INITIAL STATEMENT OF REASONS AND PUBLIC REPORT
DEPARTMENT OF PESTICIDE REGULATION

Title 3, California Code of Regulations
Amend Section 6452.2
Pertaining to Field Fumigant Emission Limits

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 section 6452.2. The pesticide regulatory program activities that will be affected by the proposal are those pertaining to environmental monitoring and pesticide enforcement. In summary, the proposed action would revise the total pesticide (fumigant and nonfumigant) volatile organic compound (VOC) emissions benchmarks in the Sacramento Metro, South Coast, Southeast Desert, and Ventura ozone nonattainment areas (NAAs), and allow a phase-in implementation of the VOC fumigant emissions reduction in the Ventura ozone NAA between 2008 and 2012.

SPECIFIC PURPOSE AND FACTUAL BASIS

State and federal law mandates that DPR protect human health and the environment by regulating pesticide sales and use and by fostering reduced-risk pest management.

The proposed regulatory action pertains to seven of the most widely used fumigant active ingredients--methyl bromide, 1,3-Dichloropropene, chloropicrin, dazomet, sodium tetrathiocarbonate, and pesticides that generate methyl isothiocyanate (MITC), such as metam-sodium and potassium N-methyldithiocarbamate (also known by the chemical name metam-potassium).

Before planting, farmers use fumigants to control disease, weeds, and pests in the soil. Fumigants are also used to control pests in structures and harvested commodities. Measured in pounds, fumigants represent approximately 20 percent of all agricultural pesticides used in California. Because fumigants are usually applied at a rate of several hundred pounds an acre and are very volatile, fumigants account for an even higher proportion of VOCs emitted by pesticides. Statewide, more than half of pesticide VOCs come from fumigant applications. In some areas of the state, up to three-quarters or more of the pesticide VOCs are from fumigants.

VOCs can contribute to the formation of ground-level ozone, which is harmful to human health and vegetation when present at high enough concentrations. The federal Clean Air Act requires each state to submit a State Implementation Plan (SIP) for achieving and maintaining federal ambient air

quality standards for ozone. An ozone NAA is a geographical region in California that does not meet either federal or state ambient air quality standards. The U.S. Environmental Protection Agency (U.S. EPA) designates NAAs in Title 40, Code of Federal Regulations (CFR) section 81.305. In 1994, California's Air Resources Board and DPR developed a plan to reduce pesticidal sources of VOCs in five NAAs--Sacramento Metro, San Joaquin Valley, South Coast, Southeast Desert, and Ventura--as part of the California SIP to meet the one-hour ozone standard.

In 2006, a federal court found that DPR had violated this pesticide element of the 1994 SIP and ordered DPR to adopt regulations by January 26, 2008, to achieve a 20 percent reduction of pesticide VOC emissions from 1991 levels in the five NAAs. (Court Order concerning remedies, No. Civ. S-04-822 [E.D. Cal. filed April 6, 2006], enforcing *El Comite Para el Bienestar de Earlimart v. Helliker*, 416 F. Supp. 2d 912 [E.D. Cal. 2006].) The regulations adopted on January 25, 2008, comply with the court order. Those regulations, in part, require the Director to establish field fumigant VOC emission limits for NAAs that exceed 80 percent of the emissions benchmarks to make sure those benchmarks are not exceeded. The benchmarks are based on each NAA's emissions in 1991, and are set 20 percent below that level.

DPR proposes to amend section 6452.2 to revise the total pesticide (fumigant and nonfumigant) VOC emissions benchmarks in the Sacramento Metro, South Coast, Southeast Desert, and Ventura ozone NAAs. As ordered by the lower court, the regulation used VOC emission estimates for 1991 as the base year to determine the benchmarks described in section 6452.2. However, DPR believes that to use 1990 emissions as the baseline is a more accurate reflection of, and consistent with, our obligation under the 1994 SIP. Therefore, DPR proposes to amend section 6452.2 by using the emissions data from 1990 instead of 1991 to establish the benchmarks.

Also, DPR proposes to allow a phase-in implementation of the final emissions target in Ventura between 2008 and 2012. DPR estimates that to comply with the emission limits, Ventura County farmers must reduce treated acreage significantly. The proposed phase-in 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 California Air Resources Board's planning for the eight-hour ozone standard.

For 2008, DPR proposes to amend the field fumigant VOC emission limit to 1,350,000 pounds (average 3.67 tons per day) for applications that occur during the May 1 through October 31 time period in the Ventura ozone NAA. Current regulation establishes a lower emission limit for 2008. DPR will issue allowances to permittees to ensure compliance with the fumigant emission limit. This regulation change will have no retroactive effect, even if adopted after May 1. DPR will establish emission allowances for each grower based on the current fumigant limit. If and when the proposed regulation is adopted, DPR will revise or issue new emission allowances based on the revised fumigant limit. The revised emission allowances will have no effect on the applications conducted prior to the revision. The proposed regulation contains a higher fumigant limit. Therefore, even if growers used all of the original allowances, DPR could allow additional applications and still not exceed the revised fumigant limit. In practice, DPR will likely issue two emission allowances to each grower. One allowance will be based on the current fumigant limit.

DPR will also issue a “standby” emission allowance to each grower, based on the revised fumigant limit. DPR would authorize use of the standby emission allowance if, and when, the proposed regulation is adopted.

The proposed amendments to section 6452.2 are inconsistent with the court order, which is currently on appeal. DPR will only adopt this proposal when, and if, it is consistent with its legal obligations.

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.

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.

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

The proposed revisions to the benchmarks in section 6452.2(a) would lower the Sacramento Metro NAA overall limit by 0.2 tons per day (tpd), raise the South Coast NAA by 4.6 tpd, raise the Southeast Desert NAA by 0.3 tpd, and raise the Ventura NAA by 0.4 tpd. Also, the proposed phase-in of the Ventura County benchmark would temporarily allow an additional 1.3 tpd emissions in that county than would have been allowed under existing law. The revised benchmarks would still require an immediate reduction of current emissions in Southeast Desert and Ventura.

DPR's review of the proposed action showed that no significant adverse environmental impacts can reasonably be expected to occur in the Sacramento, South Coast, and Southeast Desert NAAs. Revising the benchmarks in Ventura can reasonably be expected to result in a short-term significant adverse effect on ozone levels, in comparison to existing regulations.

No Adverse Effects Finding

In reaching a conclusion of no significant adverse effects, DPR considered the following.

The overall benchmarks in the Sacramento Metro and South Coast NAAs are being changed to conform to the existing goals of the SIP. This change is not reasonably expected to have any effect on emissions or practices. DPR expects the changes to the cropping patterns and pest management

practices that led to achievement of the required pesticide VOC reductions in these NAAs will continue.

The VOCs emitted by agricultural pesticide use in the Southeast Desert NAA are mostly MITC (about 53 percent) and methyl bromide (about 18 percent). MITC has very low photochemical reactivity (potential to contribute to ozone formation), and methyl bromide is virtually nonreactive. Thus, the proposal would only result in an insignificant increase in VOCs, with a genuine potential to contribute to ozone formation – about 0.05 tpd. Furthermore, as a rural area, Southeast Desert NAA ozone formation is likely more limited by nitrogen oxide emissions, with VOC emission reductions having a minimal effect. This 0.05 tpd is not expected to be cumulatively significant because it is accounted for in the Air Resources Board's ozone air quality planning, which manages overall emissions of ozone precursors in the Southeast Desert NAA.

The increase in overall emissions that may occur under the proposed regulation cannot reasonably be expected to have an adverse effect on risks of toxic exposure. The benchmarks that would be amended control total areawide emissions of VOCs averaged over a six-month period. Risk of toxic exposure to the regulated substances is a function of air concentration and potential for exposure to that concentration at a particular place and time. U.S. EPA, DPR, and the county agricultural commissioners each have complimentary regulatory programs in place to directly mitigate these risk factors. This regulatory proposal will not significantly add to or detract from the effectiveness of those programs.

The proposal is not reasonably expected to adversely effect ozone depletion, climate change, water quality, resource/energy use, solid or hazardous waste disposal, or agricultural resources.

Potential adverse effect on ozone formation in Ventura County

Methyl bromide and MITC-generating fumigants comprise approximately 50 percent of the pesticide VOC inventory in the Ventura NAA. As discussed above, these two fumigants have very low photochemical reactivity, indicating that they do not appreciably contribute to ozone formation. The remaining fumigants used in the Ventura NAA have greater photochemical reactivity and do contribute to ozone formation. This means that the proposed regulation will result in emissions in 2008 of an additional 0.85 tpd of reactive VOCs. Preliminary photochemical modeling shows that ozone formation in the Ventura NAA responds to both nitrogen oxide and VOC reductions. Consequently, the proposed revision may have significant impact on air quality in the short term by temporarily allowing VOC emissions from pesticide use, which could contribute to ozone formation and which would not be permitted under the existing regulations.

Discussion of alternatives or mitigation measures and overriding considerations

DPR intends to implement the proposed regulations in order to mitigate unreasonable risks of economic dislocation and irreparable environmental harm posed by existing requirements. In Ventura County, a 20 percent reduction from 1991 levels is about a 52 percent reduction from current levels. The number of acres under fumigation in Ventura County has dramatically increased

over the past ten years, as high land values have caused a shift to high value crops that require annual fumigation, such as strawberries. Consequently, full adoption of the lowest emitting fumigation methods available would still leave a shortfall of 1.3 tpd in Ventura. This is the amount of fumigant used on a third of the total acres fumigated in Ventura (5,800-7,500 acres fumigated at normal rates). Thus, implementing the full pesticide VOC emissions cap in the Ventura NAA would require growers to forgo fumigation on thousands of historically fumigated acres. The likely result is that significant acreage will be taken out of agricultural production altogether, rather than converted to lower value crops that do not require fumigation. There is a real risk of those acres being developed for urban uses. About 25-35 percent of currently fumigated acres are already within various city limits. Thus, existing law poses a risk of agricultural land being converted to urban uses. DPR was compelled to adopt the existing VOC regulation under a federal court order.

Phasing-in the ultimate pesticide VOC limit in Ventura will mitigate the economic impact of losing agricultural production and the environmental risk of losing agricultural land by allowing growers additional time to develop alternative agricultural uses and lower emitting application methods, as well as pest management techniques. Extending the phase-in would be inconsistent with the SIP. Phase-in over a shorter time period would not achieve the purposes of the proposed regulations--reducing VOC emissions to required levels, while avoiding unreasonable economic impacts and risk of loss of agricultural land.

DPR intends to adopt the proposed regulation, if consistent with its legal obligations. Mitigating the economic impact and risk of irreparable environmental degradation that would follow from not implementing the proposal overrides its relatively minor and temporary adverse environmental impact. There are no other alternatives or further mitigation measures that could be implemented which would still achieve the proposal's purpose.

EFFORTS TO AVOID UNNECESSARY DUPLICATION WITH FEDERAL REGULATIONS

The proposed regulatory action does not duplicate or conflict with any regulations contained within the CFR. There are no regulations within the CFR that address this issue.

As noted in this Initial Statement of Reasons, the federal Clean Air Act requires each state to submit an SIP for achieving and maintaining federal ambient air quality standards, including the standard for ozone. In 1994, the Air Resources Board and DPR developed a plan to reduce pesticidal sources of VOCs in NAAs as part of the California SIP to meet the one-hour ozone standard.

Also, as previously noted, in April 2004, U.S. EPA issued a more stringent eight-hour ozone standard, likely requiring additional VOC reductions. California will prepare a new SIP for the eight-hour standard, and will need additional VOC reductions from all sources to meet the new ozone standard.

DOCUMENTS RELIED UPON

1. Pesticide Volatile Organic Compound Emission Adjustments for Field Conditions and Estimated Volatile Organic Compound Reductions - Revised Estimates. September 29, 2007. Memorandum from Terrell Barry, Frank Spurlock, and Randy Segawa to John S. Sanders, Branch Chief, Environmental Monitoring Branch, DPR.

2. Air Resources Board's Executive Order S-07-003 Revised Proposed Revision to the Pesticide Element of the 1994 Ozone SIP for the Ventura County Nonattainment Area, November 30, 2007.

3. Consultation on Draft Regulations on Fumigants. California Environmental Protection Agency, Agencywide Economic Analysis Unit, Air Resources Board. Memorandum from Stephen Storelli to Linda Irokawa-Otani, Regulations Coordinator, DPR. January 23, 2008.