



Mary-Ann Warmerdam  
Director

Arnold Schwarzenegger  
Governor

California Notice 2005-07

TO: Pesticide Registrants

SUBJECT: NEW DATA REQUIREMENT FOR LIQUID AGRICULTURAL AND  
LIQUID COMMERCIAL STRUCTURAL-USE PESTICIDE PRODUCTS:  
VOLATILE ORGANIC COMPOUND EMISSION DATA

Effective October 1, 2005, the Department of Pesticide Regulation (DPR) will require applications for registration of new agricultural and commercial structural-use pesticide products that are formulated as liquids to be accompanied by volatile organic compound (VOC) emissions data, in addition to all other data required for registration of the pesticide product in California. Applicants will be required to conduct and submit the results of thermogravimetric analysis (TGA) data on each end-use product.

## BACKGROUND

VOCs and nitrogen oxides react with sunlight to create ground-level ozone. Ozone is a major air pollutant, which is known to be harmful to human health and vegetation. Many pesticide active ingredients and inert ingredients are VOCs.

The federal Clean Air Act requires states to submit state implementation plans (SIPs) for implementing, maintaining, and enforcing national ambient air quality standards (NAAQS) for air pollutants, such as ozone, in each air quality control region of the State. Any region that does not meet the NAAQS for a given pollutant is designated as a federal nonattainment area (NAA). Currently, several California air quality control regions do not meet the NAAQS for ozone.

In 1994, the California Air Resources Board (ARB) submitted a SIP to the U.S. Environmental Protection Agency (U.S. EPA). The SIP included a pesticide element. The pesticide element (also referred to as the Pesticide SIP) addresses VOCs that result from the use of agricultural and commercial structural-use pesticides. (Consumer pesticide product sources of VOCs are regulated by ARB.) In the pesticide element, DPR committed to reducing VOC emissions from agricultural and commercial structural-use pesticides by specified amounts within specified time periods for five NAAs. Currently, three of the five NAAs do not meet the goals established in the 1994 SIP (relative to 1990 base year: San Joaquin Valley, 12 percent reduction by 1999; Ventura, 20 percent reduction by 2005; and Southeast Desert, 20 percent reduction by 2007).



To implement the 1994 SIP, DPR developed a method to estimate the VOC emission potential of pesticide products and to calculate estimated pesticidal VOC emissions. DPR used TGA data to determine the VOC emission potential of each registered pesticide product, and in conjunction with data from DPR's pesticide use-reporting system calculated estimated annual VOC emission totals for each pesticide product. In order to obtain TGA data on each registered agricultural and commercial structural-use pesticide, DPR placed all agricultural and commercial structural-use pesticides formulated as liquids into reevaluation in 1994, and all solid formulations into reevaluation in 1995. However, during these reevaluations, DPR gave registrants the option of calculating the VOC emission potential of a pesticide product using water and/or inorganic subtraction, instead of submitting TGA data. In addition, if no data (either TGA or subtraction) were submitted for a given pesticide product, DPR assigned the product a default emission potential value based on the highest TGA value for the product's formulation category. In 1996, DPR issued California Notice 96-5, which requested, but did not require, that registrants of new agricultural and commercial structural-use pesticide products submit TGA data for each new product. A few registrants of new pesticide products submitted TGA data; however, the majority of registrants did not, and DPR had to assign default emission potential values to many new pesticide products. In order to obtain TGA data on all currently registered liquid agricultural and commercial structural products for which TGA data has not previously been submitted, DPR initiated a new reevaluation in February 2005.

DPR needs TGA emission potential data on all liquid agricultural and liquid commercial structural-use pesticides in order to comply with the Clean Air Act and meet VOC attainment goals.

#### AUTHORITY TO REQUIRE VOC EMISSION DATA AS A REGISTRATION REQUIREMENT

Food and Agricultural Code (FAC) section 12824, which sets forth evaluation requirements for registration, states that DPR "...may establish performance standards and tests that are to be conducted or financed, or both conducted and financed, by...applicants for registration..." To implement and interpret FAC section 12824, DPR adopted Title 3 California Code of Regulations (3 CCR) section 6170, which states, "The application is incomplete and may be returned by the Director if the application is not accompanied by...the data required to be submitted by sections...6181-6192...when applicable to support registration of the product." 3 CCR section 6191 states, "The director, after consultation with the Air Resources Board, shall determine under what circumstances interference with the attainment and maintenance of ambient air quality standards is likely to result from the evaporative emission of volatile organic compounds contained in a pesticide product and may require the applicant to supply data regarding such [VOC] emissions." (emphasis added)

DPR is hereby implementing 3 CCR sections 6170 and 6191, and establishing the submission of VOC emission data as a data requirement for each new pesticide product that meets **all** of the following criteria:

1. Formulated as a liquid (i.e., solution, emulsifiable concentrate, aqueous concentrate, flowable, oil);
2. Intended for use in California on at least one agricultural or commercial structural-use site (Attachment A);
3. Not a spray adjuvant (the VOC contribution of adjuvants is expected to be minimal and adjuvants are not part of ARB's inventory); and
4. Does not contain any of the following as a primary active ingredient (the VOC emission potential of pesticide products containing these active ingredients is known):
  - 1,3-Dichloropropene
  - Chloropicrin
  - Metam Sodium
  - Methyl Bromide
  - Metam Potassium
  - Sodium Chlorate
  - Sodium Hypochlorite

#### VOC EMISSION DATA REQUIREMENT

Each application for registration of a new pesticide product that meets the criteria listed above must be accompanied by the following:

1. Data regarding the volatility potential of each product. The data must be obtained using the attached TGA study protocol entitled "*Estimation of Volatile Emission Potential of Pesticides by Thermogravimetry*" (Attachment B), or another method acceptable to DPR. You are required to submit the results of the study and all other information listed on the attached TGA Data Submission Form (Attachment C), along with copies of the thermograms from all pesticide analyses.

**Note:** A separate TGA Data Submission Form, along with the data and information listed on the form, must be submitted for each pesticide product.

**Note:** If you wish to use an alternate method to calculate the VOC emission potential of a pesticide product, a protocol for the method must first be submitted to, and approved by DPR. The method must provide results that are comparable to, or more accurate than the TGA method.

**Note:** In order to obtain an accurate estimate of a product's VOC emission potential, the results of the TGA method must be corrected for the water content of the pesticide product and the percentage of any exempt compounds. Attachment E\* contains a list of exempt compounds. The VOC emission potential of your product will be corrected for the water content or any exempt chemical present in any trade name inert ingredient in the primary product, if DPR receives a statement of formula for the trade name inert. If you purchase the trade name inert ingredient from another party, the other party may submit the statement of formula for that inert ingredient directly to DPR. Inert ingredient information is kept confidential.

**Note:** If you previously submitted TGA data to DPR for an identical product, simply cite the submitted data. If TGA data for an identical product owned by another company are on file with DPR, the applicant may fulfill the data requirement by providing DPR with a written letter of authorization from the data owner.

## LABORATORIES

The laboratory of your choice can conduct the TGA method. However, for your convenience, a list of laboratories that have expressed an interest in conducting TGA studies is attached (Attachment F\*). DPR is not recommending or endorsing any of these laboratories.

## AVAILABILITY OF DOCUMENTS ELECTRONICALLY

Copies of the TGA study protocol, TGA Data Submission Form, list of exempt compounds, and list of laboratories that have expressed an interest in conducting TGA studies are available on DPR's website at <<http://www.cdpr.ca.gov/docs/pur/vocproj/vocmenu.htm>>.

**Note:** To stay consistent with the use of the same documents in the VOC reevaluation (California Notice 2005-03), the list of exempt compounds is referred to as "Attachment E," and the list of laboratories is referred to as "Attachment F." This notice contains no reference to "Attachment D" because applicants for registration of new pesticide products are already required to complete and submit an "Application for Pesticide Registration," including product formulation information.

## APPEAL PROCESS

If you feel that TGA methodology is not appropriate to a particular product due to inherent chemical properties, please provide DPR with detailed information supporting your position. The VOC emission potential of consumer pesticides and pesticides intended for use as paints and wood preservatives are regulated by ARB, and therefore, exempt from this data requirement.

## INCOMPLETE APPLICATIONS

Each applicant for registration of a new pesticide product that meets the criteria listed above must submit the results of a TGA study. If TGA data are not submitted, DPR will consider the application incomplete, and return the application to the applicant. If DPR finds the submitted TGA data to be inadequate or unacceptable, DPR will deny registration of the product.

If you have any questions regarding this notice, please contact Ms. Ann Prichard, Senior Environmental Research Scientist, by e-mail at <aprichard@cdpr.ca.gov> or by telephone at (916) 324-3931. For technical information and questions regarding the TGA method and VOC Data Submission Form, please contact Mr. Randy Segawa, Senior Environmental Research Scientist, Environmental Monitoring Branch, by e-mail at <rsegawa@cdpr.ca.gov> or by telephone at (916) 324-4137. For questions regarding submission of an application for registration and required data, please contact your registration specialist.

*Original signed by Barry Cortez*

*June 3, 2005*

---

Barry Cortez, Chief  
Pesticide Registration Branch  
(916) 445-4377

---

Date

Attachments

cc: Ms. Ann Prichard  
Mr. Randy Segawa