

TITLE 3. DEPARTMENT OF PESTICIDE REGULATION
Methyl Bromide Field Fumigation
DPR Regulation No. 03-004

NOTICE OF PROPOSED REGULATORY ACTION

The Department of Pesticide Regulation (DPR) proposes to repeal and readopt section 6450, adopt sections 6450.1, 6450.2, 6450.3, and amend sections 6000 and 6784 of Title 3, California Code of Regulations (3 CCR). The proposed regulatory action pertains to the use of methyl bromide when used to fumigate soil prior to the planting of agricultural crops and focuses on mitigating possible acute (short-term) and subchronic (intermediate) methyl bromide exposure hazards to the public and agricultural employees.

DPR adopted permanent methyl bromide field fumigation regulations that became effective on January 14, 2001. DPR then adopted amendments to these regulations on April 8, 2002. However, the regulations were voided by a recent court decision (*Ventura County Agricultural Association vs. DPR*) on the grounds that DPR did not adequately consult with the California Department of Food and Agriculture (CDFA) prior to noticing the regulations. DPR filed emergency regulations to repeal and readopt these regulations since it was necessary to maintain continuity and to ensure continued protection of the health and safety of workers and the public when methyl bromide is used for field fumigation. The emergency regulations became effective on September 22, 2002. While DPR reviewed new data and consulted with other agencies, some of which was required pursuant to a court settlement agreement in *Carrillo vs. DPR*, subsequent emergency regulations were refiled with the Office of Administrative Law (OAL) (effective on January 9, 2003, and May 21, 2003). The proposed regulatory action would make permanent methyl bromide field fumigation regulations.

SUBMITTAL OF COMMENTS

Any interested person may present comments in writing about the proposed action to the agency contact person named below. Written comments must be received no later than 5:00 p.m. on November 18, 2003. Comments regarding this proposed action may also be transmitted via e-mail <dpr03004@cdpr.ca.gov>.

Public hearings have been scheduled for the times and places stated below to receive oral comments regarding the proposed regulatory changes.¹

DATE: November 14, 2003
TIME: 1:00 p.m.
PLACE: California Environmental Protection Agency Headquarters Building
Coastal Hearing Room
1001 I Street,
Sacramento, California 95812

¹ If you have special accommodation or language needs, please notify DPR. TTY/TDD speech-to-speech users may dial 7-1-1 for the California Relay Service.

DATE: November 15, 2003
TIME: 1:00 p.m.
PLACE: Seaside Park
Gem and Mineral Building
10 West Harbor Boulevard
Ventura, California 93001

DATE: November 17, 2003
TIME: 6:00 p.m.
PLACE: Salinas Community Center
Sherwood Hall
940 North Main Street
Salinas, California 93906

A DPR representative will preside at the hearing. Persons who wish to speak will be asked to register before the hearing. The registration of speakers will be conducted at the location of the hearing from 12:30 to 1:00 p.m. in Sacramento and Ventura, and from 5:30 to 6:00 p.m. in Salinas. Generally, registered persons will be heard in the order of their registration. Any other person who wishes to speak at the hearing will be afforded the opportunity to do so after the registered persons have been heard. If the number of registered persons in attendance warrants, the hearing officer may limit the time for each presentation in order to allow everyone wishing to speak the opportunity to be heard. Oral comments presented at a hearing carry no more weight than written comments.

EFFECT ON SMALL BUSINESS

DPR has determined that the proposed regulatory action does affect small businesses.

INFORMATIVE DIGEST/POLICY STATEMENT OVERVIEW

Methyl bromide is a pesticide commonly used in agriculture. Methyl bromide is a gaseous fumigant used to treat soil before planting vegetable, fruit and nut crops, and flower and forest nurseries. Depending on the crop, field applications may occur annually, or once every several years. Methyl bromide is injected into the soil with specialized application equipment that lays tarpaulins over the ground to minimize off-gassing for several days. Methyl bromide is also used in other settings not covered by this rulemaking action. For example, after harvest, methyl bromide fumigation is used to protect crops from pest damage during storage and transportation. The fumigant is also used for quarantine pest control; termite eradication in homes and other structures; and to control insects in mills, ships, railroad cars, and other transportation vehicles.

Methyl bromide exposure may produce harmful effects on people. Exposure results from inhalation or absorption through the skin. Despite its potential to cause harmful effects to humans, methyl bromide still remains one of the most widely used pesticides in the world due to its outstanding efficacy against a broad range of pests and the lack of effective alternatives.

Methyl bromide is listed as a restricted material in 3 CCR section 6400(d). Possession and use of methyl bromide for agricultural production purposes are allowed only under a permit from the local county agricultural commissioner (CAC). Before issuing a permit, the CAC must evaluate the permit application to determine whether the intended use may cause a substantial adverse environmental impact based on local conditions at the application site. Depending on the results of this review, the CAC may deny the permit or impose permit conditions including the use of specified mitigation measures. In evaluating permit applications, CACs consider and, where appropriate, use information provided by DPR. For methyl bromide, DPR provides this information as suggested permit conditions. The suggested permit conditions provide mitigation measures the CAC can use and are based on DPR's analysis of available data. CACs can impose more stringent mitigation measures than in the suggested permit conditions based on the local conditions at the application site.

In 3 CCR, there are regulations pertaining to the field fumigation use of methyl bromide. In late December 2000, DPR adopted regulations focused upon mitigating possible acute (short-term) methyl bromide exposure hazards to the public and agricultural employees. Suggested permit conditions formed the foundation upon which the regulations were based.

The regulatory action amended sections 6000 (Definitions), 6450 (Chloropicrin and Methyl Bromide-Field Fumigation), and 6784 (Field Fumigation); and added sections 6450.1 (Notification Requirements), 6450.2 (Buffer Zone Requirements), and 6450.3 (Fumigation Methods). In addition to amending use restrictions and general safe-use requirements for field fumigations, new provisions that were not contained in suggested permit conditions were added. These provisions include submission of a work site plan at the time a property operator applies for a restricted materials permit, notification to neighboring property operators prior to a fumigation, extra protection for children in schools, establishment of minimum buffer zones, and new limits on work hours for fumigation employees. OAL approved the regulations DPR adopted in December 2000, and they became effective on January 14, 2001.

DPR subsequently adopted emergency methyl bromide field fumigation regulations on June 27, 2001, to amend sections 6450.2 and 6450.3(a)(1)(C)2 to provide an immediate and effective mechanism to implement appropriate mitigation measures to protect workers from acute methyl bromide exposure hazards. The regulations that became effective on January 14, 2001, had prohibited inner buffer zones from extending onto public roadways. However, DPR determined the minimal methyl bromide exposure to people traveling along roads did not warrant the restrictions. The impact of this restriction resulted in agricultural acreage being divided into smaller application blocks to be treated over several days over a longer period of time. By increasing the number of field fumigations, fumigation handlers were potentially at greater risk of acute methyl bromide exposure hazards due to the increased need to disassemble application equipment prior to transporting the equipment to the next application site. The emergency regulations allowed the inner buffer zone to extend into public roadways upon commissioner approval and corrected an improper application equipment configuration. The emergency regulations were readopted on October 25, 2001.

On February 22, 2002, DPR filed a certificate of compliance with OAL to make the emergency regulations permanent. These regulations became effective on April 8, 2002. That regulatory action also amended section 6784(b), exempting employees involved in fumigation-handling activities from maximum work-hour restrictions if National Institute for Occupational Safety and Health (NIOSH)-certified respiratory protection specifically recommended for use in atmospheres containing less than five parts per million (ppm) methyl bromide is worn for the entire duration of the fumigation-handling activities. Like the regulations that became effective on January 14, 2001, these regulations focused on mitigating possible acute (short-term) methyl bromide exposure hazards to the public and agricultural employees.

In 2002, a San Francisco Superior Court Judge ruled in *Ventura County Agricultural Association v. DPR* (consolidated with *Environmental Defense Center v. DPR*) that DPR did not adequately consult with CDFA on the development of the methyl bromide regulations as required by law and a 1992 memorandum of agreement. As a result, the court voided the regulations prompting the need to fulfill the consultation requirements with CDFA and readopt the regulations. Although DPR disagrees with the judge's ruling that it failed to consult adequately with CDFA before finalizing the methyl bromide regulations that became effective on January 14, 2001, in the interest of expediency, DPR decided not to appeal the ruling.

At the same time, DPR was in the process of settling another case involving methyl bromide, *Carrillo vs. DPR and Monterey County Agricultural Commissioner*. DPR agreed to review and consider the regulation of subchronic methyl bromide exposure when repromulgating the methyl bromide field fumigation regulations. The repromulgation would be needed because of the *Ventura County Agricultural Association* case, which voided the existing regulations. Because of the additional review and consultation duties that resulted from the *Carrillo* case settlement agreement, DPR filed emergency regulations with OAL (OAL File No. 02-0910-01E) before the stay of the Court's order expired on September 23, 2002. The emergency regulations became effective on September 22, 2002. DPR readopted the emergency regulations (OAL File No. 03-0109-01EE), which became effective on January 21, 2003, as additional air monitoring results from the 2001 use season and new subchronic toxicity studies that potentially could be used to support the permanent regulations were under review.

DPR conducted risk assessments to address the potential risk associated with human exposure to methyl bromide in California. After peer reviewing the draft *Methyl Bromide RCD* (DPR, 1999), the National Research Council subcommittee recommended additional studies, in particular a new subchronic toxicity study, and exposure monitoring to better characterize the risk. In 2002, DPR finalized the *Methyl Bromide Risk Characterization Document For Inhalation Exposure* (DPR, 2002) in response to the recommendations made by NRC. It included the data from ambient air monitoring conducted in several counties in 2000 and 2001 during high use periods. Further, DPR staff prepared a document entitled *Methyl Bromide Risk Characterization Document For Inhalation Exposure Addendum to Volume I* (DPR, 2003), which is an addendum to the completed risk assessment and reviews all data received to date, including a newly submitted subchronic toxicity study. The newly submitted study was reviewed by scientists from

the University of California.

After completion of the Addendum, on February 26, 2003, DPR held a public workshop to present staff analysis on subchronic exposure levels to methyl bromide. DPR solicited public comments on an appropriate target value for subchronic exposures. After the workshop, DPR requested an additional toxicology review from the U.S. Environmental Protection Agency (U.S. EPA). After consideration of all the comments and reviews, DPR scientists have recommended the subchronic exposure levels of 16 parts per billion (ppb) for adults, and 9 ppb for children. These target levels will provide an adequate margin of safety for human subchronic exposure to methyl bromide. The DPR target level for acute exposure is 210 ppb (24-hour time-weighted average)-- the same target level used to develop the current emergency methyl bromide field fumigation regulations. (The documents used to support the current regulations refer to the concentration level of 0.21 ppm. The 0.21 ppm is equivalent to 210 ppb, and will hereafter be referred to as 210 ppb).

In addition to the toxicology study evaluations, DPR staff analyzed the 2000 and 2001 methyl bromide air monitoring data, and established some empirical relationships between the ambient air concentration and the field fumigation use of methyl bromide in certain areas and periods. The air monitoring and DPR's analysis was discussed at a public workshop on June 28, 2002.

DPR consulted with other state agencies, air pollution control districts, CACs, and the University of California to determine if mitigation measures should be considered to protect the public and agricultural employees from possible subchronic methyl bromide exposure hazards. Because of this extensive review and consultation process, some of which is required pursuant to the settlement agreement in the *Carrillo* case, it was necessary for DPR to readopt the emergency regulations that are the currently in effect. The readopted emergency regulations became effective on May 21, 2003.

The proposed action would permanently adopt methyl bromide field fumigation regulations focusing on mitigating possible acute and subchronic methyl bromide exposure hazards to the public and agricultural employees.

The "shaded areas" of the proposed text show language that is not in the existing emergency regulations and are being provided as a convenience to the reader.

6000. Definitions.

This section contains proposed definitions for "application block" and "buffer zone." These definitions are needed for the proposed regulatory action.

6450. Chloropicrin and Methyl Bromide-Field Fumigation.

Methyl bromide may be used singly or in combination with chloropicrin or other pesticides. These regulations pertain to field soil fumigation use requirements using methyl bromide and are

intended to mitigate exposures to methyl bromide used during field fumigations.

Proposed section 6450 specifies what is required in a proposed work site plan and what information a CAC shall include when conditioning a permit to use methyl bromide. The section also includes limits on the size (acreage) of an application block and specifications for the tarpaulins that are often used in field fumigations.

Proposed section 6450 clarifies that field fumigation does not apply to golf courses, tree holes, potting soil, greenhouses, and other similar structures. The proposed regulatory action focuses upon preplant field soil fumigations pertaining to the production of agricultural commodities. Greenhouse, golf course, potting soil, tree hole fumigations, and raised-tarpaulin nursery fumigations of less than one acre may be addressed in future regulatory actions. In addition, since the definition for "field" in section 6000 includes greenhouses, this statement is needed for consistency. Proposed section 6450 also clarifies and defines certain employee tasks that are considered "fumigation handling activities." This means employees involved in assisting with covering the tarpaulin at the end of the rows (shoveling); observing the overall operation, checking proper tarpaulin placement, changing cylinders (copiloting); operating application equipment (driving); tarpaulin cutting; and tarpaulin removal prior to the expiration of the restricted entry interval.

Subsection (a) pertains to a proposed work site plan. The operator of the property where the fumigation will take place shall provide a proposed work site plan to the CAC for evaluation at least seven days prior to submitting a notice of intent. Subsection (a) specifies what is to be included in the proposed work site plan and that the plan shall be retained by the CAC for one year after permit expiration.

Proposed subsection (b) states that the CAC, pursuant to section 6432 (Permit Evaluation), shall evaluate local conditions and the proposed work site plan.

Proposed subsection (c) specifies the information CACs shall include when "conditioning" a permit. The permit conditions shall include buffer zone requirements, work hour restrictions, notification requirements, any other restrictions to address local conditions, and if applicable, a description of the tarpaulin repair response plan and tarpaulin removal. The CAC evaluation and conditioning of the permit is to be completed before the permittee submits a notice of intent.

Proposed subsection (d) limits the size of an application block to 40 acres.

Proposed subsection (e) specifies permeability factors for tarpaulins used in fumigations. Tarpaulins meeting specified gas-retention standards are added to a list of DPR-approved tarpaulins maintained by the Department. This list is available from DPR.

Proposed subsection (f) requires that tarpaulins shall be buried under at least four inches of firmly packed soil at the ends of the rows and remain in place for the time specified in proposed section 6450.3.

Proposed subsection (g) states that fumigation equipment is to be operated to eliminate pesticide drip by clearing the fumigant from the injection device before it is lifted from the soil.

Proposed subsection (h) limits that amount of methyl bromide that can be applied in any calendar month to 270,000 pounds in any township.

6450.1. Methyl Bromide Field Fumigation Notification Requirements.

Proposed section 6450.1 incorporates into regulation specific notification requirements pertaining to methyl bromide field fumigations. It covers notification requirements for property operators prior to fumigation of their property. DPR has specified time frames for notification of the CAC and neighboring property operators prior to a fumigation.

Proposed subsection (a) "Notification to the Commissioner," specifies what information a restricted materials permit holder must provide to the CAC and when it must be provided. A permittee would be required to notify the CAC at least 48 hours prior to fumigating a property and provide the hour the fumigation is intended to commence along with the information specified in section 6434(b). Subsection (a) also would require that a new notice of intent be submitted to the CAC if the fumigation does not commence within 12 hours of the intended starting time specified on the original notice of intent. However, the 48-hour requirement does not apply unless required by the CAC. In addition, this subsection contains notification provisions for multiple application blocks that are to be fumigated sequentially.

Proposed subsection (b) is entitled "Notification to Property Operators." Subsection (b) would require the operator of the property to be treated to assure that operators of specified properties within 300 feet from the outer buffer zone perimeter are notified that a permit has been issued by the CAC. The specified properties are those that contain schools, residences, hospitals, convalescent homes, onsite employee housing, or other similar sites identified by the CAC.

Notification shall be in writing, or by other means approved by the CAC. 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 content of the notification is to include the name of the chemical(s) to be applied, the name, business address, and telephone number for both the operator of the property to be treated and local CAC, the earliest and latest dates that the fumigation will start, and how to request subsequent notification of the specific date and time of the fumigation.

For the notified persons that subsequently request specific fumigation information, the operator of the property to be treated shall provide it to them 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.

6450.2 Methyl Bromide Field Fumigation Buffer Zone Requirements.

Proposed section 6450.2 incorporates into regulation specific information pertaining to buffer zones. It establishes minimum buffer zone distances and durations, limits activities that can occur in a buffer zone, and includes special protections for schools.

Proposed subsection (a) states that the CAC shall approve buffer zone sizes and durations based upon local conditions. The CAC shall rely upon the information provided in *Methyl Bromide Field Fumigation Buffer Zone Determination, Est. 6/03*, to condition restricted material permits unless the CAC determines, based on other information, that deviation from the information provided can be made in a way that assures equal or less exposure. The CAC shall consult with the director prior to approving any deviation resulting in buffer zone sizes or durations less than specified in the *Methyl Bromide Field Fumigation Buffer Zone Determination, Est. 6/03*. At no time shall the inner buffer zone be less than 50 feet, and the outer buffer zone be less than 60 feet, or the buffer zone durations be less than 36 hours. The document entitled, *Methyl Bromide Field Fumigation Buffer Zone Determination, Est. 6/03*, is being incorporated by reference and is available from the Department upon request.

Proposed subsection (b) specifies how a buffer zone shall be measured. Buffer zone distances are measured from the perimeter of the application block.

Proposed subsection (c) states that buffer zones 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.

Proposed subsection (d) specifies two buffer zones--an inner and outer--to be determined by the CAC after the proposed work site plan is submitted. These zones can be visualized as concentric rings around an application block.

Proposed subsection (e), entitled "Inner Buffer Zone Restrictions," specifies that an inner buffer zone shall be at least 50 feet. Activities in an inner buffer zone are limited to fumigation handling activities and transit through the zone.

An inner buffer zone shall not extend into adjoining property unless certain requirements are met. The property must be an agricultural property and the adjoining property operator must give written permission and allow the operator of the property to be treated to post the inner buffer zone on the adjoining property with signs. With approval from the CAC, 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 means of travel. If the CAC is not convinced that possible access by road crews and utility workers will not be a problem, he/she can disapprove the extension of the inner buffer zone across the site.

Proposed subsection (f), entitled "Outer Buffer Zone Restrictions" specifies that an outer buffer zone shall be at least 60 feet. Only fumigation handling, transit, and CAC-approved activities

would be allowed in an outer buffer zone while it is in effect. CAC-approved outer buffer zone activities must be identified in the restricted material permit conditions and cannot exceed 12 hours in a 24-hour period. The outer buffer zone may extend into adjoining property with the permission of the adjoining property operator. 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 CAC. The outer buffer zone may extend across roads, highways, or similar means of travel or sites approved by the CAC.

Proposed subsection (g) requires that the operator of the property to be treated shall assure that the operator of the other specified properties into which a buffer zone may extend notify onsite employees, including those of a licensed pest control business or farm labor contractor, that a buffer zone(s) has been established on the property. 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.

Proposed subsection (h) requires that if the operator of the other property notifies his/her employees as specified in (g), then 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. This specific fumigation notification shall be provided to the other property operator at least 48 hours prior to starting the fumigation.

Proposed subsection (i) states that when a school property is within 300 feet of the perimeter of the outer buffer zone, the injection shall be completed 36 hours prior to the start of a school session. School session shall be those times when students are attending scheduled classes. It is not intended to include times before or after school, or on evenings, weekends, or holidays during which people may be present on the school grounds for educational, extracurricular, administrative, maintenance, or community activities.

6450.3 Methyl Bromide Field Fumigation Methods.

Proposed section 6450.3 lists the allowable methods of soil field fumigation, the requirements for each, and some general restrictions.

Proposed subsection (a) lists, on a method-by-method basis, the field soil fumigation methods that will be allowed. For each method, DPR has included application rates, equipment specifications, tarpaulin cutting and removal times (if applicable), and restricted entry intervals. An exception to the restrictions of this section is allowed for experimental research purposes covered under a valid research authorization issued pursuant to section 6260.

Notwithstanding section 6770, proposed subsection (b) would restrict persons entering an application block before the restricted entry interval expires except to perform tarpaulin cutting, removal, and repair as described in section 6784(b)(4) and (5). This proposed action would

further reduce potential exposure to fumigation handlers.

6784. Field Fumigation.

Proposed section 6784 includes employer recordkeeping requirements, limits on work hours for employees involved in those activities, and procedures for tarpaulin cutting, removal, and repair.

Current subsection 6784(a) has been relocated to subsection (b)(2)(B).

Proposed subsection (a) states that signs required be posted in accordance with section 6776(f) shall remain in place until aeration is complete.

The introductory sentence in subsection (b) clarifies that the subsection pertains to field soil fumigations in which methyl bromide is used singly or in combination with chloropicrin or any other pesticide or warning agent pursuant to the fumigation methods described in section 6450.3.

Proposed subsection 6784(b)(1) states that the employer shall maintain records for all employees involved in application, tarpaulin cutting, tarpaulin repair, and tarpaulin removal activities. The records shall identify the person, work activity(ies), date(s), duration of handling, the U.S. EPA 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.

Proposed subsection 6784(b)(2)(A) specifies that shovelers (employees that cover the edges of the tarpaulins with soil at the end of the treatment rows) are allowed to work only at the ends of the application rows unless respiratory protection specified in 6487(b)(6) is worn. Subsection (b)(2)(B) requires that two employees be present during introduction of the fumigant and during removal of the tarpaulins.

Proposed subsection 6784(b)(3) specifies work hours and workdays limitations. This subsection includes two tables, Table 1--Maximum Work Hours, and Table 2--Maximum Work Hours in a Maximum Three (3) Workdays per Calendar Month. These tables list the maximum employee work hours in a 24-hour period, during the injection period and the restricted entry interval for various methods of applications.

Proposed subsection 6784(b)(4)(A) requires that unsealing of tarpaulins be discontinued at any time if the presence of gas is readily evident. This is evidence by onset of eye irritation or odor.

Proposed subsection 6784(b)(4)(B) covers the cutting procedures required in tarpaulin broadcast fumigations. Only mechanical methods (all-terrain vehicle or tractor with a cutting wheel) can be used and tarpaulin panels must be cut lengthwise.

In proposed subsection 6784(b)(5), DPR is requiring property operators to provide a "tarpaulin repair response plan" to the CAC. The tarpaulin repair response plan is to be approved by the CAC in the work site plan and 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 and size of the damaged area(s); timing of damage; feasibility of repair; and environmental factors such as wind speed and direction. In addition, a certified applicator of the licensed pest control business, using a testing device as specified by the pesticide product labeling, must test the ambient air in the areas in which tarpaulins are to be repaired. Self-contained breathing apparatus must be worn when conducting these tests. During repair activities, employees must wear respiratory protection if there is five ppm or greater methyl bromide concentration in the work area. If there is less than a five ppm methyl bromide concentration, respiratory protection is not required, but employees involved in tarpaulin repair activities are limited to one work hour in a 24-hour period unless respiratory protection specified in subsection 6784(b)(6) is worn.

Proposed subsection 6784(b)(6) would require fumigation handlers to wear NIOSH-certified respiratory protection specifically recommended by the manufacturer for use in atmospheres containing less than five ppm methyl bromide, if required by section 6784. Fumigation handlers would be required to wear the required respiratory protection during the entire duration of the fumigation-handling activity and any requirements for respiratory protection on the product label shall not be superceded by this regulation. NIOSH-approved, air-supplying respiratory protection could be used in lieu of chemical cartridge respirators.

IMPACT ON LOCAL AGENCIES OR SCHOOL DISTRICTS

DPR has determined that the proposed regulatory action does not impose a mandate on local agencies or school districts, nor does it require reimbursement by the State pursuant to Part 7 (commencing with section 17500) of Division 4 of the Government Code, because the regulatory action does not constitute a "new program or higher level of service of an existing program" within the meaning of section 6 of Article XIII of the California Constitution. DPR has also determined that no nondiscretionary costs or savings to local agencies or school districts are expected to result from the proposed regulatory action.

CAC offices will be the local agencies responsible for enforcing the proposed regulations. DPR anticipates that there will be no fiscal impact to these agencies because CACs will be following the same permit evaluation process that is currently performed. CACs already approve buffer zones during this permit evaluation process pursuant to section 6450.2(d). Processing permit applications falls under the current pesticide enforcement program that includes a negotiated work plan. DPR negotiates with the CACs an annual work plan for enforcement activities.

COSTS OR SAVINGS TO STATE AGENCIES

DPR has determined that no savings or increased costs to any State agency will result from the proposed regulatory action.

EFFECT ON FEDERAL FUNDING TO THE STATE

DPR has determined that no costs or savings in federal funding to the State will result from the proposed action.

EFFECT ON HOUSING COSTS

DPR has determined that the proposed action will have no effect on housing costs.

SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT DIRECTLY AFFECTING BUSINESSES

DPR has made an initial determination that adoption of this regulation will not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states. However, there will be additional economic impacts beyond that already incurred by businesses since the regulations were initially adopted.

DPR made its economic impact determination based upon two economic impact assessments performed by the California Environmental Protection Agency's (Cal/EPA's) Agency-Wide Economic Analysis Unit. The economic impact assessments are listed in the "Documents Relied Upon" section of the Initial Statement of Reasons for this proposed regulatory action and are available from DPR.

After noticing the originally proposed text for the initial regulatory proposal on January 10, 2000, DPR received and considered many comments and subsequently incorporated some of them into modified texts. Comments received during the first and second 15-day public comment periods for the modified texts confirmed that the changes would make the regulations less burdensome to affected private persons or businesses than the regulations as originally proposed. The modifications became effective in January 2001.

Growers who use methyl bromide for field soil fumigation prior to planting agricultural crops have incurred new restrictions on the use of this pesticide since DPR's regulations became effective on January 14, 2001. Pest control businesses that apply methyl bromide as a field soil fumigant have also been impacted. The economic impacts include a reduction in the number of allowable methyl bromide application methods, larger buffer zone areas surrounding methyl bromide application sites, new provisions pertaining to notification of adjoining property operators prior to a fumigation, and limits on work hours for fumigation handling employees. In addition, operators of properties to be fumigated have had to complete and submit to their local CAC a work site plan at least seven days prior to submission of the notice of intent.

Some businesses (growers) have incurred a significant adverse economic impact because they cannot provide the required buffer zones. These are primarily growers with smaller fields, those located near sensitive areas, those who must use methods with larger buffer zone requirements,

those that cannot secure permission from neighbors for an extension of a buffer zone onto adjoining property, and those that cannot use one of the available substitutes. Even those that incurred a significant impact the first year of the regulation will probably be more seriously affected by the federal methyl bromide phaseout that began in 2001. DPR cannot predict the proportion of growers that will be significantly affected.

Some growers may not have incurred a significant adverse economic impact because they have untreated land available to serve as a buffer zone, they can use application methods with lower buffer requirements, and apply in the off-peak application season.

DPR assumed at the time the first economic impact assessment was conducted that commercial applicators would pass on some additional application costs to growers. In addition, DPR assumed that the acreage treated in California would be determined by the amount of methyl bromide available in the market, so the regulation would not reduce the acreage treated by the commercial applicators.

Cal/EPA's Agency-Wide Economic Analysis Unit prepared a second economic impact assessment for the methyl bromide regulations DPR adopted in April 2002. The amendments adopted at that time substantially mitigated the impact of the previous regulations to directly affected businesses.

The second Cal/EPA economic impact assessment indicated that two provisions of the regulations noticed on December 14, 2001, would reduce compliance costs to those applying methyl bromide by reducing the number of treatment days required. The regulation allowed inner buffer zones to extend across roadways and exempt workers equipped with NIOSH-certified respirators from restrictions on the time they spend applying methyl bromide. Data limitations precluded an estimate of the amount of reduced compliance costs.

Under the regulations that became effective on January 14, 2001, the inner buffer zone could extend across property lines if the adjoining land was agricultural and the owner gave permission. If the land had other uses, was a public roadway, or the owner did not give permission, the buffer zone could not extend beyond the property line. That increased the amount of field area that fell within the minimum buffer zone. The grower would then have to determine which was more costly--leaving the area untreated or building up the buffer zone with a series of treatments over several days.

DPR has tables within the suggested permit conditions that relate treated area and amount of methyl bromide used to determine the size of the buffer zones required. These tables have a minimum buffer zone, which is 50 feet for the inner buffer zone, for each main application method. To minimize untreated land, applicators select the largest initial treatment area that would result in a buffer zone of the minimum size. The initial area treated can then be used as buffer zone for later treatments, so the area treatable in one day can be increased. The tables will be incorporated by reference in the proposed regulations in the document, *Methyl Bromide Field Fumigation Buffer Zone Determination, Est. 6/03*.

Allowing the inner buffer zone to extend across roadways could dramatically reduce the amounts of acres left untreated and reduce the number of treatment days. If the land across the roadway from the property to be treated was also agricultural, the buffer zone could be made large enough that no land would be left untreated and the area that qualifies as an isolated block ceases to constrain the area treated in one day.

The regulations prior to April 8, 2002, also restricted the number of hours crews could apply methyl bromide. This limited the maximum number of acres the crews could treat in a day. If the field was larger than the allowable number of acres, the crew had to return another day to complete the treatment or additional crews had to be brought in. The post-April 8, 2002, regulation exempted workers from the time restrictions if they were equipped with a certain type of respirator.

The number of acres a crew could treat in one day would be determined by the application method and the size of the treatment block allowed, given the available buffer zones. By simultaneously relaxing the two constraints of buffer zone restrictions and work hour limitations, application workers could complete a field fumigation with fewer trips and with less land left untreated. Crews completing a fumigation in one day could also move to another field the same day, which was less likely to occur under the regulations that became effective on January 14, 2001.

After those regulations became effective, DPR received reports of a 10 to 30 percent increase in the number of treatment days. However, DPR does not know how much of this increase was due to the inability to extend buffer zones across roadways, the inability to extend the buffer zones into nonagricultural property, instances where neighbors refuse to allow the extension across property lines, or where worker daily hour limitations limit application times. DPR also does not know in how many cases the inability to extend the inner buffer zones results in applicators being unable to treat an entire field. Consequently, the number of growers that will benefit from the regulations adopted on April 8, 2002, is unclear.

Application companies should observe a net decrease in costs for performing methyl bromide fumigations, due to reduced labor costs and a lower equipment cost as rigs are not left idle. However, some of this cost reduction would be offset when applicators purchase the more expensive compliant respirators. Some of these cost reductions would be passed on to growers in the form of lower fees charged by the applicators. Growers would benefit from increased yields in parts of their fields as the amount of area left untreated decreases.

The proposed regulation limits the amount of methyl bromide used in any township in any calendar month. Since no township had a monthly use level that exceeded the reference concentration levels in 2001, and with the continuing federal phaseout of methyl bromide, DPR does not anticipate this mitigation measure to impact businesses.

In March 2002, the University of Davis, Department of Agricultural and Resource Economics, completed an economic analysis entitled *Economic Analysis of the Effects of the January 2001 DPR Methyl Bromide Fumigation Regulations on the California Strawberry Industry*. This is listed in the "Documents Relied Upon" section of the Initial Statement of Reasons. This document provides an analysis of the economic effects of the regulations implemented in January 2001.

No other less burdensome alternatives were received, identified, or evaluated in response to DPR's subsequent regulations that were noticed on December 14, 2001, and then adopted on April 8, 2002.

Since then, DPR has not identified or received any proposed alternatives that would lessen any adverse economic impact on businesses and invites you to submit proposals. Submissions may include the following considerations:

- (A) The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small businesses.
- (B) Consolidation or simplification of the compliance and reporting requirements for businesses.
- (C) The use of performance standards rather than prescriptive standards.
- (D) Exemption or partial exemption from the regulatory requirements for businesses.

IMPACT ON THE CREATION, ELIMINATION, OR EXPANSION OF JOBS

DPR has determined it is unlikely the proposed regulatory action will impact the creation or elimination of jobs, the creation of new businesses or the elimination of existing businesses, or the expansion of businesses currently doing business with the State of California.

DPR previously determined that the regulation originally noticed on January 10, 2000, would impose a significant economic impact on some application workers but not adversely affect the creation or elimination of jobs. The worker schedule restrictions would limit the number of hours trained application workers could remain in the fields in a 24-hour period. For some application methods, the decrease could be by more than one-half of their current daily work hours. Commercial applicators would then have to recruit more workers and redistribute work hours to them. Thus, even if there were no net decrease in the total number of labor hours demanded, some workers would be adversely affected by the redistribution. There would be no change in the number of full-time jobs, as the newly-recruited application workers would be transferred from other application activities. Most likely some workers would see additional hours available to them.

For the subsequent regulations that became effective on April 8, 2002, DPR stated that if the regulation did reduce the number of additional days required to treat fields with methyl bromide, there would be a reduction in the number of worker hours needed to transport, assemble, and disassemble equipment. This might represent a decrease in income for the workers performing

these tasks. However, the reduction was not expected to be large enough to result in a significant adverse economic impact on workers. Moreover, the regulation might allow application companies to reduce the amount of time their application rigs were used on each field treated with methyl bromide. The companies might be able to find additional application jobs, in which case the workers might not observe any decrease in work hours. Many of the workers involved in the transport could be workers whose time spent applying methyl bromide is limited by the existing regulations. These workers would be able to spend more of their time in the higher paying application tasks rather than transporting equipment.

COST IMPACTS ON REPRESENTATIVE PRIVATE PERSONS OR BUSINESSES

For the regulation noticed on January 10, 2000, DPR had determined that it was a "major regulation" as defined in Health and Safety Code section 57005. A major regulation is any Cal/EPA regulation that will have an economic impact of more than \$10 million on California business. The Cal/EPA economic impact assessment estimated the first-year cost of the regulation at around \$16 million. Due to data limitations, several strong assumptions were required in order to develop adjustments to the estimate. The economic impact assessment addressed these assumptions and the adjustments made to the estimates, as well as the overall reliability of the estimate.

Due to the continuing federal phaseout of methyl bromide, the regulation was expected to impose significantly lower costs in subsequent years. Beginning in 2001, the supplies available in the U.S. would be 50 percent of the 1991 level. DPR felt it was likely that few growers would be able to secure sufficient supplies to treat their entire planned acreage. Acreage that cannot be treated due to the reduced supply could then be used to satisfy buffer zone requirements. Estimates of the acreage required to satisfy the inner buffer zone amounted to about 14 percent of acreage treated from 1995-98. Given the magnitude of the supply reduction, the amount of untreatable acreage could be much higher. Thus, growers were expected to face reduced costs of satisfying the inner buffer zone requirement beginning in 2001. Growers would continue to face the costs of notification and additional partial treatments.

For the regulations noticed on December 14, 2001, and then adopted on April 8, 2002, DPR made an initial determination that their adoption would not have a significant cost impact on representative private persons or businesses. DPR determined that no businesses were expected to incur a significant adverse economic impact. DPR determined that there would be a significant reduction in compliance costs to those applying methyl bromide to agricultural fields. Allowing applicators to extend the "inner" buffer zone across roadways should reduce the number of sequential partial treatments required to treat a field, which would reduce the labor cost of transporting, assembling, and disassembling application equipment. Some of the cost reduction would be passed through to growers in the form of lower application fees. Growers could also benefit from more timely applications if the proposed regulation reduces the amount of time rigs are used to treat each field.

The extent of potential compliance cost reductions would depend on individual field characteristics, such as size, distance to roadways, and the presence of sensitive sites. The absence of data on these characteristics precluded an estimate of the amount of reduced compliance costs.

The proposed regulation would require the use of respiratory protection, in most cases, if an employee who performs fumigation-handling activities works more than three days in a calendar month. Equipping workers with the compliant chemical cartridge respirators would cost about \$25 per worker per day. The total cost per day would depend on crew size, which varies by field size and the application method being used. Under the previously adopted regulations, the applicators could choose to use the respiratory protection equipment when the equipment cost is less than the cost of having to return to the field another day to complete the treatment. As an option, the proposed regulations provides the use of air-supplying respiratory protection in lieu of chemical cartridge respirators. Although the initial cost of this type of respiratory protection may be higher, over a period of time it may be more cost effective.

The use of respiratory protection for potentially all handlers of methyl bromide will trigger the requirements of 3 CCR section 6738(h). Since methyl bromide handlers will, in most cases, be required to wear NIOSH-approved respiratory protection, they must fulfill the section 6738(h) requirements of training, fit testing, cleaning and disinfecting, and medical review. Though the tractor driver and the copilot of a methyl bromide application crew may already be required to wear respiratory protection in some instances (hence already in compliance with section 6738), the proposed regulations draw all other associated crew members (i.e., shovelers, tarpaulin cutters and removers, etc.) into the respirator requirements. This will require an additional cost in training and outfitting these workers.

CONSIDERATION OF ALTERNATIVES

DPR must determine that no reasonable alternative considered by it, or that has otherwise been identified and brought to its attention, would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons or businesses than the proposed regulatory action.

AUTHORITY

This regulatory action is taken pursuant to the authority vested by Food and Agricultural Code sections 11456, 12976, 12981, 14005, 14102, and 11502.

REFERENCE

This regulatory action is to implement, interpret, or make specific Food and Agricultural Code sections 11501, 12981, 14006, and 14102.

AVAILABILITY OF STATEMENT OF REASONS AND TEXT OF PROPOSED REGULATIONS

DPR has prepared an Initial Statement of Reasons, and has available the express terms of the proposed action, all of the information upon which the proposal is based, and a rulemaking file. A copy of the Initial Statement of Reasons and the proposed text of the regulation may be obtained from the agency contact person named in this notice. The information upon which DPR relied in preparing this proposal and the rulemaking file are available for review at the address specified below.

AVAILABILITY OF CHANGED OR MODIFIED TEXT

After the close of the comment period, DPR may make the regulation permanent if it remains substantially the same as described in the Informative Digest. If DPR does make changes to the regulation, the modified text will be made available for at least 15 days prior to adoption. Requests for the modified text should be addressed to the agency contact person named in this notice. DPR will accept written comments on any changes for 15 days after the modified text is made available.

AGENCY CONTACT

Written comments about the proposed regulatory action, requests for a copy of the Initial Statement of Reasons and/or the proposed text of the regulation, and inquiries regarding the rulemaking file may be directed to:

Linda Irokawa-Otani, Regulations Coordinator
Office of Legislation and Regulations
Department of Pesticide Regulation
P.O. Box 4015
Sacramento, California 95812-4015
(916) 445-3991

Questions on the substance of the proposed regulatory action may be directed to:

Randy Segawa, Sr. Environmental Research Scientist
Environmental Monitoring Branch
Department of Pesticide Regulation
(916) 324-4137

This Notice of Proposed Action, the Initial Statement of Reasons, and the proposed text of the regulation are also available on DPR's Internet Home Page <<http://www.cdpr.ca.gov>>.

AVAILABILITY OF FINAL STATEMENT OF REASONS

Following its preparation, a copy of the Final Statement of Reasons mandated by Government Code section 11346.9(a) may be obtained from the contact person named above. In addition, the Final Statement of Reasons will be posted on DPR's Internet Home Page and accessed at <<http://www.cdpr.ca.gov>>.

DEPARTMENT OF PESTICIDE REGULATION

Director

Date