INITIAL STATEMENT OF REASONS AND PUBLIC REPORT
DEPARTMENT OF PESTICIDE REGULATION

Title 3. California Code of Regulations
Amend Sections 6447, 6447.2, and 6784
Pertaining to Methyl Bromide Field Fumigation

This is the Initial Statement of Reasons required by Government Code section 11346.2, and the public report specified in section 6110 of Title 3, California Code of Regulations (3 CCR). Section 6110 meets the requirements of Title 14, CCR section 15252, and Public Resources Code section 21080.5 pertaining to certified state regulatory programs under the California Environmental Quality Act.

SUMMARY OF PROPOSED ACTION/PESTICIDE REGULATORY PROGRAM ACTIVITIES AFFECTED

The Department of Pesticide Regulation (DPR) proposes to amend 3 CCR sections 6447, 6447.2, and 6784. The pesticide regulatory program activities that will be affected by the proposal are those pertaining to restricted materials and worker safety. In summary, the proposed 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 subchronic (intermediate) methyl bromide exposure hazards to the public and agricultural employees. The proposed action would revise the limits on the amount of methyl bromide that can be applied in any calendar month in any township; prohibits county agricultural commissioners (CACs) from using buffer zone sizes smaller and durations shorter than specified in the *Methyl Bromide Field Fumigation Buffer Zone Determination* document incorporated by reference; revises the maximum employee work hours in a 24-hour period while engaged in the injection process and during the restricted entry interval for various methods of applications; and makes a clarifying change to the description of the National Institute for Occupational Safety and Health (NIOSH)-certified respirator that must be used when required by employees involved in field fumigation.

SPECIFIC PURPOSE AND FACTUAL BASIS

Methyl bromide is a gaseous fumigant used to treat soil before planting vegetable, fruit, and nut crops and flowers. 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 can cause harmful effects on people depending on the exposure situation and precautions that are taken. Human exposure results from inhalation or absorption through the skin. 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 restricted materials permit from the local 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 late December 2000, DPR adopted regulations focused upon mitigating possible acute (short-term) methyl bromide exposure hazards to the public and agricultural employees. These regulations are found in 3 CCR. In September 2004, DPR submitted regulations to the Office of Administrative Law (OAL) File No. 04-0921-01C) that, in part, focused on mitigating subchronic methyl bromide exposure hazards to the public and agricultural employees. Subchronic exposure refers to seasonal exposure to workers and the public over a period of weeks. The regulations were approved by OAL on November 3, 2004. As required by Food and Agricultural Code (FAC) sections 12980 and 12981, the Office of Environmental Health Hazard Assessment (OEHHA) provided DPR with health-based recommendations.

In December 2004, a lawsuit was filed *[Fernandez v. Department of Pesticide Regulation (San Francisco County Superior Court No. CPF-04-504781)]* alleging, in part, that the regulations were not developed jointly and mutually with OEHHA and were not based on OEHHA's recommendations. On February 24, 2006, the judge found that DPR violated its duty to develop the regulations jointly and mutually with OEHHA and did not base the regulations on OEHHA's recommendations. DPR appealed this decision.

In July 2008, the First Appellate District Court of Appeal *[Fernandez v. Department of Regulation (164 Cal. App. 4th 1214)]* affirmed the lower court decision. The Court concluded that DPR must collaborate with OEHHA in determining the health risks from methyl bromide. DPR was ordered to repromulgate sections of the regulations jointly and mutually with OEHHA.

In November 2008, DPR and OEHHA jointly and mutually began developing regulations to mitigate the health effects to workers resulting from subchronic exposure to methyl bromide pursuant to FAC section 12980. On March 23, 2009, OEHHA provided DPR with a memorandum identifying its health-based recommendations for bystander's subchronic inhalation exposure to methyl bromide. On September 3, 2009, OEHHA provided DPR with an additional memorandum identifying its health-based recommendations specifically for adult workers.

In a joint memorandum dated July 31, 2009, OEHHA agreed that DPR, as the risk manager, would develop a risk management directive to provide parameters for the development of amendments to 3 CCR sections 6447(h) and 6784(b)(3)(B) to mitigate the health effects to

bystanders and workers resulting from subchronic exposures to methyl bromide. OEHHA agreed to work with DPR to implement that risk management directive.

On September 21, 2009, DPR issued a risk management directive that established a range of regulatory target levels unlikely to cause adverse health effects, and enumerated the factors that were taken into consideration in making that determination, including OEHHA's health-based recommendations. DPR and OEHHA staff were directed to develop mitigation measures to meet the range of specific target levels identified in that directive. Upon completion of OEHHA and DPR staff work based on the September 21, 2009 risk management directive, DPR issued a risk management decision on January 29, 2010. It directed OEHHA and DPR staff to develop specific regulatory amendments that would establish mitigation measures designed to reach the regulatory target levels identified in the DPR risk management decision. The decision was based upon the feasibility and practicality of implementing the mitigation measures for each target level, and the ability of DPR and the CACs to adequately enforce them.

The following is a description of each of the proposed amendments to the existing regulations:

- Amend Section 6447(h)

  Currently, section 6447(h) requires DPR, in coordination with the CACs, to ensure that ambient air concentrations of methyl bromide do not exceed an average daily nonoccupational exposure of nine parts per billion (ppb) in a calendar month.

  Under the January 2010 DPR risk management decision discussed above, the regulatory target level was lowered to the more health protective level of five ppb. DPR proposes to reduce the maximum amount of methyl bromide that can be applied for agricultural use in any township in a calendar month. Under this proposal, a township cap will be established at 171,625 pounds. Township caps will be enforced via permit conditions.

- Amend Section 6447.2(a)

  As defined in section 6000, a buffer zone is the area that surrounds a pesticide application block in which certain activities are restricted to protect human health and safety from existing or potential adverse effects associated with a pesticide application. A buffer zone is not an exclusion zone in which all entry is prohibited. Section 6447.2 contains specific information pertaining to buffer zones. This section establishes minimum buffer zone distances and duration, limits activities that can occur in a buffer zone, and includes special protections for schools. The CAC approves buffer zone sizes and durations based upon local conditions. The CAC relies upon the information provided in DPR's *Methyl Bromide Field Fumigation Buffer Zone Determination, Est. 2/04*, to condition restricted material permits and to determine the buffer zones required by the permit. Under the current regulation, the CAC uses the buffer zone in the referenced document unless the CAC determines based on other information that a deviation can be made in a way that assures equal or less exposure. Although CACs currently can approve buffer zones that are smaller and shorter in duration than specified in the DPR buffer zone determination document, the current regulation additionally specifies that 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.

DPR proposes to amend subsection (a) to prohibit CACs from using buffer zone sizes smaller and durations shorter than specified in the *Methyl Bromide Field Fumigation Buffer Zone Determination* document. Consequently, the current requirements for CACs to justify a deviation from the buffer zones established in the DPR document, and for CACs to maintain a minimum buffer zone size and duration, are no longer necessary and under this proposal will be deleted.

However, under FAC section 14006.5, CACs have authority to issue restricted materials permits covering the use of methyl bromide and are required to consider local conditions when doing so. Therefore, CACs will continue to be able to require buffer zones of larger size and longer durations than specified in the DPR document, and require other conditions based on local conditions. In addition, the publication date for DPR's *Methyl Bromide Field Fumigation Buffer Zone Determination* document, which is already incorporated by reference into regulation, is being revised to "Rev. 3/10." The referenced document has been updated to change citations to sections 6450.1 and 6450.2, to 6447.1 and 6447.2, respectively, to reflect the renumbering of those sections in previous rulemaking. Except for those changes, the revised DPR document remains substantively the same as the 2004 version. A copy of the revised document is included in the rulemaking file and is available upon request from DPR.

- Amend Section 6784(b)(2)(C)

  The current regulations require that, when employees involved in field fumigation are required to wear respiratory protection, the employees must wear respiratory protection certified by NIOSH and specifically recommended by the manufacturer for use in atmospheres containing less than five parts per million (ppm) methyl bromide. However, this wording is unclear. Manufacturers of NIOSH-certified respiratory protection recommend their use in atmospheres up to five ppm. DPR proposes to amend section 6784(b)(2)(C) to clarify that when respiratory protection is required, employees must wear NIOSH-certified respiratory protection specifically recommended for use in atmospheres containing five ppm or less methyl bromide.

- Amend Section 6784(b)(3)(B)

  Current section 6784(b)(3)(B) is intended, at a minimum, to reduce possible subchronic exposure of methyl bromide to or below the target level of 16 ppb (24-hour time weighted average concentration) to workers. This subsection specifies the maximum employee work hours allowed (Table 1. Maximum Work Hours in a 24-hour period), while engaging in the injection process and during the restricted entry interval, for the various methods of application.

  DPR proposes to amend section 6784(b)(3)(B) by revising the work hours in "Table 1. Maximum Work Hours" to reduce possible subchronic exposure of methyl bromide to or below the more health protective target level of 13 ppb (24-hour time-weighted average concentration) to workers. Additionally, DPR proposes to amend the heading "Maximum

Application Rate (lbs. actual methyl bromide)" in Table 1 and Table 2 to include "per acre" to clarify that the application rate is measured as pounds per acre.

COLLABORATION WITH OEHHA PURSUANT TO FAC SECTIONS 12980 AND 12981

DPR and OEHHA jointly and mutually developed the proposed regulation as specified in FAC sections 12980 and 12981, utilizing OEHHA's health-based recommendations as a factor in setting DPR's regulatory target level related to pesticides and worker safety. DPR and OEHHA have set forth the rulemaking process used to meet these statutory requirements in a Memorandum of Agreement dated August 13, 2008.

CONSULTATION WITH OTHER AGENCIES

DPR consulted with the California Department of Food and Agriculture during the development of the text of proposed regulations, as specified in FAC section 11454, and the February 6, 1992, Memorandum of Agreement that was developed per FAC section 11454.2.

DPR has consulted with the Department of Industrial Relations and the University of California pursuant to FAC section 12981.

DPR has also consulted with the California Agricultural Commissioners and Sealers Association, the California Air Resources Board, and Air Pollution Control Districts.

ALTERNATIVES TO THE PROPOSED REGULATORY ACTION

DPR has not identified any feasible alternatives to the proposed regulatory action that would lessen any adverse impacts, including any impacts on small businesses, and invites the submission of suggested alternatives.

ECONOMIC IMPACT ON BUSINESSES

The proposed regulations will not have a significant adverse economic impact upon business. The document relied upon to make this determination is listed in the "Documents Relied Upon" section of this initial statement of reasons and is available from DPR.

IDENTIFICATION OF ANY SIGNIFICANT ADVERSE ENVIRONMENTAL EFFECT THAT CAN REASONABLY BE EXPECTED TO OCCUR FROM IMPLEMENTING THE PROPOSAL

There are no significant adverse environmental effects to California's air, soil, water, plants, fish, or wildlife that can reasonably be expected to occur from implementing the proposal. Therefore, no alternatives or mitigation measures are proposed to lessen any significant adverse effects on the environment.

EFFORTS TO AVOID UNNECESSARY DUPLICATION WITH FEDERAL REGULATIONS

The proposed regulatory action does not duplicate or conflict with federal regulations because there are no federal regulations contained within the Code of Federal Regulations that address this issue. Only the U.S. EPA-approved product labels address soil field fumigation use of methyl bromide.

DOCUMENTS RELIED UPON

1. Fan, Anna M.; Marty, Melanie, Office of Environmental Health Hazard Assessment. Health-Based Recommendations for Subchronic Inhalation Exposure to Methyl Bromide. Memorandum to Gary Patterson and Sue Edmiston, Department of Pesticide Regulation, March 23, 2009.

2. Fan, Anna M., Office of Environmental Health Hazard Assessment. Health-Based Recommendations for Subchronic Inhalation Exposure of Field Fumigation Workers to Methyl Bromide. Memorandum to Gary Patterson and Sue Edmiston, Department of Pesticide Regulation, September 3, 2009.

3. Andrews, Chuck; Verder-Carlos, Marylou, Department of Pesticide Regulation. Methyl Bromide Regulations Development. Memorandum to Chris Reardon, Department of Pesticide Regulation. January 21, 2010.

4. Reardon, Christopher, DPR Chief Deputy Director. Methyl Bromide Regulations Risk Management Decision. Memorandum to Chuck Andrews and Marylou Verder-Carlos, Department of Pesticide Regulation. January 29, 2010.

5. Methyl Bromide Risk Characterization Document Volume I Inhalation Exposure. Department of Pesticide Regulation, Medical Toxicology, Worker Health and Safety, and Environmental Monitoring and Pest Management Branches. Sacramento. February 14, 2002.

6. Methyl Bromide Risk Characterization Document Inhalation Exposure Addendum to Volume I. Department of Pesticide Regulation, Medical Toxicology Branch. Sacramento. February 3, 2003.

7. Methyl Bromide Risk Characterization Document for Inhalation Exposure (Draft). Department of Pesticide Regulation, Medical Toxicology, Worker Health and Safety, and Environmental Monitoring and Pest Management Branches. Sacramento. October 15, 1999.

8. Methyl Bromide Risk Characterization in California, National Research Council. May 2000.

9. Storelli, Stephen, California Environmental Protection Agency, Agencywide Economic Analysis Unit, Air Resources Board. Economic Assessment of the Department of Pesticide Regulation Amendments to the Methyl Bromide Field Fumigation Regulation. Memorandum to Linda Irokawa-Otani, Regulations Coordinator, DPR. March 17, 2010.