

FINAL STATEMENT OF REASONS AND PUBLIC REPORT  
DEPARTMENT OF PESTICIDE REGULATION

Title 3, California Code of Regulations  
Amend Sections 6000, 6400, 6502, 6624, 6626, and 6784(b);  
Amend sections 6450, 6450.1, 6450.2, and 6450.3, and Renumber to  
Sections 6447, 6447.1, 6447.2, and 6447.3;  
Adopt Sections 6445, 6445.5, 6448, 6448.1, 6449, 6449.1, 6450, 6450.1,  
6450.2, 6451, 6451.1, 6452, 6452.1, 6452.2, 6452.3, 6452.4, and 6536  
Pertaining to Field Fumigant Emissions Reduction

UPDATE OF THE INITIAL STATEMENT OF REASONS

The originally proposed regulatory action was noticed in the *California Regulatory Notice Register* on May 18, 2007.

During the 45-day public comment period, the Department of Pesticide Regulation (DPR) received comments on the originally proposed text. The comments are discussed under the heading "Summary and Response to Comments Received" of this Final Statement of Reasons. During the review of these comments, DPR determined that a number of the suggested changes should be included in a modified text. These changes and the reasons for them are found below under the heading "Changes to the Text of Proposed Regulations." Additional documents were also relied upon and added to the rulemaking file.

DPR received comments addressing the modified text and some of the documents during the 15-day public comment period. These comments are discussed under the subheading "Comments Received During the 15-Day Public Comment Period" in this Final Statement of Reasons.

DPR has amended sections 6000, 6400, 6502, 6624, 6626, and 6784(b); amended sections 6450, 6450.1, 6450.2, and 6450.3, and renumbered to 6447, 6447.1, 6447.2, and 6447.3; and adopted sections 6445, 6445.5, 6448, 6448.1, 6449, 6449.1, 6450, 6450.1, 6450.2, 6451, 6451.1, 6452, 6452.1, 6452.2, 6452.3, 6452.4, and 6536 of Title 3, California Code of Regulations (3 CCR). The pesticide regulatory program activities affected are those pertaining to environmental monitoring and pesticide enforcement. In summary, this action adopts regulations to reduce smog-producing emissions from field fumigant use and, thereby, will achieve court-ordered state air quality objectives for pesticides.

*Changes to the Text of Proposed Regulations*

DPR made changes that are sufficiently related to the originally proposed text.

- Revised section 6000 to add the definition for "ozone nonattainment area" to clarify the geographic locations that apply to the nonattainment areas (NAAs).

- Revised section 6445 to clarify that operating chemigation equipment is a fumigation-handling activity. Also, removed unnecessary reference to section 6445.5, as the term is not used in section 6445.5.
- Revised section 6445.5 to require a field fumigation application to be made by a qualified applicator licensee holding a license to perform work in the subcategory "O" of field fumigation pest control only if the application is made by a licensed pest control business. It may not be economically feasible to require all fumigations to be made by a licensed pest control business.

Also, deleted the requirement of having a qualified applicator holder licensed or certified in the proposed subcategory "O" present at the application site during fumigation handling activities. At this time, DPR has determined that this requirement may not be practical.

- Revised sections 6447, 6448, 6449, 6450, and 6451 to clarify that the field soil fumigation requirements do not apply to replant of individual vine or tree-sites when an application is made to less than one contiguous acre. The intent was to allow fumigations for individual vine and tree replacement within a vineyard or orchard, and to exclude the method for treatment of entire vineyards or orchards. VOC emissions associated with a fumigation to tree-sites less than one contiguous acre would be negligible.
- Revised subsections 6447(a) and (c) to include the phrase "if applicable" for clarity, as some methods that were originally prohibited will be allowed in some areas. Subsection (e) was also revised for clarity.
- Revised section 6447.2(a) to include the original publication date of the *Methyl Bromide Field Fumigation Buffer Zone Determination* document. Revisions to this publication are not needed.
- Revised section 6447.3(a) to include the three methyl bromide methods originally proposed to be prohibited statewide. However, specific methods will be prohibited in the San Joaquin Valley, Southeast Desert, or Ventura NAAs during the May 1 through October 31 time period, to further reduce VOC emissions in these areas. These methods can be used in Sacramento and South Coast NAAs because additional VOC reductions are not needed in these two NAAs.
- DPR revised sections 6448, 6449, 6450, and 6451 to specify that the provisions pertaining to field soil fumigations using 1,3-Dichloropropene, chloropicrin, metam-sodium, potassium N-methyldithiocarbamate (metam-potassium), dazomet, or sodium tetrathiocarbonate applies only to the Sacramento Metro, San Joaquin Valley, South Coast, Southeast Desert, and Ventura NAAs during the May 1 through October 31 time period. Standardized fumigation methods and requirements will be required in the five NAAs during the peak ozone period.

Standardized methods include fumigation methods with known emission rates. Fumigation methods with known emission rates must be used within the five NAAs during May-October in order to track emissions and determine compliance with the emissions limits. Field fumigation outside of the five NAAs would remain consistent with existing regulations and permit conditions. Additional revisions were made for clarity purposes.

- For clarity and enforceability purposes, revised section 6448.1(b) by replacing the percent of moisture with a "feel" method that is commonly used to measure soil moisture, and is included on some product labels. Additionally, moisture shall be measured above, instead of "at," the depth of the application. The appropriate soil moisture is needed between the application and the soil surface.
- DPR revised section 6448.1(c) to prohibit the use of specific 1,3-Dichloropropene methods in the San Joaquin Valley, Southeast Desert, and Ventura NAAs to further reduce VOC emissions in these areas. These methods can be used in Sacramento and South Coast NAAs because additional VOC reductions are not needed in these two NAAs.
- DPR revised the post-fumigation water levels in subsection 6448.1(c)(3)(C) and (4)(D) and subsections 6450.1(d)(1)(A) and (3)(A) from 0.25 to 0.20 inches. Comment and subsequent evaluation on nozzles and irrigation systems determined that 0.20 is more a more appropriate irrigation rate.
- Revised subsection 6448.1(c)(4) to remove the word "Broadcast." This was an oversight-- tarpaulin/shallow/broadcast with three post-fumigation water treatments is not a valid method. DPR also clarified the requirements of the three post-fumigation water treatments to the untarped areas of a bed fumigation. Also, subsections (c)(1-7)(B) remove the requirement for specific tillage or compaction equipment. As long as the requirements of eliminating chisel trace and compacting the soil can be met, specifying the type of equipment to be used is not necessary. Subsections (c)(1), (2), (3), (5), and (6) were clarified to specify that compaction equipment would only be required for broadcast fumigations since compaction equipment is not used in bed fumigations.
- Deleted methods (7) and (8), nontarpaulin/deep/broadcast or bed/three post-fumigation water treatments and tarpaulin/deep/broadcast or bed/three post-fumigation water treatments, in section 6448.1. DPR is unsure if the three-post water treatments for these methods are effective in reducing VOC emissions. Renumbered method (9) chemigation (drip system)/tarpaulin to (7) and made clarifying changes to the requirement that the pressure must not exceed the pressure rating of the drip tape. Subsection (9)(C) was also reworded for clarity.

- Revised section 6449.1 to prohibit the use of specific methods for products containing chloropicrin as the sole active ingredients in the San Joaquin Valley, Southeast Desert, and Ventura NAAs to further reduce VOC emissions in these areas. These methods can be used in Sacramento and South Coast NAAs because additional VOC reductions are not needed in these two NAAs. Also, included soil moisture requirements for these applications, as well as tarpaulin repair requirements when applicable.
- Added section 6449.1(d) to describe the requirements for tarpaulin repair when tarpaulins are used for chloropicrin fumigation. Undamaged tarpaulins are needed to ensure these application methods achieved the VOC reductions expected. These provisions are consistent with the tarpaulin repair requirements for the other fumigants that use tarpaulins.
- For clarity and enforceability purposes, revised section 6450.1(b) moisture requirements. This is consistent with the changes in section 6448.1.
- DPR revised the post-fumigation water levels in section 6450.2(b)(1) from 0.25 to 0.20 inches. Comment and subsequent evaluation on nozzles and irrigation systems determined that 0.20 is a more appropriate irrigation rate.
- Subsection 6450.1(d) has been revised to prohibit the use of certain metam-sodium and N-methyldithiocarbamate (metam-potassium) methods in the San Joaquin Valley, Southeast Desert, and Ventura NAAs during the May 1 through October 31 time period to further reduce VOC emissions in these areas. These methods can be used in Sacramento and South Coast NAAs because additional VOC reductions are not needed in these two NAAs.
- Revised section 6450.1(d) to add sprinkler/broadcast or bed/two post-fumigation water treatments, and nontarpaulin/shallow/broadcast or bed/two post-fumigation water treatments. DPR received an additional study that indicates that these methods are effective in reducing VOC emissions. Additional editorial changes were made to reflect the addition of these two methods.
- Deleted the requirement in subsections 6450.1(d)(1)(A) and (3)(A) requiring the 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. Because of temperature and timing restrictions, the requirement is not feasible.
- Clarifying changes to section 6450(d)(7) were made to the pressure rating of drip tape. The requirement of drip tape covered with tarpaulin or two inches of soil at the end of the rows was removed. There was no difference in VOC emissions from tarped or untarped drip tape.

- Revised the criteria in section 6452 that allows the use of a field fumigation method that results in no greater emission than any of the fumigant methods either not described or excluded from use in sections 6447.3, 6448.1, 6449.1, 6450.1, 6450.2, or 6451.1. This will still provide the necessary flexibility for innovations that reduce emissions to occur. This change in criteria would provide for a more complete evaluation in determining emission rates. Emission rates depend on the emission rating and the application rate. The change in criteria allows DPR to consider both factors. Some new fumigation methods may be entirely different and not comparable to any existing methods, so this criterion was deleted.

Grammatical correction was made in (b)(1)(A) and (B) by deleting the word "and" between ". . . same fumigant and allowed for use. . .".

- DPR revised section 6452.1. The actual record keeping and reporting requirements of fumigant applications has been relocated to sections 6624 and 6626. Only references of these two sections are made in section 6452.1. Based on comments received, beginning January 1, 2009, reporting fumigant use in the five NAAs will be incorporated into the existing pesticide use reporting system. Implementation of incorporating these reporting requirements into the existing use report system will be delayed due to necessary changes to DPR's infrastructure.
- Deleted the requirements in section 6452.2 that would require registrants to track and report fumigant emissions from the use of their products. Since registrants will no longer be required to track and report these emissions, the percentage of emissions associated with each fumigant and method has also been deleted. DPR will require permittees in the five NAAs to report their fumigant use to the Department. The change in tracking responsibility provides greater transparencies of the records. The change requires a minor revision to the existing pesticide use reporting system, while the original proposal required a greater burden on the regulated community for a new reporting system.
- Revised and renumbered section 6452.3 to 6452.2. DPR proposed two options in establishing field fumigant VOC emissions limits for the NAAs. To remove any uncertainty as to whether Option 1 complied 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, DPR sought the Court's permission to implement Option 1 (phase-in). Option 2 was proposed in case the Court denied such permission--DPR would then adopt Option 2 (no phase-in).

The overall 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 2.0 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 fumigant 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 nonagricultural uses. To mitigate these risks, the Department proposed 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 Resources Board's planning for the eight-hour ozone standard. However, on December 12, 2007, the court ruled that the regulations that it ordered DPR to adopt must require the 20 percent reduction in Ventura in 2008. Therefore, Option 2 has been adopted.

DPR revised the process to determine the fumigant limits. The revised process will provide greater assurance that the 1994 State Implementation Plan (SIP) commitments will be met. The 1994 SIP requires reductions in the total agricultural and structural (fumigant plus nonfumigant) pesticide VOC emissions. A fixed fumigant limit in regulation, as originally proposed, would not ensure that DPR meets the overall agricultural and structural pesticide reductions. The proposed change allows DPR the flexibility to adjust the fumigant limit, depending on increases or decreases in nonfumigant emissions. There are no proposed requirements for nonfumigants. DPR will use information from existing reporting for nonfumigants to update the fumigant limits each year.

The requirement to limit registrant emissions to their allocations in areas where DPR has allocated fumigant emissions has been deleted. Fumigant emission allowances have been moved to section 6452.3.

- Revised section 6452.3 to require field fumigant VOC emission allowances to permittees applying a field fumigant in an ozone NAA for which a fumigant emission limit has been established so that each ozone NAA does not exceed the fumigant emission limit. DPR has determined that establishing field fumigant allowances to permittees would be a more effective process than establishing registrant allowances who would then allocate to the permittees. Changing registrant allowances to permittee allowance is more compatible with the existing regulatory structure (restricted materials permitting). It also provides a more transparent means for ensuring compliance with emission limits. Section 6452.3(f) gives the Director discretion to establish a threshold of one to five acres, below which an emission allowance would not be required. The Director would implement a threshold if he/she determines that the exemptions would have a negligible impact on VOC emissions and decrease the workload to administer the allowances. DPR does not need to evaluate complex pest management needs or the impact of new fumigants, as required under the original proposal. Also a nonsubstantive clarifying change was made to subsection (b).

- In section 6452.4, deleted the establishment of an interim percentage of VOC emissions for new fumigants. Registration of new fumigant VOC chemicals will require the chemical to be designated as a restricted material. This action will require rulemaking; at that time additional mitigation measures associated with its use will be adopted into regulation.

Replaced this section with the annual VOC emissions inventory report.

- Also, in section 6452.4, added the requirement that the Director will issue an annual emissions inventory report for the five NAAs. The department will base the fumigant emission limits on the most current annual emission inventory report. The report will include the analyses of pesticide VOC emissions, emission potentials, emission ratings, and regulatory strategies that will be imposed in the upcoming year to reduce VOC emissions. The report will be subjected to a 45-day public comment period. The emission inventory and all the factors (emission potentials, emission ratings, analyses) of the report will be subject to public comment.

The pesticide VOC emission inventory has been the basis of the VOC program since 1994. DPR will put into regulation the methodology that has been followed and is described in the 1994 SIP. The use of the emission inventory will ensure that annual tracking of nonfumigant pesticide emissions are part of, and accounted for, in the strategy to reduce pesticide VOCs.

- An editorial correction was made to section 6536(a).
- Amended section 6624 to add the fumigant use records requirements originally in section 6452.1 to subsection (f).
- Amended section 6626 to add the use reporting requirements originally in section 6452.1 to subsection (d). Also, added subsection (e) to require the information be reported through the existing pesticide use reporting system beginning January 1, 2009.
- Revised section (b)(3)(B)2. Table 1. Maximum Work Hours and Table 2. Maximum Work Hours in a Maximum Three (3) Workdays Per Calendar Month to add back in nontarpaulin/ shallow/bed, nontarpaulin/deep/broadcast, and drip system--hot gas application methods, since these methods will now be allowed except for in San Joaquin Valley, Southeast Desert, and Ventura ozone NAAs.

In addition, qualified applicator license application forms PR-PML-001 (Rev. 04/07) and PR-PML-141 (Rev. 04/07), and qualified applicator certificate application forms PR-PML-001A (Rev. 04/07) and PR-PML-141 (Rev. 04/07) were incorporated by reference since it would be impractical to publish these documents in the CCR.

*Cost Impacts On Representative Private Persons Or Businesses*

In the initial Notice of Proposed Regulatory Action, DPR made an initial determination that the adoption of this regulation will have a significant cost impact on representative private persons or businesses. DPR made the determination that the proposed regulation is a "major regulation" as defined in Health and Safety Code section 57005. A major regulation is any California Environmental Protection Agency (Cal/EPA) regulation that will have an economic impact of more than \$10 million on California business. DPR made this determination based upon an economic impact assessment performed by Cal/EPA-wide Economic Analysis Unit. Cal/EPA's economic impact assessment estimated the first-year cost of the regulation at approximately \$10-\$120 million.

DPR revised its analysis based on the modifications made to the originally proposed regulations. The economic impact assessment estimated the first-year cost of the regulation at approximately \$10-\$102 million, instead of the \$10-\$120 million originally estimated. The revised economic analysis was added to the rulemaking file and noticed pursuant to Government Code section 11347.1.

*Fiscal Impact to State and Local Agencies*

DPR made an initial determination that there would be no savings or increased cost to any state agency resulting from the originally proposed regulatory action. DPR also determined that there would be no cost impact to local agencies. Based on the modifications made to the originally proposed regulations, the estimated cost significantly increased to both DPR and the local county agricultural commissioners. DPR's estimated costs are \$516,000 in 2007-08, \$1.37 million in 2008-09, and \$952,000 ongoing. Revised cost estimates for the county agricultural commissioners are \$60,000 in 2007-08, \$1.3 million in 2008-09, and \$1.35 million ongoing.

PUBLIC HEARINGS

DPR scheduled and held two public hearings to receive oral comments on the proposed regulations. The hearings were held in Ontario and Parlier. Transcripts of the hearings and the hearing attendance registers are contained in the rulemaking file.

### SUMMARY AND RESPONSE TO COMMENTS RECEIVED

DPR has prepared a matrix that lists, categorizes, and summarizes the issues raised, and includes a corresponding number (and assigned commentor number) for each comment. The matrix also contains DPR's responses to each of the comments.

- Comments Received During the 45-Day Public Comment Period - Attachment A
- Comments Received During the 15-Day Public Comment Period - Attachment B

### ALTERNATIVES DETERMINATION

The Director has determined that no alternative considered by DPR would be more effective in carrying out the purpose for which this regulation is proposed, or would be as effective and less burdensome to affected private persons or businesses than the proposed regulatory change.

### POSTING REQUIREMENT

Section 6110 of Title 3 of the California Code of Regulations states in part that, "The public report shall be posted on the official bulletin boards of the Department, and of each commissioner's office, and in each District office of the DPR [Division of Pest Management, Environmental Protection and Worker Safety] for 45 days." DPR has posted its Initial Statement of Reasons and Public Report on its official bulletin board, which consists of the Department's Internet Home Page <<http://www.cdpr.ca.gov>>. In addition, copies were provided to the offices listed above for posting.