Reducing Smog-Producing Emissions from Nonfumigant Pesticide Products

Pest Control Adviser Fact Sheet

General Information

Beginning November 1, 2013, regulations by the Department of Pesticide Regulation (DPR) to cut smog-producing emissions of volatile organic compounds (VOCs) from pesticides go into effect. These regulations reduce VOC emissions from certain nonfumigant pesticide products (Title 3, California Code of Regulations, sections 6558, 6577, 6880, 6881, 6883, 6884, and 6886). The regulations are designed to keep VOC emissions below a target level from May to October in the San Joaquin Valley. Designated high-VOC products have restrictions on sales and use.

Sales restrictions apply to:

- High-VOC products containing abamectin, chlorpyrifos, gibberellins, or oxyfluorfen; and
- Applied in San Joaquin Valley.

Use restrictions apply to:

- High-VOC products containing abamectin, chlorpyrifos, gibberellins, or oxyfluorfen; and
- Applied in San Joaquin Valley; and
- Applied between May 1 and October 31; and
- Application to alfalfa, almonds, citrus, cotton, grapes, pistachios, or walnuts.

What are volatile organic compounds (VOCs)?
VOCs are gases that can combine with other substances in the air to form ground-level ozone (smog). Ozone can damage lung tissue, cause respiratory illness, and harm farm crops. Statewide, pesticides account for about two percent of all VOCs but in several regions they are among the top ten sources.

What is a high-VOC product?
As described in section 6880, the regulations apply to certain products containing abamectin, chlorpyrifos, gibberellins, or oxyfluorfen. Products containing these four active ingredients are designated as either high-VOC, low-VOC, or excluded from the regulations. VOC requirements pertain only to high-VOC products. For the specific criteria for designating high-VOC products, and list of products, go to www.cdpr.ca.gov, click on “A-Z Index,” then “VOC nonfumigant regulations.”

What is the area affected?
For these regulations, the San Joaquin Valley includes all of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare counties and the valley portion of Kern County. Pesticide VOC emissions in the San Joaquin Valley are not consistently low enough to meet the reduction goal, so further control measures are needed. Pesticide VOC emissions in other areas consistently achieve the needed reductions.

Why are these products and crops regulated?
DPR included products containing these four active ingredients and applications to these seven crops because the inert ingredients in these products and their application to these crops are among the highest pesticide VOC contributors in the San Joaquin Valley. Additionally, DPR has determined that use of low-VOC products for these pesticides and crops are feasible and will ensure that the needed VOC reductions will be achieved.

Pest Control Adviser (PCA) Requirements

Which PCAs are affected?
As described in section 6883, PCAs who make recommendations for the following pesticide applications are affected:

- Use of high-VOC products containing abamectin, chlorpyrifos, gibberellins, or oxyfluorfen; and
- Applied in San Joaquin Valley; and
- Applied between May 1 and October 31; and
- Application to alfalfa, almonds, citrus, cotton, grapes, pistachios, or walnuts.

What are the use restrictions?
Prior to the above high-VOC applications, growers must obtain a written recommendation from a licensed PCA. For the specific criteria for designating high-VOC products, and list of products, go to www.cdpr.ca.gov, click on "A-Z Index," then "VOC nonfumigant regulations."

As described in section 6884, if the specified pesticide VOC emissions level is exceeded, the above high-VOC applications are prohibited, except for:

- Chlorpyrifos to control aphids on cotton
- Gibberellins applied at no more than 16 grams active ingredient/acre
- Oxyfluorfen applied at no more than 0.125 (1/8) pounds active ingredient/acre
- Emergency exemption from registration (Section 18)
- Special Local Need (Section 24(c)) registration
- Applications required by the U.S. Department of Agriculture, the California Department of Food and Agriculture, or county agricultural commissioner to control, suppress or eradicate pests
- Applications with a precision sprayer that meets the criteria of the California Office of the Natural Resources Conservation Service's Environmental Quality Incentives Program.

As described in section 6558, if the high-VOC prohibitions are in effect, PCAs cannot recommend a high-VOC product for use in the San Joaquin Valley during May-October on any of the seven crops, unless it is for one of the exceptions listed above.

How do PCAs know if high-VOC prohibitions are in effect?
DPR notifies interested parties through its VOC email list. To sign up for the VOC email list, go to www.cdpr.ca.gov, and click on "Join E-lists" at the bottom left-hand corner.

DPR determines if high-VOC prohibitions are triggered once each year. DPR publishes a draft report of pesticide VOC emissions in late summer or early fall and it includes a comparison of the emissions to the trigger level. If triggered, the high-VOC product prohibitions described above would be implemented for the upcoming May-October period, and remain in effect for at least two years. For example, in fall 2005, DPR calculated the emissions for May-October 2004. Had the regulations been in effect, the May-October 2004 emissions would have exceeded the trigger level, and high-VOC prohibitions would have been triggered beginning with the May-October 2006 period.

When are the PCA requirements in effect?
The requirement to obtain a PCA recommendation becomes effective on May 1, 2014, and is in effect every year during May 1 to October 31. High-VOC prohibitions will go into effect only if the trigger level is exceeded.

What other information do PCAs need to know?
As described in section 6558, if a PCA recommends the use of a high-VOC product for one of the exceptions when high-VOC prohibitions are in effect, the exception must be identified. A PCA must retain a recommendation for a high-volatile organic compound product for at least two years.

The regulations place much of the burden for compliance on PCAs. PCAs are responsible for knowing:

- Which products are high-VOC and which are low-VOC
- Whether or not the high-VOC use prohibitions in effect
- What are the exceptions to the high-VOC prohibitions if they are in effect

The regulations include a process for DPR to grant approval for additional exceptions if certain criteria are met. Any additional exceptions will be described in DPR's annual emissions report.

In addition, DPR encourages PCAs to consider and recommend low-VOC products when feasible even if the high-VOC prohibitions are not in effect. Voluntary use of low-VOC products will assist in keeping emissions below the trigger level for high-VOC prohibitions.

Additional Information – Contact Person

Additional information is available at DPR's website: www.cdpr.ca.gov. Click on "A-Z Index" then "Volatile Organic Compound Emissions from Pesticides Project."

Randy Segawa, Environmental Program Manager I
Randy.Segawa@cdpr.ca.gov
(916) 324-4137