

Methyl Bromide Regulatory Status

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California in the Forefront

- More than 10 years of increasingly strict controls on methyl bromide use
- A stepwise progression, based on scientific analyses of toxicology and monitoring data
- As more data have been developed and evaluated, the rules have evolved

How We Began

- Health concerns in early 1990s prompted a preliminary risk assessment that showed unacceptable risks
- Beginning in 1993, DPR developed a series of exposure reduction measures to address short-term exposures to fumigation workers and to persons living or working near treated fields

Permit Guidance in the 1990s

- In California, methyl bromide users must obtain a permit
- DPR provided guidance for county agricultural commissioners to use in issuing permits
 - These “permit conditions” are use controls beyond those required by the label

Permit Guidance in the 1990s

- Suggested permit conditions (use restrictions) for methyl bromide included:
 - Specifications for application equipment
 - Reduced application rates
 - Acreage limitations
 - Buffer zones

Assessing the Risk

- DPR scientists completed a *preliminary* risk assessment for methyl bromide in 1992
 - It addressed short-term exposure
 - It was used to develop permit conditions through the 1990s

Assessing the Risk

- In 1999, the final risk assessment was completed, addressing all exposures
- Risk assessment was peer-reviewed by a National Academy of Sciences (NAS) panel
 - It endorsed DPR's findings for short-term exposure action levels
 - Recommended additional studies to establish subchronic (seasonal) action levels

Adopting New Controls

- 2001: DPR put into place regulations for methyl bromide field fumigation
- New rules supplanted many permit conditions, and included:
 - Mandatory buffer zones
 - Advance notification of neighbors
 - Other protective measures, including special protections around schools

Adopting New Controls

- Regulations based on the 210 ppb target level for short-term exposures
- Because data was still incomplete, DPR did not take regulatory action to control subchronic (seasonal) or chronic exposures
- Scientific staff began review of air monitoring and other data to assess need for additional regulatory safeguards

Lawsuits Played a Role

- Regulations the target of lawsuits by environmental and agricultural interests
- In two of the cases, a judge voided the regulations, ruling that DPR did not follow the law and consult adequately with the Department of Food and Agriculture

Lawsuits Played a Role

- Settling a third lawsuit, DPR agreed to consider stricter controls to reduce seasonal exposure when developing a new regulation package
- In the interim, DPR readopted the 2002 regulations on an emergency basis, to ensure protective measures remained in place

Regulation Development

- February 2003 DPR workshop:
 - Presented staff analysis of the significant endpoints for subchronic exposures
 - Solicited comments on appropriate target value for developing regulations
- We also consulted regularly with worker groups, environmentalists, industry, other agencies

Controlling Seasonal Exposure

- In September 2003, we formally proposed new package of regulations
- Aimed at enhancing protection for workers and others who face potential exposure when multiple fumigations occur over several weeks
- Proposed regulations intended to prevent air levels from exceeding these seasonal regulatory targets

Intent of New Regulations

- Old rules focused on limiting short-term (24-hour) exposure to no more than 210 ppb
 - This short-term goal will remain the same
- Seasonal protections to be added for subchronic (4- to 8-week) exposure
 - 9 ppb target exposure level for children
 - 16 ppb for adults (occupational exposure)

Old Rules Staying the Same

- Work site plan to be submitted to CAC
- Minimum buffer zones from sensitive sites
- CAC approval of buffer zones based on local conditions
- Buffer zones prohibited from extending into sensitive sites
- Buffer zones may extend across roads

Old Rules Staying the Same

- Application block limited to 40 acres
- Specifications on application methods
- Specifications on tarps and time they remain in place
- Warning signs must be posted
- Work-hour limitations for fumigators
- Notification of neighbors and adjacent property owners

Changes Being Proposed

- Geographic caps on use
 - No township could exceed 270,000 in a month
 - Township a land surveying unit of 36 square miles
- In 2001, only one California township exceeded 200,000 pounds
 - Even in this township (where use was 202,385 pounds), DPR scientists calculated that fumigant levels would not exceed 5 ppb

Changes Being Proposed

- Buffer zone distances and duration now to be in regulation
- Applicators and other workers will have to wear respiratory protection
- Modifications made to work-hour limitations due to respiratory protection