are limited to employees involved in assisting with covering the tarpaulin at the end of the rows (shoveling); assisting in the overall operation, ensuring proper tarpaulin placement and condition, and changing cylinders (copiloting); operating tractor equipment (driving); supervising the fumigation operation; tarpaulin cutting; and tarpaulin removal prior to the expiration of the restricted entry interval.~~

(a) In addition to the requirements of section 6428, the operator of the property to be treated shall submit a proposed work site plan to the commissioner for evaluation at least seven days prior to submitting a notice of intent. The proposed work site plan shall include, but is not limited to, method of application to be used, acreage and identification of each application block to be treated, application rate to be used, description of the notification procedure to property operators pursuant to section ~~6450.1~~ **6447.1**(b), description of any activities within the buffer zone(s) as specified in section ~~6450.2~~ **6447.2**(e) and (f), description of any workday/work hour limitations and respiratory protection as specified in sections 6784(b)(2)(C) and (b)(3), and if applicable **if applicable**, description of the tarpaulin repair response plan, and tarpaulin removal.

The commissioner shall retain the proposed worksite plan for one year after the expiration of the permit.

(b) The commissioner, pursuant to section 6432, shall evaluate local conditions and the proposed work site plan.

(c) The commissioner shall include at least the following when conditioning a permit: the buffer zone requirements, work-hour restrictions, notification requirements, any other restrictions to address local conditions, and ~~if applicable~~ **if applicable**, description of the tarpaulin repair response plan and tarpaulin removal. The commissioner shall complete the evaluation and complete conditioning the permit prior to the submission of the notice of intent.

(d) An application block shall not exceed 40 acres unless approved by the Director.

(e) Except for experimental research purposes pursuant to a valid research authorization issued according to section 6260 or a reduced **volatile organic compound** emission fumigation method approved pursuant to section 6452, tarpaulins shall have a permeability factor of no less than between 5 and no more than ~~and~~ 8 milliliters methyl bromide per hour, per square meter, per 1,000 parts per million of methyl bromide under the tarpaulin at 30 degrees Celsius, and be approved by the Department. A list of approved tarpaulins is available from the Department.

(f) Tarpaulins shall be buried under at least four inches of firmly packed soil at the end of the rows. The tarpaulins shall remain in place for the time specified in section ~~6450.3~~ 6447.2.

(g) Fumigation equipment shall be operated to eliminate pesticide drip by clearing the fumigant from the injection device before it is lifted or removed from the soil.

(h) The Department, in coordination with county agricultural commissioners, shall ensure that ambient air concentrations of methyl bromide do not exceed an average daily non-occupational exposure of nine parts per billion in a calendar month.

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006, and 14102, Food and Agricultural Code.

Renumber section 6450.1 to 6447.1 and amend to read:

6450.1. 6447.1 Methyl Bromide Field Fumigation Notification Requirements.

(a) Notification to the Commissioner.

(1) Notwithstanding section 6434, the operator of the property to be treated shall assure that the commissioner is notified (notice of intent) at least 48 hours prior to commencing fumigation. The notice of intent shall indicate the hour the fumigation is intended to commence and the information specified in section 6434(b).

(2) The fumigation shall not commence sooner than the intended starting time or later than 12 hours after the intended starting time specified on the notice of intent.

(3) If fumigation of an application block does not commence within the time specified in (a)(2), a new notice of intent must be submitted, but no new 48-hour waiting period is needed unless required by the commissioner.

(4) For multiple application blocks to be fumigated sequentially, the commissioner may allow one notice of intent that includes an application schedule for all the application blocks in lieu of a separate notice of intent for each application block to be fumigated. The schedule must specify the date and time each application block is intended to be fumigated.

(b) Notification to Property Operators.

(1) The operator of the property to be treated shall assure that operators of the following properties within 300 feet ~~from~~ of the perimeter of the outer buffer zone receive notification that a permit to use methyl bromide near their property has been issued by the commissioner: properties that contain schools, residences, hospitals, convalescent homes, onsite employee housing, or other similar sites identified by the commissioner. Notification shall be in writing in both English and Spanish, or by other means approved by the commissioner. The operator of the property to be treated shall assure that notification is delivered at least seven days prior to the submission of the notice of intent. The notification shall include the following information:

- (A) the name of the chemical(s) to be applied;
- (B) name, business address, and business telephone number of the operator of the property to be treated;
- (C) name, business address, and business telephone number of the commissioner;
- (D) the earliest and latest dates that the fumigation will start; and
- (E) how to request subsequent notification of specific date and time of the fumigation.

(2) The operator of the property to be treated shall assure that specific notification of the date and time of the start of the fumigation and anticipated expiration of buffer zones is provided to those persons notified in (b)(1) who request specific fumigation information. This specific fumigation notification shall be provided at least 48 hours prior to starting the fumigation. If a request for specific notification is received after the submission of the notice of intent and before the fumigation begins, the specific fumigation notification shall be provided prior to starting the fumigation, but the 48-hour requirement shall not apply. If the fumigation of an application block does not commence within the time frame specified in (a)(2), then a new notification must be provided to those persons who requested the information, but the 48-hour requirement shall not apply unless required by the commissioner.

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006, and 14102, Food and Agricultural Code.

Renumber section 6450.2 to section 6447.2 and amend to read:

~~6450.2.~~ 6447.2. Methyl Bromide Field Fumigation Buffer Zone Requirements.

(a) The commissioner shall approve buffer zone sizes and durations based upon local conditions. The commissioner shall rely upon the information provided in Methyl Bromide Field Fumigation Buffer Zone Determination, ~~Est. 2/04 Rev. 4/07~~ Est. 2/04, hereby incorporated by reference, to condition restricted material permits, unless the commissioner determines based on other information that a deviation from the information in Methyl Bromide Field Fumigation Buffer Zone Determination, ~~Est. 2/04 Rev. 4/07~~ Est. 2/04, can be made in a way that assures equal or less exposure. At no time shall the inner buffer zone be less than 30 feet, and the outer buffer zone be less than 60 feet, or the buffer zone durations be less than 36 hours.

(b) The operator of the property to be treated shall assure that all buffer zone distances are measured from the perimeter of the application block.

(c) The buffer zone restrictions shall begin at the start of fumigation. The buffer zone restrictions shall remain in effect for at least 36 hours after the completion of the injection to the application block.

(d) Two buffer zones, an inner and outer for each application block, shall be approved by the commissioner after the proposed work site plan is submitted.

(e) Inner Buffer Zone Restrictions.

- (1) The inner buffer zone shall be at least 30 feet.
- (2) The operator of the property to be treated shall assure that no persons are allowed within the inner buffer zone except to transit and perform fumigation-handling activities.
- (3) The inner buffer zone shall not extend into adjoining property except as provided below:
 - (A) The inner buffer zone may extend into adjoining agricultural property if the adjoining property operator gives written permission and allows the operator of the property to be treated to post the inner buffer zone boundary on the adjoining property with signs. If written permission is given, the operator of the property to be treated shall assure that:
 1. the inner buffer zone boundaries on the adjoining property are posted with signs while the buffer zone is in effect; and
 2. the signs are posted so that the wording is clearly visible, to persons with normal vision, from a distance of 25 feet and shall contain the following words: "METHYL BROMIDE INNER BUFFER ZONE" and "KEEP OUT" and "NO ENTRE"; and
 3. the signs are posted at intervals not exceeding 200 feet.
 - (B) With approval from the commissioner, the inner buffer zone may extend across sites only where transit activities may occur, including streets, roads, roads within agricultural property, highways, and other similar sites of travel. Written permission and posting requirements in ~~6450.2~~ 6447.2(e)(3)(A) shall not apply.

(f) Outer Buffer Zone Restrictions.

- (1) The outer buffer zone shall be at least 60 feet.
- (2) The operator of the property to be treated shall assure that no persons are allowed within the outer buffer zone except to transit, perform fumigation-handling activities, and commissioner-approved activities as identified in the restricted materials permit conditions. In no instance shall persons be allowed within the outer buffer zone for more than 12 hours in a 24-hour period.
- (3) The outer buffer zone may extend into other properties with permission from the operators of these other properties. In no instances shall the outer buffer zone contain occupied residences or occupied onsite employee housing while the outer buffer zone is in effect. The outer buffer zone shall not extend into properties that contain schools, convalescent homes, hospitals, or other similar sites determined by the commissioner.
- (4) The outer buffer zone may extend across roads, highways, or similar sites of travel or sites approved by the commissioner.

(g) The operator of the property to be treated shall assure that the operator of the other properties specified in (e)(3)(A) and (f)(3) above notify the following persons that a buffer zone(s) has been established on the property: onsite employees, including those of a licensed pest control business or farm labor contractor. The notice to employees shall be given prior to the commencement of the employee's work activity. Notification to farm labor contractor employees may be done by giving written notice to the farm labor contractor, who shall then give the notice to the employee. Employee notification shall be in a manner the employee can understand, and include information required in section ~~6450.1~~ 6447.1(b)(2).

(h) The operator of the property to be treated shall assure that specific notification of the date and time of the start of the fumigation and anticipated expiration of buffer zones is provided to the other property operator, if the operator of the other property is required to notify his/her employees as specified in (g). This specific fumigation notification shall be provided to the other property operator at least 48 hours prior to starting the fumigation. If the fumigation of an application block does not commence within the time frame specified in ~~6450.1~~ 6447.1(a)(2),

then a new notification must be provided to the other property operator specified in (e)(3)(A) and (f)(3), but the 48-hour requirement shall not apply unless required by the commissioner.

(i) When a school property is within 300 feet of the perimeter of the outer buffer zone, the injection shall be completed no less than 36 hours prior to the start of a school session. School session shall be those times when students are attending scheduled classes.

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006, and 14102, Food and Agricultural Code.

Renumber section 6450.3 to section 6447.3 and amend to read:

6450.3 6447.3. Methyl Bromide Field Fumigation Methods.

(a) ~~The fumigation shall be made only in accordance with the following restrictions, except for experimental research purposes pursuant to a valid research authorization issued according to section 6260~~ The methyl bromide field soil fumigation must be made using only the methods listed described in this section. However, within the San Joaquin Valley, Southeast Desert, or Ventura ozone nonattainment areas, the following methods are prohibited during the May 1 through October 31 time period: (1), (2), (4), and (6); and if applied as alternating fumigated and unfumigated areas (strip fumigation), methods (3) and (5). In addition to labeling requirements for each of these methods, the following requirements shall apply.

- ~~(1) Nontarpaulin/Shallow/Bed~~
- ~~(A) Application rate shall not exceed 200 pounds of methyl bromide per acre.~~
- ~~(B) The application tractor shall be equipped with an air fan dilution system.~~
- ~~(C) Rearward curved (swept back) chisels shall be used with:~~
 - ~~1. closing shoes and bed shaper, or closing shoes and compaction roller; and~~
 - ~~2. chisel injection points positioned beneath and ahead of the closing shoes.~~
- ~~(D) Injection depth shall be between 10 and 15 inches. The injection depth to preformed beds must not be below the bed furrow.~~
- ~~(E) Injection spacing shall be 40 inches or less.~~
- ~~(F) The soil shall not be disturbed for at least three days (72 hours) following completion of injection to the application block.~~
- ~~(G) The application block restricted entry interval shall be three days.~~
- ~~(2) Nontarpaulin/Deep/Broadcast~~
- ~~(A) Application rate shall not exceed 400 pounds of methyl bromide per acre.~~
- ~~(B) Forward curved chisel shall be used with:~~
 - ~~1. An application tractor equipped with an air fan dilution system, and the injection depth shall be at least 20 inches; or~~
 - ~~2. Closing shoes and compaction roller and the injection depth shall be at least 24 inches.~~
- ~~(C) Injection spacing shall be 68 inches or less.~~
- ~~(D) The soil shall not be disturbed for at least four days (96 hours) following completion of injection to the application block.~~
- ~~(E) The application block restricted entry interval shall be four days.~~
- (1) Nontarpaulin/Shallow/Bed**
- (A) Application rate shall not exceed 200 pounds of methyl bromide per acre.**
- (B) The application tractor shall be equipped with an air fan dilution system.**

(C) Rearward-curved (swept-back) chisels shall be used with:

- 1. closing shoes and bed-shaper, or closing shoes and compaction roller; and**
- 2. chisel injection points positioned beneath and ahead of the closing shoes.**

(D) Injection depth shall be between 10 and 15 inches. The injection depth to preformed beds must not be below the bed furrow.

(E) Injection spacing shall be 40 inches or less.

(F) The soil shall not be disturbed for at least three days (72 hours) following completion of injection to the application block.

(G) The application block restricted-entry interval shall be three days.

(2) Nontarpaulin/Deep/Broadcast

(A) Application rate shall not exceed 400 pounds of methyl bromide per acre.

(B) Forward-curved chisel shall be used with:

1. an application tractor equipped with an air fan dilution system, and the injection depth shall be at least 20 inches; or

2. closing shoes and compaction roller and the injection depth shall be at least 24 inches.

(C) Injection spacing shall be 68 inches or less.

(D) The soil shall not be disturbed for at least four days (96 hours) following completion of injection to the application block.

(E) The application block restricted-entry interval shall be four days.

(3 ~~13~~) Tarpaulin/Shallow/Broadcast

(A) Application rate shall not exceed 400 pounds of methyl bromide per acre.

(B) Application shall be made using either:

1. An application tractor equipped with an air fan dilution system, and with a plow consisting of horizontal v-shaped blades mounted by a vertical arm to the tool bar. The fumigant shall be injected laterally beneath the soil surface; or

2. Rearward-curved (swept-back) chisels, closing shoes, and compaction roller shall be used.

(C) Injection depth shall be ~~between~~ at least 10 and no greater than 15 inches.

(D) Injection spacing shall be 12 inches or less.

(E) The tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.

(F) The tarpaulin shall not be cut until a minimum of five days (120 hours) following completion of injection to the application block. The tarpaulin shall be cut pursuant to section 6784(b)(4).

(G) Tarpaulin removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed.

(H) The application block restricted-entry interval shall end at completion of tarpaulin removal, and shall be at least six days.

(4 ~~2~~ 4) Tarpaulin/Shallow/Bed

(A) Application rate shall not exceed 250 pounds of methyl bromide per acre.

(B) Rearward-curved (swept-back) chisels shall be used with either:

1. Closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or

2. Bed shaper. The chisels shall be placed with the injection point under the bed shaper, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or

3. Combination bed former and bed shaper. The chisels shall be placed between the bed former and the bed shaper. The tractor with the tarpaulin-laying equipment shall immediately follow the application tractor.

(C) Injection depth shall be between 6 and 15 inches. The injection depth to preformed beds must not be below the bed furrow.

(D) Injection spacing shall be 12 inches or less.

(E) The tarpaulin shall not be cut until at least five days (120 hours) following completion of injection to the application block.

(F) If tarpaulins are removed before planting, tarpaulin removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed. The application block restricted-entry interval shall end at completion of tarpaulin removal, and shall be at least six days.

(G) If tarpaulins are not to be removed before planting, the application block restricted-entry interval shall either:

1. consist of the five-day period described in subsection (E) plus an additional 48 hours after holes have been cut for planting, or

2. be at least 14 days. If this option is chosen, the methyl bromide air concentration underneath the tarpaulin must test less than five parts per million before planting begins.

~~(5 3 5)~~ Tarpaulin/Deep/Broadcast

(A) Application rate shall not exceed 400 pounds of methyl bromide per acre.

(B) Forward-curved chisels shall be used with either:

1. An air fan dilution system on the application tractor; or

2. Closing shoes and compaction roller.

(C) Injection depth shall be at least 20 inches.

(D) Injection spacing shall be 66 inches or less.

(E) The tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.

(F) The tarpaulin shall not be cut until at least five days (120 hours) following completion of injection to the application block. The tarpaulin shall be cut pursuant to section 6784(b)(4).

(G) Tarpaulin removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed.

(H) The application block restricted entry interval shall end at completion of tarpaulin removal, and shall be at least six days.

~~(6) Drip System—Hot Gas~~

~~A hot gas application through a subsurface drip irrigation system to tarpaulin-covered beds may be used if all of the following criteria are met:~~

~~(A) Application rate shall not exceed 225 pounds of methyl bromide per acre.~~

~~(B) The fumigant shall be injected beneath the soil surface at a minimum depth of one inch.~~

~~(C) The portion of the drip system used in the fumigation shall be physically disconnected from the main water supply during the fumigation to prevent possible contamination of the water supply.~~

~~(D) All fittings and emitters underneath the tarpaulin shall be buried in the soil to a minimum depth of one inch.~~

~~(E) Prior to the start of the fumigation, all drip tubing shall be checked for blockage, and the irrigation system connections and fittings checked for blockage and leaks using pressurized air~~

and/or water. The end of each drip tubing shall be placed under the tarpaulin prior to introduction of fumigant.

(F) The tarpaulin shall be placed and inspected for tears, holes, or improperly secured edges prior to fumigating. Repairs and adjustments shall be made before the fumigation begins.

(G) Prior to the start of the fumigation, all fittings above ground and outside of the tarpaulin shall be pressure tested with compressed air, water, or nitrogen gas to a maximum pressure of 50 pounds per square inch. A soap solution shall be used to check the fittings for leaks if using air or nitrogen. All apparent leaks shall be eliminated prior to the fumigation. All drip tubing with emitters connected to the distribution manifold not covered by the tarpaulin shall be sealed to prevent fumigant loss through the emitters.

(H) Prior to introducing the fumigant, the drip system shall be purged of water by means of pressurized gas, such as CO₂ or nitrogen.

(I) The drip system shall be purged prior to disconnecting any line containing the fumigant.

(J) After purging, drip tubing shall be pinched off and then disconnected from the distribution manifold. All disconnected tubing leading into the treated field shall be secured to prevent gas from escaping.

(K) All fittings used for connecting or disconnecting the heat exchanger to the irrigation system manifold shall be of a positive shut off design.

(L) All persons shall wear the eye protection specified on the label when working with a manifold system or tubing containing the fumigant under pressure.

(M) The entire fumigation system (heater, valves, and manifold) shall be purged of the fumigant at the end of each day's fumigation.

(N) The tarpaulin shall not be cut until at least five days (120 hours) following completion of injection to the application block.

(O) If tarpaulins are removed before planting, tarpaulin removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed. The application block restricted entry interval shall end at completion of tarpaulin removal and shall be at least six days.

(P) If tarpaulins are not to be removed before planting, the application block restricted entry interval shall either:

1. consist of the five day period described in subsection (N) plus an additional 48 hours after holes have been cut for planting, or

2. be at least 14 days. If this option is chosen, the methyl bromide air concentration underneath the tarpaulin must test less than five parts per million before planting begins.

(6) Drip System - Hot Gas

A hot gas application through a subsurface drip irrigation system to tarpaulin-covered beds may be used if all of the following criteria are met:

(A) Application rate shall not exceed 225 pounds of methyl bromide per acre.

(B) The fumigant shall be injected beneath the soil surface at a minimum depth of one inch.

(C) The portion of the drip system used in the fumigation shall be physically disconnected from the main water supply during the fumigation to prevent possible contamination of the water supply.

(D) All fittings and emitters underneath the tarpaulin shall be buried in the soil to a minimum depth of one inch.

(E) Prior to the start of the fumigation, all drip tubing shall be checked for blockage, and the irrigation system connections and fittings checked for blockage and leaks using

pressurized air and/or water. The ends of each drip tubing shall be placed under the tarpaulin prior to introduction of fumigant.

(F) The tarpaulin shall be placed and inspected for tears, holes, or improperly secured edges prior to fumigating. Repairs and adjustments shall be made before the fumigation begins.

(G) Prior to the start of the fumigation, all fittings above ground and outside of the tarpaulin shall be pressure-tested with compressed air, water, or nitrogen gas to a maximum pressure of 50 pounds per square inch. A soap solution shall be used to check the fittings for leaks if using air or nitrogen. All apparent leaks shall be eliminated prior to the fumigation. All drip tubing with emitters connected to the distribution manifold not covered by the tarpaulin shall be sealed to prevent fumigant loss through the emitters.

(H) Prior to introducing the fumigant, the drip system shall be purged of water by means of pressurized gas, such as CO₂ or nitrogen.

(I) The drip system shall be purged prior to disconnecting any line containing the fumigant.

(J) After purging, drip tubing shall be pinched off and then disconnected from the distribution manifold. All disconnected tubing leading into the treated field shall be secured to prevent gas from escaping.

(K) All fittings used for connecting or disconnecting the heat exchanger to the irrigation system manifold shall be of a positive shut-off design.

(L) All persons shall wear the eye protection specified on the label when working with a manifold system or tubing containing the fumigant under pressure.

(M) The entire fumigation system (heater, valves, and manifold) shall be purged of the fumigant at the end of each day's fumigation.

(N) The tarpaulin shall not be cut until at least five days (120 hours) following completion of injection to the application block.

(O) If tarpaulins are removed before planting, tarpaulin removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed. The application block restricted-entry interval shall end at completion of tarpaulin removal and shall be at least six days.

(P) If tarpaulins are not to be removed before planting, the application block restricted-entry interval shall either:

1. consist of the five-day period described in subsection (N) plus an additional 48 hours after holes have been cut for planting, or

2. be at least 14 days. If this option is chosen, the methyl bromide air concentration underneath the tarpaulin must test less than five parts per million before planting begins.

(b) Notwithstanding section 6770, the operator of the property to be treated shall assure that only persons performing fumigation-handling activities are allowed in an application block before the restricted entry interval expires. Persons performing activities other than tarpaulin cutting, removal, and repair described in sections 6784(b)(3), (4), and (5) shall wear a full-face respirator that meets the requirements of section 6784(b)(2)(C).

(c) Notwithstanding subsection (a), a reduced volatile organic compound emission field fumigation method approved pursuant to section 6452 or a method for experimental research purposes pursuant to a valid research authorization issued according to section 6260 may be allowed.

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006, and 14102, Food and Agricultural Code.

Adopt section 6448 to read:

6448. 1,3-Dichloropropene Field Fumigation - General Requirements.

The provisions of ~~this section and~~ section 6448.1 ~~pertain~~ **apply** to field soil fumigation using 1,3-Dichloropropene **within the Sacramento Metro, San Joaquin Valley, South Coast, Southeast Desert, or Ventura ozone nonattainment areas during the May 1 through October 31 time period.** *For purposes of these sections, field soil fumigation does not apply to* ~~raised-tarpaulin nursery fumigations of less than one acre, or replant of individual vine or tree-sites (tree holes) less than one contiguous acre, are not considered field soil fumigations under the provision of section 6448.1.~~

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006, and 14102, Food and Agricultural Code.

Adopt section 6448.1 to read:

6448.1. 1,3-Dichloropropene Field Fumigation Methods.

(a) Application rate must not exceed 332 pounds of 1,3-Dichloropropene active ingredient per acre.

(b) *At time of fumigation, soil moisture must be at least 50 percent of field capacity at the depth of application for soils coarser than loam soils and at least 25 percent for loam and finer soils.*

If there are no labeling requirements specifying soil moisture, then at time of application soil must contain at least enough moisture above the depth of application to meet the following test appropriate to the soil texture for:

(1) coarse soils (sand and loamy sand) - at least enough moisture to form a ball when compressed by hand, that may break when tapped;

(2) loamy, moderately coarse, or medium textured (coarse sandy loam, sandy loam, fine sandy loam) - at least enough moisture so that soil forms a ball that holds together when tapped;

(3) fine texture soils (clay loam, silty clay loam, sandy clay, silty clay, sandy clay loam and clay) - at least enough moisture so that the soil is pliable, not crumbly. Forms a ribbon when squeezed between thumb and forefinger.

(c) The 1,3-Dichloropropene field soil fumigation must be made using only the methods *listed described* in this section. **However within the San Joaquin Valley, Southeast Desert, or Ventura ozone nonattainment areas, methods (1) and (2) are prohibited.** In addition to labeling requirements for each of these methods, the following requirements shall apply.

(1) Nontarpaulin/Shallow/Broadcast or Bed

(A) Injection point must be at least 12 inches below the soil surface.

(B) Chisel trace must be eliminated by use of tillage equipment (~~tandem-dise~~) to mix the soil to a depth of at least three inches. **Broadcast fumigation must be** followed by compaction of the soil surface ~~by ring roller, cultipacker, or roller.~~

(2) Tarpaulin/Shallow/Broadcast or Bed

(A) Injection point must be at least 12 inches below the soil surface.

(B) Chisel trace must be eliminated by use of tillage equipment (~~tandem-dise~~) to mix the soil to a depth of at least three inches. **Broadcast fumigation must be** followed by compaction of the soil surface ~~by ring roller, cultipacker, or roller.~~

(C) Tarpaulins must be buried under at least four inches of firmly packed soil at the end of the rows.

(D) The operator of the property shall maintain a "tarpaulin repair response plan" pursuant to subsection (d).

(3) Nontarpaulin/Shallow/Broadcast or Bed/Three Post-Fumigation Water Treatments

(A) Injection point must be at least 12 inches below the soil surface.

(B) Chisel trace must be eliminated by use of tillage equipment (~~tandem-dise~~) to mix the soil to a depth of at least three inches. **Broadcast fumigation must be** followed by compaction of the soil surface ~~by ring roller, cultipacker, or roller.~~

(C) Fumigation must be completed in a time that allows compliance with the post-fumigation water treatments below:

1. Water must be applied by an irrigation method that uniformly covers the treated area in the entire application block.

2. On the day of fumigation, the first water treatment must consist of at least ~~0.25~~**0.20** inches of water, beginning within 30 minutes of the completion of fumigation. A second post-fumigation water treatment must consist of at least ~~0.25~~**0.20** inches of water applied starting no earlier than one hour prior to sunset on the day of fumigation and completed by midnight.

3. On the day following fumigation, a third post-fumigation water treatment must consist of at least ~~0.25~~**0.20** inches of water, and must be applied starting no earlier than one hour prior to sunset and completed by midnight.

4. Additional post-fumigation water treatment(s) may be applied at any time provided the treatments required above are completed in the specified time periods.

(4) Tarpaulin/Shallow/~~Broadcast or~~ Bed/Three Post-Fumigation Water Treatment

(A) Injection point must be at least 12 inches below the soil surface.

(B) Chisel trace must be eliminated by use of tillage equipment (~~tandem-dise~~) to mix the soil to a depth of at least three inches ~~followed by compaction of the soil surface by ring roller, cultipacker, or roller.~~

(C) Tarpaulins must be buried under at least four inches of firmly packed soil at the ends of the rows.

(D) Fumigation must be completed in **a time that allows** compliance with the post-fumigation water treatments ~~pursuant to subsection (c)(3)(C).~~**below:**

1. Water must be applied by an irrigation method that uniformly covers the untarped area in the entire application block.

2. On the day of fumigation, the first water treatment must consist of at least 0.20 inches of water to the untarped areas, beginning within 30 minutes of the completion of fumigation. A second post-fumigation water treatment must consist of at least 0.20 inches of water to the untarped areas applied starting no earlier than one hour prior to sunset on the day of fumigation and completed by midnight.

3. On the day following fumigation, a third post-fumigation water treatment must consist of at least 0.20 inches of water to the untarped areas, and must be applied starting no earlier than one hour prior to sunset and completed by midnight.

4. Additional post-fumigation water treatment(s) may be applied at any time provided the treatments required above are completed in the specified time periods.

(E) The operator of the property shall maintain a "tarpaulin repair response plan" pursuant to subsection (d).

(5) Nontarpaulin/Deep/Broadcast or Bed

(A) Injection point must be at least 18 inches below the soil surface.

(B) Chisel trace must be eliminated by use of tillage equipment (*tandem disc*) to mix the soil to a depth of at least three inches. **Broadcast fumigation must be** followed by compaction of the soil surface *by ring roller, cultipacker, or roller.*

(6) Tarpaulin/Deep/Broadcast or Bed

(A) Injection point must be at least 18 inches below the soil surface.

(B) Chisel trace must be eliminated by use of tillage equipment (*tandem disc*) to mix the soil to a depth of at least three inches. **Broadcast fumigation must be** followed by compaction of the soil surface *by ring roller, cultipacker, or roller.*

(C) Tarpaulins must be buried under at least four inches of firmly packed soil at the end of the rows.

(D) The operator of the property shall maintain a "tarpaulin repair response plan" pursuant to subsection (d).

(7) Nontarpaulin/Deep/Broadcast or Bed/Three Post Fumigation Water Treatments

(A) Injection point must be at least 18 inches below the soil surface.

(B) Chisel trace must be eliminated by use of tillage equipment (*tandem disc*) to mix the soil to a depth of at least three inches followed by compaction of the soil surface *by ring roller, cultipacker, or roller.*

~~(C) Fumigation must be completed in compliance with the post fumigation water treatments pursuant to subsection (e)(3)(C).~~

(8) Tarpaulin/Deep/Broadcast or Bed/Three Post Fumigation Water Treatments

(A) Injection point must be at least 18 inches below the soil surface.

(B) Chisel trace must be eliminated by use of tillage equipment (*tandem disc*) to mix the soil to a depth of at least three inches followed by compaction of the soil surface *by ring roller, cultipacker, or roller.*

~~(C) Tarpaulins must be buried under at least four inches of firmly packed soil at the end of the rows.~~

~~(D) Fumigation must be completed in compliance with the post fumigation water treatments pursuant to subsection (e)(3)(C).~~

~~(E) The operator of the property shall maintain a "tarpaulin repair response plan" pursuant to subsection (d).~~

(9) (7) Chemigation (Drip System)/Tarpaulin

(A) Drip system must be filled with water and tested for pressure variation, clogged emitters, and leaks before chemigation. The pressure **must not exceed the pressure rating of the drip tape, and the pressure** variation in the drip tape throughout the field must be less than three pounds per square inch. Drip system must be free of leaks and clogged emitters.

(B) The tarpaulin shall be placed and inspected for tears, holes, or improperly secured edges prior to fumigating. Repairs and adjustments shall be made before the chemigation begins.

(C) Drip tape must be covered with tarpaulin or two inches of soil at the end of the rows. **Ends of drip tape not covered by tarpaulin must be covered by at least two inches of soil.**

(D) After chemigation, the drip system must be flushed with a volume of water at least three times the volume of the mainline and laterals of the drip system.

(E) The operator of the property shall maintain a "tarpaulin repair response plan" pursuant to subsection (d).

(d) Tarpaulin Repair.

(1) If a tarpaulin is used, the operator of the property shall maintain a "tarpaulin repair response plan." 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 (2) below.

(2) The "tarpaulin repair response 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.

(e) Notwithstanding subsection (c), a reduced volatile organic compound emission field fumigation method approved pursuant to section 6452 or a method for experimental research purposes pursuant to a valid research authorization issued according to section 6260 may be allowed.

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006, and 14102, Food and Agricultural Code.

Adopt section 6449 to read:

6449. Chloropicrin Field Fumigation - General Requirements.

The provisions of ~~this section and~~ section 6449.1 ~~pertain~~ **apply** to field soil fumigation using chloropicrin **within the Sacramento Metro, San Joaquin Valley, South Coast, Southeast Desert, or Ventura ozone nonattainment areas during the May 1 through October 31 time period.** ~~For purposes of these sections, field soil fumigation does not apply to r~~**Raised-tarpaulin nursery fumigations of less than one acre or replant of individual vine or tree-sites (tree holes) less than one contiguous acre are not considered field soil fumigations under the provisions of section 6449.1.**

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006, and 14102, Food and Agricultural Code.

Adopt section 6449.1 to read:

6449.1. Chloropicrin Field Fumigation Methods.

(a) Application rate must not exceed 400 pounds of chloropicrin per acre.

(b) **For products containing chloropicrin as the sole active ingredient, ~~the chloropicrin~~ field soil fumigation must be made using only the methods described in section 6447.3 or 6448.1. However within the San Joaquin Valley, Southeast Desert, or Ventura ozone nonattainment areas the methods described in the following sections are prohibited: 6447.3(a)(1), (2), (4), and (6); if applied as alternating fumigated and unfumigated areas (strip fumigation), methods 6447.3(a)(3) and (5); 6448.1(c)(1) and (5); and if applied as a bed fumigation, 6448.1(c)(2), except nontarpaulin methods are prohibited for products that contain chloropicrin as the sole active ingredient.**

(c) If there are no labeling requirements specifying soil moisture, then at time of application soil must contain at least enough moisture above the depth of application to meet the following test appropriate to the soil texture for:

(1) coarse soils (sand and loamy sand) - at least enough moisture to form a ball when compressed by hand, that may break when tapped;

(2) loamy, moderately coarse, or medium textured (coarse sandy loam, sandy loam, fine sandy loam) - at least enough moisture so that soil forms a ball that holds together when tapped;

(3) fine texture soils (clay loam, silty clay loam, sandy clay, silty clay, sandy clay loam and clay) - at least enough moisture so that the soil is pliable, not crumbly. Forms a ribbon when squeezed between the thumb and forefinger.

(d) Tarpaulin Repair.

(1) If a tarpaulin is used, the operator of the property shall maintain a "tarpaulin repair response plan." 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 described in (2) below.

(2) The "tarpaulin repair response 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.

(e) Notwithstanding subsection (b), a reduced volatile organic compound emission field fumigation method approved pursuant to section 6452 or a method for experimental research purposes pursuant to a valid research authorization issued according to section 6260 may be allowed.

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006, and 14102, Food and Agricultural Code.

Adopt section 6450 to read:

6450. Metam-Sodium, Potassium N-methyldithiocarbamate (metam-potassium), and Dazomet Field Fumigation - General Requirements.

The provisions of ~~this section and~~ sections 6450.1 and 6450.2 ~~pertain~~ **apply** to field soil fumigation using metam-sodium, potassium N-methyldithiocarbamate (metam-potassium), or dazomet **within the Sacramento Metro, San Joaquin Valley, South Coast, Southeast Desert, or Ventura ozone nonattainment areas during the May 1 through October 31 time period.** ~~For purposes of these sections, field soil fumigation does not apply to~~ ~~g~~ **Golf courses, tree-site (tree-hole), tree applications for prevention of root graft disease transmission, wood decay uses, potting soil, replant of individual vine or tree-sites (tree holes) less than one contiguous acre, raised-tarpaulin nursery fumigations of less than one acre, and greenhouses and other similar structures are not considered field soil fumigations under the provisions of sections 6450.1 and 6450.2.**

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006, and 14102, Food and Agricultural Code.

Adopt section 6450.1 to read:

6450.1. Metam-Sodium and Potassium N-methyldithiocarbamate (Metam-Potassium) Field Fumigation Methods.

(a) Application rate must not exceed 320 pounds active ingredient per acre for metam-sodium. Application rate must not exceed 350 pounds active ingredient per acre for potassium N-methyldithiocarbamate (metam-potassium).

(b) ~~At time of fumigation, soil moisture must be at least 50 percent of field capacity at the depth of application e~~ ~~Except for the method described in subsection (d)(7-9).~~ **if there are no labeling requirements specifying soil moisture, then at time of application soil must contain at least enough moisture above the depth of application to meet the following test appropriate to the soil texture for:**

(1) coarse soils (sand and loamy sand) - at least enough moisture to form a ball when compressed by hand, that may break when tapped;

(2) loamy, moderately coarse, or medium textured (coarse sandy loam, sandy loam, fine sandy loam) - at least enough moisture so that soil forms a ball that holds together when tapped;

(3) fine texture soils (clay loam, silty clay loam, sandy clay, silty clay, sandy clay loam, and clay) - at least enough moisture so that the soil is pliable, not crumbly. Forms a ribbon when squeezed between thumb and forefinger.

(c) Fumigations must start no earlier than one hour after sunrise and must be completed no later than one hour before sunset except for the method described in subsection (d)(7-9).

(d) The metam-sodium or potassium N-methyldithiocarbamate (metam-potassium) field soil fumigation must be made using only the methods ~~listed~~ **described** in this section. **However, within the San Joaquin Valley, Southeast Desert or Ventura ozone nonattainment areas, methods (1), (4), and (9) are prohibited.** In addition to labeling requirements for each of these methods, the following requirements shall apply.

(1) Sprinkler/Broadcast or Bed/One Post-Fumigation Water Treatment

~~(A) Fumigation must be made over a minimum of six hours and in a minimum of 0.80 inch of water, or applied at a concentration of no more than one gallon of product per 290 gallons of water.~~

~~(B)~~(A) Fumigation must be completed in a time that allows compliance with the post-fumigation water treatment below:

1. Water must be applied by an irrigation method that uniformly covers the treated area in the entire application block.

2. On the day of fumigation, one post-fumigation water treatment must consist of at least ~~0.25~~ **0.20** inches of water, beginning within 30 minutes of the completion of fumigation.

3. Any additional post-fumigation water treatment(s) may be applied at any time.

(2) Sprinkler/Broadcast or Bed/Two Post-Fumigation Water Treatments

(A) Fumigation must be completed in a time that allows compliance with the post-fumigation water treatments below:

1. Water must be applied by an irrigation method that uniformly covers the treated area in the entire application block.

2. On the day of fumigation, the first post-fumigation water treatment must consist of at least **0.20** inches of water, beginning within 30 minutes of the completion of fumigation. A second post-fumigation water treatment must consist of at least **0.20** inches of water applied starting no earlier than one hour prior to sunset on the day of fumigation and completed by midnight.

3. Additional post-fumigation water treatment(s) may be applied at any time provided the treatments required above are completed in the specified time periods.

~~(2)~~(3) Sprinkler/Broadcast or Bed/Three Post-Fumigation Water Treatments

~~(A) Fumigation must be made over a minimum of six hours and in a minimum of 0.80 inch of water, or applied at a concentration of no more than one gallon of product per 290 gallons of water.~~

~~(B)~~(A) Fumigation must be completed in a time that allows compliance with the post-fumigation water treatments below:

1. Water must be applied by an irrigation method that uniformly covers the treated area in the entire application block.

2. On the day of fumigation, the first post-fumigation water treatment must consist of at least ~~0.25~~ **0.20** inches of water, beginning within 30 minutes of the completion of fumigation. A second post-fumigation water treatment must consist of at least ~~0.25~~ **0.20** inches of water applied starting no earlier than one hour prior to sunset on the day of fumigation and completed by midnight.

3. On the day following fumigation, a third post-fumigation water treatment must consist of at least ~~0.25~~ **0.20** inches of water, and must be applied starting no earlier than one hour prior to sunset and completed by midnight.

4. Additional post-fumigation water treatment(s) may be applied at any time provided the treatments required above are completed in the specified time periods.

~~(3)~~(4) Nontarpaulin/Shallow/Broadcast or Bed/One Post-Fumigation Water Treatment

(A) Fumigation must be completed in compliance with the post-fumigation water treatments pursuant to subsection (d)(1)~~(B)~~(A).

(5) Nontarpaulin/Shallow/Broadcast or Bed /Two Post-Fumigation Water Treatments

(A) Fumigation must be completed in compliance with the post-fumigation water treatments pursuant to subsection (d)(2)(A).

~~(4)~~ **(6)** Nontarpaulin/Shallow/Broadcast or Bed/Three Post-Fumigation Water Treatments
(A) Fumigation must be completed in compliance with the post-fumigation water treatments pursuant to subsection (d)~~(2)~~**(3)**~~(B)~~**(A)**.

~~(5)~~ **(7)** Chemigation (Drip System)

(A) Drip system must be filled with water and tested for pressure variation, clogged emitters, and leaks before chemigation. The pressure **must not exceed the pressure rating of the drip tape and the** pressure variation in the drip tape throughout the field must be less than three pounds per square inch. Drip system must be free of leaks and clogged emitters.

~~(B)~~ Drip tape must be covered with tarpaulin or two inches of soil at the end of the rows.

~~(C)~~ **(B)** After chemigation, the drip system must be flushed with a volume of water at least three times the volume of the mainline and laterals of the drip system.

~~(6)~~ **(8)** Rotary Tiller/Power Mulcher/Soil Capping

(A) Application equipment must be followed immediately by soil compaction equipment.

~~(7)~~ Flood

(A) The fumigant must be applied with at least six inches of water per acre.

(e) Notwithstanding subsection (d), a reduced volatile organic compound emission field fumigation method approved pursuant to section 6452 or a method for experimental research purposes pursuant to a valid research authorization issued according to section 6260 may be allowed.

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006, and 14102, Food and Agricultural Code.

Adopt section 6450.2 to read:

6450.2. Dazomet Field Fumigation Methods.

(a) Fumigations must start no earlier than one hour after sunrise and must be completed no later than one hour before sunset.

(b) The field soil fumigation using dazomet is limited to methods specifically identified in the labeling. In addition to labeling requirements for each identified method, the fumigation must comply with the following.

(1) Fumigation must be completed in a time that allows compliance with the post-fumigation water treatments below:

(A) Water must be applied by an irrigation method that uniformly covers the treated area in the entire application block.

(B) On the day of fumigation, the first water treatment must consist of at least ~~0.25~~**0.20** inches of water, beginning within 30 minutes of the completion of fumigation. A second post-fumigation water treatment must consist of at least ~~0.25~~**0.20** inches of water applied starting no earlier than one hour prior to sunset on the day of fumigation and completed by midnight.

(C) On the day following fumigation, a third post-fumigation water treatment must consist of at least ~~0.25~~**0.20** inches of water, and must be applied starting no earlier than one hour prior to sunset and completed by midnight.

(D) On the second day following fumigation, a fourth post-fumigation water treatment must consist of at least ~~0.25~~**0.20** inches of water, and must be applied starting no earlier than one hour prior to sunset and completed by midnight.

(E) Additional post-fumigation water treatment(s) may be applied at any time provided the treatments required above are completed in the specified time periods.

(c) Notwithstanding subsection (b), a reduced volatile organic compound emission field fumigation method approved pursuant to section 6452 or a method for experimental research purposes pursuant to a valid research authorization issued according to section 6260 may be allowed.

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006, and 14102, Food and Agricultural Code.

Adopt section 6451 to read:

6451. Sodium Tetrathiocarbonate Field Fumigation - General Requirements.

The provisions of ~~this section and~~ section 6451.1 ~~pertain~~ **apply** to field soil fumigation using sodium tetrathiocarbonate **within the Sacramento Metro, San Joaquin Valley, South Coast, Southeast Desert, or Ventura ozone nonattainment areas below during the May 1 through October 31 time period.** ~~For purposes of these sections, field soil fumigation does not apply to~~ **Replant of individual vine or tree-sites (tree holes) less than one contiguous acre,** and raised-tarpaulin nursery fumigations of less than one acre, and greenhouses and other similar structures **are not considered field soil fumigations under the provisions of section 6451.1.**

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006, and 14102, Food and Agricultural Code.

Adopt section 6451.1 to read:

6451.1 Sodium Tetrathiocarbonate Field Fumigation Methods.

(a) The field soil fumigation of sodium tetrathiocarbonate is limited to methods specifically identified in the labeling.

(b) Notwithstanding subsection (a), a reduced volatile organic compound emission field fumigation method approved pursuant to section 6452 or a method for experimental research purposes pursuant to a valid research authorization issued according to section 6260 may be allowed.

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006, and 14102, Food and Agricultural Code.

Adopt section 6452 to read:

6452. Reduced Volatile Organic Compound Emissions Field Fumigation Methods.

~~(a) For the Sacramento Metro and South Coast ozone nonattainment areas Upon written request, the Director may approve use of a field fumigation method **not described in sections 6447.3, 6448.1, 6449.1, 6450.1, 6450.2, and 6451.1 if the request is accompanied by scientific data documenting the** that results in less-volatile organic compound (VOC) emissions. **The emission rating specified in section 6452.4 or the maximum emission rate (emission rating multiplied by the maximum application rate) must be no greater than any one of the methods for the same fumigant described in sections 6447.3, 6448.1, 6449.1, 6450.1, 6450.2, and 6451.1, than a comparable method specified in section 6452.2(b). The written request must be accompanied by scientific data documenting the overall VOC emission rate.**~~

~~(b) The Director will issue a public notice giving the basis for the approval of the field fumigation method and percentage of VOC emissions. The notice will be posted, on the Department's Web site.~~

(b) For the San Joaquin Valley, Southeast Desert, and Ventura ozone nonattainment areas, upon written request, the Director may approve use of a field fumigation method either not described or excluded from use in sections 6447.3, 6448.1, 6449.1, 6450.1, 6450.2, or 6451.1 if the request meets the following criteria:

(1) The request is accompanied by scientific data documenting the VOC emissions;

(A) The emission rating, as specified in section 6452.4, is no greater than any one of the methods for the same fumigant and allowed for use in the San Joaquin Valley, Southeast Desert, and Ventura ozone nonattainment areas as specified in sections 6447.3, 6448.1, 6449.1, 6450.1, 6450.2, or 6451.1, or

(B) The maximum emission rate (emission rating multiplied by the maximum application rate) is no greater than any one of the methods for the same fumigant and allowed for use in the San Joaquin Valley, Southeast Desert, and Ventura ozone nonattainment areas as specified in sections 6447.3, 6448.1, 6449.1, 6450.1, 6450.2, or 6451.1.

(c) Criteria the Director shall consider includes whether:

(1) the data and information provided are sufficient to estimate emissions;

(2) the results are valid as indicated by the quality control data; and

(3) the conditions studied represent agricultural fields fumigated.

(d) The Director shall publish a notice of interim approval for a field fumigation method on the Department's Web site. The interim approval expires three years after the date of approval.

NOTE: Authority cited: Sections 11456, 12976, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 14006, and 14102.

Adopt section 6452.1 to read:

6452.1 Fumigant Volatile Organic Compound Emission Records and Reporting.

(a) Any person who applies field fumigants in the following circumstances shall maintain records of fumigant applications pursuant to section 6624.:

~~(1) Applies methyl bromide, 1,3-Dichloropropene, chloropicrin, metam sodium, N-methyl dithiocarbamate (metam potassium), dazomet, or sodium tetrathio carbonate using methods pursuant to this Article, or applies a fumigant pursuant to section 6452.4; and~~

~~(2) Applies within the Sacramento Metro, San Joaquin Valley, South Coast, Southeast Desert, or Ventura ozone nonattainment areas, as specified in Title 40 of the Code of Federal Regulations section 81.305.~~

~~(b) The records must include the following information for each field fumigation:~~

~~(1) Name of fumigant product;~~

~~(2) U.S. Environmental Protection Agency registration number of fumigant product;~~

~~(3) Total amount of product applied;~~

~~(4) Date of application;~~

~~(5) Ozone nonattainment area specified in subsection (a)(2) or location by county, section, township, range, base and meridian where the fumigant was applied; and~~

~~(6) Fumigation method used, as specified in section 6452.2(b) or the method used pursuant to sections 6452 or 6452.4.~~

~~(c) The pesticide use records maintained pursuant to section 6624 will meet the requirements of this section if the fumigation method as specified in subsection (b)(6) is appended to the use record.~~

~~(d) Any person who applies field fumigants shall report the information specified in subsection (b) section 6626, to the Department, and the product registrant's designated contact for the fumigant product used. A copy of the pesticide use report submitted to the commissioner pursuant to section 6626 can be used to meet the requirements if the fumigation method as specified in subsection (b)(6) is appended to the use report. The report must be delivered to the Department and the registrant by the 10th day of the month following the month in which the fumigation was performed. If the report is mailed, the postmark shall be the date of delivery.~~

~~(e) The records required pursuant to this section must be retained for two years and made promptly available to the Director or commissioner upon request.~~

NOTE: Authority cited: Sections 11456, 12976, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 14006, and 14102.

Adopt section 6452.2 to read:

6452. 2 Fumigant Volatile Organic Compound Emission Registrant Tracking

~~(a) Registrants of products containing methyl bromide, 1,3-Dichloropropene, chloropicrin, metam sodium, potassium N-methyldithiocarbamate (metam potassium), dazomet, or sodium tetrathio carbonate shall:~~

~~(1) Identify a designated contact to receive reports specified in section 6452.1(d) and provide the contact information to all persons who apply or distribute their field fumigants; and~~

~~(2) Track the air emissions from their field fumigant products in the following ozone nonattainment areas as specified in Title 40 of the Code of Federal Regulations section 81.305: Sacramento Metro, San Joaquin Valley, South Coast, Southeast Desert, and Ventura.~~

~~(b) Fumigant product emissions shall be determined by multiplying the pounds applied of active ingredient(s) of each registered product by the percentage of volatile organic compound (VOC) emissions below or the percentage set pursuant to section 6452:~~

<i>Fumigant</i>	<i>Fumigation Method</i>	<i>Percentage of VOC Emissions (percent of pounds applied)</i>	<i>3-CCR Section</i>
<i>Methyl Bromide</i>	<i>Tarpaulin/Shallow/Broadcast</i>	48	6447.3(b)(1)
	<i>Tarpaulin/Shallow/Bed</i>	100	6447.3(b)(2)
	<i>Tarpaulin/Deep/Broadcast</i>	48	6447.3(b)(3)
<i>1,3 Dichloropropene</i>	<i>Nontarpaulin/Shallow/Broadcast or Bed</i>	61	6448.1(e)(1)
	<i>Tarpaulin/Shallow/Broadcast or Bed</i>	61	6448.1(e)(2)
	<i>Nontarpaulin/Shallow/Broadcast or Bed/Three Post-Fumigation Water Treatment</i>	40	6448.1(e)(3)
	<i>Tarpaulin/Shallow/Broadcast or Bed/Three Post-Fumigation Water Treatment</i>	40	6448.1(e)(4)
	<i>Nontarpaulin/Deep/Broadcast or Bed</i>	41	6448.1(e)(5)
	<i>Tarpaulin/Deep/Broadcast or Bed</i>	41	6448.1(e)(6)
	<i>Nontarpaulin/Deep/Broadcast or Bed/Three Post-Fumigation Water Treatment</i>	30	6448.1(e)(7)
	<i>Tarpaulin/Deep/Broadcast or Bed/Three Post-Fumigation Water Treatment</i>	30	6448.1(e)(8)
	<i>Chemigation (Drip system)/Tarpaulin</i>	29	6448.1(e)(9)
<i>Chloropicrin</i>	<i>Tarpaulin/Shallow/Broadcast</i>	44	6447.3(b)(1)
	<i>Tarpaulin/Shallow/Bed</i>	64	6447.3(b)(2)
	<i>Tarpaulin/Deep/Broadcast</i>	44	6447.3(b)(3)
	<i>Nontarpaulin/Shallow/Broadcast or Bed[†]</i>	64	6448.1(e)(1)
	<i>Tarpaulin/Shallow/Broadcast or Bed</i>	44	6448.1(e)(2)
	<i>Nontarpaulin/Shallow/Broadcast or Bed/Three Post-Fumigation Water Treatment[†]</i>	20	6448.1(e)(3)
	<i>Tarpaulin/Shallow/Broadcast or Bed/Three Post-Fumigation Water Treatment</i>	20	6448.1(e)(4)
	<i>Nontarpaulin/Deep/Broadcast or Bed[†]</i>	64	6448.1(e)(5)
	<i>Tarpaulin/Deep/Broadcast or Bed</i>	44	6448.1(e)(6)
	<i>Nontarpaulin/Deep/Broadcast or Bed/Three Post-Fumigation Water Treatment[†]</i>	20	6448.1(e)(7)
	<i>Tarpaulin/Deep/Broadcast or Bed/Three Post-Fumigation Water Treatment</i>	20	6448.1(e)(8)
<i>Chemigation (Drip System)/Tarpaulin</i>	15	6448.1(e)(9)	

<i>Metam sodium and Potassium N-methyldithiocarbamate (metam potassium)</i> ²	<i>Sprinkler/Broadcast or Bed/One Post-Fumigation Water Treatment</i>	77	6450.1(e)(1)
	<i>Sprinkler/Broadcast or Bed/Three Post-Fumigation Water Treatments</i>	21	6450.1(e)(2)
	<i>Nontarpaulin/Shallow/Broadcast or Bed/One Post-Fumigation Water Treatment</i>	77	6450.1(e)(3)
	<i>Nontarpaulin/Shallow/Broadcast or Bed/Three Post-Fumigation Water Treatment</i>	21	6450.1(e)(4)
	<i>Chemigation (Drip system)</i>	9	6450.1(e)(5)
	<i>Rotary Tiller/Power Mulcher/Soil Capping</i>	14	6450.1(e)(6)
	<i>Flood</i>	77	6450.1(e)(7)
<i>Dazomet</i>	<i>All methods</i>	17	6450.2(b)
<i>Sodium tetrathio carbonate</i> ³	<i>All methods</i>	10	6451.1(a)

¹ Nontarpaulin methods are prohibited for products that contain chloropicrin as the sole active ingredient.

² These pesticides are assumed to undergo 100 percent conversion to methyl isothiocyanate and the VOC emissions are a percentage of methyl isothiocyanate. To calculate the pounds of methyl isothiocyanate, multiply the pounds of metam sodium active ingredient by 0.566, or the pounds of potassium N-methyldithiocarbamate active ingredient by 0.503.

³ This pesticide is assumed to undergo 100 percent conversion to carbon disulfide and the VOC emissions are a percentage of carbon disulfide. To calculate the pounds of carbon disulfide, multiply the pounds of sodium tetrathio carbonate active ingredient by 0.4087.

(c) Registrants of additional fumigants for which a percentage of VOC emissions has been set pursuant to section 6452.4 shall track the fumigant emissions pursuant to subsections (a)(1) and (2). The fumigant product emissions shall be determined by multiplying the pounds applied of active ingredient(s) of each registered product by the percentage determined pursuant to section 6452.4.

(d) Registrants shall submit an annual field fumigation emissions report to the Director by March 1 of each year for the previous calendar year that summarizes the emissions for each of their products by month within each ozone nonattainment area. The emission report must contain but is not limited to:

- (1) Pounds applied for each fumigation method; and
- (2) Pounds of emission

(e) The records required pursuant to this section must be retained for two years and made promptly available to the Director or commissioner upon request.

NOTE: Authority cited: Sections 11456, 12976, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 14006, and 14102, Food and Agricultural Code.

Adopt section 6452.2 to read:

6452.3 6452.2 Fumigant Volatile Organic Compound Emission Limits.

OPTION 1:**

(a) The Director shall establish field fumigant volatile organic compound (VOC) emission **limits in the Annual Volatile Organic Compound Emissions Inventory Report issued pursuant to section 6452.4 for areas that exceed 80 percent of the emissions benchmarks allocations pursuant to subsections (b) or (c) in the San Joaquin Valley, Southeast Desert, and Ventura ozone nonattainment areas. The sum of such VOC emission allocations shall not exceed the emissions** listed below during the May 1 through October 31 time period:

<u>Ozone Nonattainment Area</u>	<u>Maximum Total Pounds of Agricultural and Structural VOC Emissions Inventory Benchmarks from Field Fumigations from May 1 to October 31</u>
<u>Sacramento Metro</u>	<u>900,000 lbs. (2.4 tons/day average)</u>
<u>San Joaquin Valley</u>	<u>1,400,000 5,900,000 lbs. (3.8 16.0 tons/day average)</u>
<u>South Coast</u>	<u>1,500,000 lbs. (4.1 tons/day average)</u>
<u>Southeast Desert</u>	<u>120,000 230,000 lbs. (0.3 0.62 tons/day average)</u>
<u>Ventura</u>	<u>700,000 970,000 lbs. (1.9 2.6 tons/day average)</u>

This subsection shall not apply to Ventura until 2012. The field fumigant VOC emission limits for the Ventura ozone nonattainment area prior to 2012 are established pursuant to subsection (c).

(b) The Director shall calculate the field fumigant VOC emission limits specified in (a) by subtracting the nonfumigant pesticide VOC emissions from the total agricultural and structural VOC emissions inventory benchmarks. Nonfumigant pesticide product emissions will be the summation of the pounds of each pesticide product used multiplied by the VOC content (emission potential) for the specific product.

(c) For the Ventura ozone nonattainment area, the Director establishes a field fumigant VOC emission limit from May 1 to October 31, 2008 of 3.30 tons/day. The Director shall establish field fumigant emission limits in Ventura for 2009, 2010, and 2011, in the Volatile Organic Compound Emissions Inventory Report pursuant to section 6452.4 by subtracting the nonfumigant emissions from the following benchmarks:

<u>Ozone Nonattainment Area</u>	<u>Total Agricultural and Structural VOC Emissions Inventory Benchmarks from May 1 to October 31</u>
<u>Ventura</u>	<u>1,340,000 lbs. (3.63 tons/day average) in 2009</u>
<u>Ventura</u>	<u>1,190,000 lbs. (3.23 tons/day average) in 2010</u>
<u>Ventura</u>	<u>1,080,000 lbs. (2.92 tons/day average) in 2011</u>

OPTION 2**:

(a) The Director shall establish field fumigant volatile organic compound (VOC) emission **limits in the Volatile Organic Compound Emissions Inventory Report issued pursuant to section 6452.4 for areas that exceed 80 percent of the emissions benchmarks allocations**

pursuant to subsections (b) or (c) in the San Joaquin Valley, Southeast Desert, and Ventura ozone nonattainment areas. The sum of such VOC emission allocations shall not exceed the emissions listed below during the May 1 through October 31 time period:

<u>Ozone Nonattainment Area</u>	<u>Maximum Total Pounds of Agricultural and Structural VOC Emissions Inventory Benchmarks from Field Fumigations from May 1 to October 31</u>
<u>Sacramento Metro</u>	<u>900,000 lbs. (2.4 tons/day average)</u>
<u>San Joaquin Valley</u>	1,400,000 <u>5,900,000 lbs. (3.8 16.0 tons/day average)</u>
<u>South Coast</u>	<u>1,500,000 lbs. (4.1 tons/day average)</u>
<u>Southeast Desert</u>	120,000 <u>230,000 lbs. (0.3 0.62 tons/day average)</u>
<u>Ventura</u>	700,000 <u>970,000 lbs. (1.9 2.6 tons/day average)</u>

(b) The Director shall calculate the field fumigant VOC emission limits specified in (a) by subtracting the nonfumigant pesticide VOC emissions from the total agricultural and structural VOC emissions inventory benchmarks. Nonfumigant pesticide product emissions will be the summation of the pounds of each pesticide product used multiplied by the VOC content (emission potential) for the specific product.

(c) The Director establishes the following field fumigant VOC emissions limits for 2008:

<u>Ozone Nonattainment Area</u>	<u>Maximum Total Pounds of VOC Emissions from Field Fumigations from May 1 to October 31</u>
<u>Ventura</u>	<u>734,000 lbs. (2.00 tons/day average)</u>

**Note: The Department is proposing to two options in establishing field fumigant volatile organic compound emissions limits. The overall limit Pesticide VOC emissions benchmark of 2.63 tons-per-day in Ventura corresponds to the emission reduction target of the 1994 Pesticide Plan and the Court order. The fumigant emission limit of 1.9 tons-per-day in 2008 is designed to achieve that goal in the first year of the regulations. Even with full implementation of the best available controls, growers in Ventura cannot meet this limit next year without reducing historically fumigated acreage by between 5,800 and 7,500 acres. The most likely result will be that land will be taken out of agricultural production creating significant risk of economic dislocation and pressure to develop the land for non-agricultural uses. To mitigate these risks, the Department proposes to phase-in implementation of the final emissions target in Ventura between 2008 and 2012 (Option 1). Option 1 allows regulated entities more time and flexibility to plan and develop strategies to meet the emission limits without necessarily taking land out of agricultural production and is consistent with the Air Board’s planning for the 8-hour ozone standard.

To remove any uncertainty as to whether Option 1 complies with the Court’s order to “propose, adopt and submit to EPA for approval, and implement regulations no later than January 1, 2008, to achieve” the overall limit in Ventura, the Department is seeking the Court's permission to implement Option 1. If the Court denies such permission then the Department will adopt Option 2 (no phase-in).

~~*(b) Registrants of products containing active ingredients referenced in section 6452.2 shall limit VOC emissions from those products during the May 1 through October 31, 2008 time period to their allocation allowance established by the Director.*~~

~~*(1) For 2008, the Director shall determine an initial fumigant emission allocation for each registrant based on the following factors:*~~

~~*(A) Pest management needs;*~~

~~*(B) Advancement of reduced emission methods;*~~

- ~~(C) Expected changes to specific use patterns for field fumigants~~
- ~~(D) Share of the field fumigant market;~~
- ~~(E) Allocation requests submitted by the registrant; and~~
- ~~(F) Regulatory changes that impact allowed use.~~

~~(2) A Notice of Field Fumigant Emission Allocation shall be given to the allocated registrants and made available to the public. The notice will include the initial fumigant emission allocation for each registrant and basis for such allocation. The notice will be posted on the Department's Web site.~~

~~(3) A 30-day public comment period will be provided to allow for submission of written statements or arguments to the Director for review before making final fumigant emission allocations.~~

~~(4) The Director will determine a final fumigant emission allocation for each registrant by May 1, 2008.~~

~~(c) The Director will establish the fumigant emission allocations for 2009 and subsequent years for each registrant in each ozone nonattainment area as follows:~~

~~(1) By May 15 of the previous year, the Director shall determine an initial fumigant emission allocation for each registrant based on the following factors:~~

~~(A) Necessity to maintain the overall pesticide VOC emission limits within each ozone nonattainment area established in subsection (f);~~

~~(B) Field fumigation emissions report provided by the registrants (commencing with the 2010 allocation) pursuant to section 6452.2(d);~~

~~(C) Pest management needs;~~

~~(D) Advancement of reduced emission methods;~~

~~(E) Expected changes to specific use patterns for field fumigants;~~

~~(F) Share of the field fumigant market;~~

~~(G) Allocation requests submitted by the registrant; and~~

~~(H) Regulatory changes that impact allowed use.~~

~~(2) A Notice of Fumigant Emission Allocation shall be given to the allocated registrants and made available to the public. The notice will include the initial fumigant emission allocation for each registrant and basis for such allocation. The notice will be posted on the Department's Web site.~~

~~(3) A 30-day public comment period will be provided to allow for submission of written statements or arguments to the Director for review before making final fumigant emission allocations.~~

~~(4) The Director will determine a final fumigant emission allocation for each registrant by November 1 of the previous year.~~

~~(d) No person may sell a product containing active ingredients referenced in section 6452.2 or 6452.4 for field fumigation use in an area for which the Director has established allocation pursuant to (b) or (c) unless they are a registrant or the registrant authorized that sale. The registrant shall not exceed its total emissions allocation.~~

~~(e) If the field fumigant VOC emissions exceed a limit specified in (f), the Director shall establish an allocation allowance in that area pursuant to subsection (c). The Director may establish an allocation allowance for the Sacramento Metro or South Coast ozone nonattainment areas pursuant to subsection (c) in order to prevent fumigant emissions from exceeding the limits specified in (f).~~

(f) If the Director establishes a field fumigation allocation allowance in the Sacramento Metro or South Coast ozone nonattainment areas, the sum of such VOC emission allocations shall not exceed the emissions listed below during the May 1 through October 31 time period:

<i>Ozone Nonattainment Area</i>	<i>Maximum Total Pounds of VOC Emissions from Field Fumigations from May 1 to October 31</i>
<i>Sacramento Metro</i>	<i>440,000 lbs. (1.2 tons/day average)</i>
<i>South Coast</i>	<i>1,000,000 lbs. (2.7 tons/day average)</i>

NOTE: Authority cited: Sections 11456, 12976, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 14006, and 14102, Food and Agricultural Code.

Adopt section 6452.3 to read:

6452.3 Field Fumigant Volatile Organic Compound Emission Allowances.

(a) Except as provided in (f), no person may apply a field fumigant during the May 1 through October 31 time period in an ozone nonattainment area for which a fumigant emission limit has been established pursuant to section 6452.2, unless their restricted material permit includes a field fumigant emission allowance.

(b) To obtain a field fumigant emission allowance, a permittee shall submit information to the commissioner by a date designated by the commissioner. The information must include but is not limited to the following:

- (1) operator identification number;**
- (2) county;**
- (3) crop;**
- (4) month(s) of application;**
- (5) number of acres to be fumigated;**
- (6) identification of each site to be fumigated;**
- (7) meridian, township, range, and section of sites to be fumigated;**
- (8) verification of operator of property for each site identified;**
- (9) identification of fumigant products to be used;**
- (10) the application rate; and**
- (11) fumigation method.**

(c) The Director shall establish a fumigant emission allowance(s) for each permittee so that the total allowances in each ozone nonattainment area do not exceed the fumigant limit established for that area. If the total allowances requested exceed an established fumigant emission limit, the Director will proportionally reduce each request to ensure that the limit is not exceeded.

(d) Commissioners in each ozone nonattainment area subject to a fumigant emission limit shall issue permits or amend existing permits to comply with the fumigant emission allowance(s) established by the Director.

(e) Commissioners shall deny any notice of intent that does not comply with the permittees' fumigant emission allowances.

(f) The Director may establish an emission allowance acreage threshold, not to exceed five acres. A permittee is not required to obtain a field fumigant emission allowance if their total fumigated acreage is no greater than the threshold. The threshold will be published

in the Annual Volatile Organic Compound Emission Inventory Report, pursuant to section 6452.4.

NOTE: Authority cited: Sections 11456, 12976, 14005, and 14102, Food and Agricultural Code.
Reference: Sections 11501, 14006, and 14102, Food and Agricultural Code.

Adopt section 6452.4 to read:

6452.4. Interim Percentage of Volatile Organic Compound Emissions For New Fumigants

(a) For each field fumigant volatile organic compound (VOC) not specified in section 6452.2(a), the Director will set an interim percentage of VOC emission for each of its field fumigation method(s) for a period not to exceed three years.

(b) The interim percentage of VOC emission shall be based on scientific data demonstrating fumigant emissions.

(c) A Notice of Proposed Interim Percentage of VOC Emission shall be given to the registrant. The notice will include the basis for such determination. The notice will be posted on the Department's Web site.

(d) A 30-day public comment period will be provided to allow for submission of written statements or arguments to the Director for review before determining an interim percentage of VOC emission.

(e) The Director will determine the interim percentage of VOC emission within 30 working days from the close of the public comment period.

(f) The registrant of the fumigant will be subject to the provisions in sections 6452.2 and 6452.3.

Adopt section 6452.4 to read:

6452.4. Annual Volatile Organic Compound Emissions Inventory Report.

(a) The Director shall issue an annual emissions inventory report for the Sacramento Metro, San Joaquin Valley, South Coast, Southeast Desert, and Ventura ozone nonattainment areas. The emission inventory report must:

(1) report the total agricultural and structural (fumigant and nonfumigant) pesticide volatile organic compound (VOC) emissions for the previous years. Nonfumigant pesticide product emissions will be the summation of the pounds of each pesticide product used multiplied by the VOC content (emission potential) for the specific product. Fumigant product emissions will be the summation of the pounds of each pesticide product used multiplied by the emission potential for that specific product and VOC emission rating for the application method, as specified in (5);

(2) evaluate compliance with the total pounds of agricultural and structural VOC emissions specified in section 6452.2;

(3) establish fumigant emissions limits established pursuant to section 6452.2 for the upcoming year;

(4) establish a fumigant emission allowance threshold.

(5) establish an emission rating for each field fumigation method described in sections 6447.3, 6448.1, 6449.1, 6450.1, 6450.2, 6451.1, or 6452. The emission rating will be expressed as a percentage of the amount of fumigant applied. The Director shall base the emission rating upon available scientific data documenting the VOC emissions.

(b) A draft emission report shall be made available to the public for comment. A 45-day public comment period will be provided to allow for submission of written statements or arguments to the Director for review before making finalizing the Annual Volatile Organic Compound Emission Report. The emission report will be posted on the Department's Web site.

NOTE: Authority cited: Sections 11456, 12976, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 14006, and 14102, Food and Agricultural Code.

Adopt Article 5 heading to read:

ARTICLE 5. USE REQUIREMENTS

Renumber section 6452 to 6453 to read:

~~6452~~ 6453. Chloropicrin and Methyl Bromide - Nursery and Commodity Fumigation.

...

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005, and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006, and 14102, Food and Agricultural Code.

CHAPTER 3. PEST CONTROL OPERATIONS
SUBCHAPTER 1. LICENSING
ARTICLE 1. GENERAL LICENSE REQUIREMENTS

Amend section 6502(c) to read:

6502. Applications.

...

(c) Pursuant to this section, the prescribed forms, hereby incorporated by reference, are specified in Table 1 and Table 2 below.

Table 1–License and Certificate Application Fees and Forms

License or Certificate Type	New Application Fee	Form
...
Qualified Applicator License	\$ 80	Qualified Applicator License Application

		PR-PML-001 (Rev. 9/04 4/07)
Qualified Applicator Certificate	\$ 40	Qualified Applicator Certificate Application PR-PML-001A (Rev. 9/04 4/07)

Table 2 - License and Certificate Renewal Application Fees and Forms

License or Certificate Type	Annual Renewal Fee	Form
...
Qualified Applicator License	\$ 60	Individual License/Certificate Renewal Application PR-PML-141 ((Rev. 9/04 4/07)
Qualified Applicator Certificate	\$ 30	Individual License/Certificate Renewal Application PR-PML-141 (Rev. 9/04 4/07)

NOTE: Authority cited: Sections 11456, 11502, 11502.5, 12005, and 12111, Food and Agricultural Code. Reference: Sections 11502.5, 11702, 11703, 11704, 11707, 11903, 11904, 12021, 12103, 12104, 12105, 12201, 12202, 12252, 12401, and 12404, Food and Agricultural Code.

ARTICLE 3. QUALIFIED APPLICATORS

Adopt section 6536 to read:

6536. Field Fumigation Licensing Requirements.

(a) A person who performs or supervises field fumigation applications pursuant to section 6445.5(b) must hold a qualified applicator license or certificate in the subcategory of field fumigation pest control.

(b) Notwithstanding section 6530, examination requirements and fees required pursuant to section 6502 may be waived and a person may be issued a qualified applicator license or certificate in the field fumigation pest control (subcategory O) within 12 months from the effective date of this section, if the applicant meets the following criteria:

- (1) Possesses a valid qualified applicator license or certificate in Agricultural Pest Control (category D), Regulatory Pest Control (category G), or Demonstration and Research (category J);
- (2) Has at least 24 months of technical experience conducting field fumigation activities for a pest control business licensed by the Director from January 1, 2006 to December 31, 2008;
- (3) Has a statement signed by the pest control business under which the applicant is operating verifying this technical experience; and

(4) Shows proof of attending at least four hours of fumigation training approved by the Director within 12 months from the effective date of this section.

NOTE: Authority Cited: Sections 11456, 11502, and 14005, Food and Agricultural Code.
Reference: Sections 11501, 14001, and 14151, Food and Agricultural Code.

SUBCHAPTER 2. WORK REQUIREMENTS
ARTICLE 1. PEST CONTROL OPERATIONS GENERALLY

Amend section 6624 to read:

6624. Pesticide Use Records.

(a) The following persons shall maintain records of pesticide use:

(1) Any person who uses a pesticide for an agricultural use as defined in Food and Agricultural Code section 11408, other than use on livestock as defined in Food and Agricultural Code section 18663;

(2) Any person who uses a pesticide listed in section 6400;

(3) Any person engaged for hire in the business of pest control;

(4) Any person who uses a pesticide for industrial post-harvest commodity treatment; and

(5) Any person who uses a pesticide listed in section 6800(b) for any outdoor institution or outdoor use.

(b) The records shall include the following information for each pest control operation:

(1) Date of application;

(2) Name of the operator of the property treated;

(3) Location of property treated;

(4) Crop commodity, or site treated;

(5) Total acreage or units treated at the site; and

(6) Pesticide, including the U.S. Environmental Protection Agency (U.S. EPA) or State registration number which is on the pesticide label, and amount used.

(c) In addition to the information required in subsection (b), the operator of the property which is producing an agricultural commodity, and an agricultural pest control business applying pesticides to such property, shall include in the records the following information for each pest control operation:

(1) Location of the property treated, by county, section, township, range, base and meridian;

(2) Hour the treatment was completed;

(3) The operator identification number issued to the operator of the property treated;

(4) The site identification number issued to the operator of the property treated;

(5) Total acreage (planted) or units at the site; and

(6) Name or identity of the person(s) who made and supervised the application, if the pesticide application was made by an agricultural pest control business.

(d) The operator of the property which is producing an agricultural commodity shall maintain records of pesticides applied by an agricultural pest control business to such property, by site.

(e) In addition to the information required in (b), effective January 1, 2002, persons engaged for hire in the business of pest control at a school site [defined in Education Code section 17609(e)] shall include in the records the following information for each pest control operation:

- (1) Time application was completed;
- (2) Name and address of the school site; and
- (3) Application location at the school site. For purposes of this subsection, location includes, but is not limited to, classrooms, playgrounds, cafeteria, vehicles, and athletic fields.

(f) In addition to the information required in subsections (b) and (c), persons who use methyl bromide, 1,3-Dichloropropene, chloropicrin, metam-sodium, N-methyl dithiocarbamate (metam-potassium), dazomet, or sodium tetrathiocarbonate field fumigants within the Sacramento Metro, San Joaquin Valley, South Coast, Southeast Desert, or Ventura ozone nonattainment areas shall include in the records a description of the method of application pursuant to sections 6447.3, 6448.1, 6449.1, 6450.1, 6450.2, 6451.1, or 6452.

(~~f~~ g) The records required pursuant to this section shall be retained for two years and made promptly available to the director or commissioner upon request.

NOTE: Authority cited: Sections 12976, 13145, 13188, and 14005, Food and Agricultural Code. Reference: Sections 11501, 11708, 11733, 13186, 14006, and 14011.5, Food and Agricultural Code

Amend section 6626 to read:

6626. Pesticide Use Reports for Production Agriculture.

(a) The operator of the property which is producing an agricultural commodity shall report the use of pesticides applied to the crop, commodity, or site to the commissioner of the county in which the pest control was performed. This report shall be hand-delivered or mailed, by the 10th day of the month following the month in which the work was performed. This report is not required if the pesticide use is reported to the commissioner by an agricultural pest control business as specified in subsection (b); however, the operator of the property treated, shall retain a copy of the business' "Report by Site" for two years.

(b) An agricultural pest control business shall report the use of pesticides applied by it for the production of an agricultural commodity to the commissioner of the county in which the pest control was performed, by hand-delivery or by mail, within seven days of completion of the pesticide application. A copy of the report shall be sent by the business to the operator of the property where the pest control was done within 30 days of completion of the pesticide application

(c) **Except as provided in (d),** ~~E~~each report of pesticide use pursuant to this section shall be on a department form or in a format approved by the director. Acceptable Department forms include form 38-017 for an operator of the property to report pursuant to subsection (a), and 39-025 for an agricultural pest control business to report pursuant to subsection (b). The information to be reported shall include the information specified in section 6624, and the name and address of the agricultural pest control business which made the application, if such a business made the application.

(d) A copy of the use report required by (a) or (b) for the application of a field soil fumigant in the Sacramento Metro, San Joaquin Valley, South Coast, Southeast Desert, and Ventura ozone nonattainment areas must be submitted to the Department with the field fumigation method as specified in section 6624(f) appended to the report. The report must

be delivered to the Department according to the date specified in (a) or (b), whichever is applicable. This subsection shall remain in effect only until December 31, 2008.

(e) Effective January 1, 2009, a use report required by (a) or (b) for the application of a field soil fumigants in the Sacramento Metro, San Joaquin Valley, South Coast, Southeast Desert, and Ventura ozone nonattainment areas shall include the information specified in 6624(f) in addition to that required by this section.

(~~d~~ **f**) If the report is mailed, the postmark shall be the date of delivery.

(~~e~~ **g**) If the county in which work was performed has no commissioner, the report shall be made to the director.

NOTE: Authority cited: Sections 11456, 11502, 12976, 13145 and 14005, Food and Agricultural Code. Reference: Sections 11501, 11708, 11733, 12981, 14006 and 14011.5, Food and Agricultural Code.

CHAPTER 3. PEST CONTROL OPERATIONS
SUBCHAPTER 3. PESTICIDE WORKER SAFETY
ARTICLE 4. FUMIGATION

Amend section 6784 to read:

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; ~~singly or in combination with chloropicrin or any other pesticide or warning agent,~~ applied pursuant to the fumigation methods described in section ~~6450.3~~ 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) ~~Whenever methyl bromide, singly or in combination with chloropicrin or any other pesticide or warning agent, is used for field soil fumigation, a~~At least two trained employees shall be present during introduction of ~~the fumigant~~ 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*
<u>Nontarpaulin/Shallow/Bed:</u> <u>Tractor Equipment Driving</u> <u>Supervising</u>	<u>200 lbs.</u>	<u>9*</u> <u>9*</u>
Nontarpaulin/Deep/Broadcast: Tractor Equipment Driving Supervising	400 lbs.	10* no limitation ^{1/}
<u>Nontarpaulin/Deep/Broadcast:</u> <u>Tractor Equipment Driving</u> <u>Supervising</u>	<u>400 lbs.</u>	<u>10*</u> <u>no limitation</u> ^{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 <u>Drip System – Hot Gas:</u> <u>Applicators</u> <u>Supervising</u> <u>Tarpaulin Cutting</u> <u>Tarpaulin Removal</u>	225 lbs. <u>225 lbs.</u>	5* 5* no limitation ^{1/} no limitation ^{2/} <u>5*</u> <u>5*</u> <u>no limitation ^{1/}</u> <u>no limitation ^{2/}</u>

^{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 above in Table 1 or below in Table 2 for the particular fumigation method used, the maximum work hours may be increased in accordance with the following formula:

$$\left(\frac{\text{maximum application rate for method}}{\text{actual application rate}} \right) \times \text{maximum work hours in a 24-hour period} = \text{revised maximum work hours in a 24-hour period}$$

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 Supervising	200 lbs.	4* 4*
<u>Nontarpaulin/Shallow/Bed:</u> <u>Tractor Equipment Driving</u> <u>Supervising</u>	<u>200 lbs.</u>	<u>4*</u> <u>4*</u>
Nontarpaulin/Deep/Broadcast: Tractor Equipment Driving Supervising	400 lbs.	4* 7*
<u>Nontarpaulin/Deep/Broadcast:</u> <u>Tractor Equipment Driving</u> <u>Supervising</u>	<u>400 lbs.</u>	<u>4*</u> <u>7*</u>
Tarpaulin/Shallow/Broadcast: Tractor Equipment Driving Shoveling, Copiloting Supervising Tarpaulin Cutting Tarpaulin Removal	400 lbs.	4* 3* 3* 4 7
Tarpaulin/Shallow/Bed: Tractor Equipment Driving Shoveling, Copiloting Supervising Tarpaulin Cutting Tarpaulin Removal	250 lbs.	4* 4* 4* 4 7
Tarpaulin/Deep/Broadcast: Tractor Equipment Driving Shoveling, Copiloting Supervising Tarpaulin Cutting Tarpaulin Removal	400 lbs.	4* 3* 3* 4 7
Drip System – Hot Gas: Applicators Supervising Tarpaulin Cutting Tarpaulin Removal	225 lbs.	2* 2* 4 7
<u>Drip System – Hot Gas:</u> <u>Applicators</u> <u>Supervising</u> <u>Tarpaulin Cutting</u> <u>Tarpaulin Removal</u>	<u>225 lbs.</u>	<u>2*</u> <u>2*</u> <u>4</u> <u>7</u>

(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 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.

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