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Tests Find Methyl Bromide Drifting Into Mobile Home Park

On Aug. 21, 1997, owners of the Nakama Ranch began fumigating a 90-acre strawberry field in Camarillo, Calif., with methyl bromide. The field is next to the Lamplighter Mobile Home Estates, whose residents, concerned about the dangers of exposure to the acutely toxic pesticide, had appealed to the California Department of Pesticide Regulation (DPR) to stop the fumigation. DPR denied the appeal, and fumigation proceeded, 10 acres at a time, through Sept. 8.

In response to residents' concerns, the Environmental Working Group (EWG) sampled the air during and after the fumigation of three of the 10-acre parcels, to determine if methyl bromide was drifting from the field into the mobile home park.

Air sampling began at 4:30 p.m. on Saturday, Sept. 6, and continued through 5:30 p.m. on Tuesday, Sept. 9, for a total monitoring time of almost 70 consecutive hours. Samples were taken with stainless-steel, silicon-lined Summa canisters, placed on Lot 216 in the mobile home park. The samples were then analyzed by an independent laboratory.

The results clearly show that methyl bromide drifted from the field onto the Lamplighter property, and remained in the air for three days.

While none of the levels measured exceeded DPR's regulatory standard for agricultural uses of methyl bromide, all samples exceeded the state's stricter Proposition 65 warning level for indoor use of the fumigant.

How dangerous are these levels? This question is more difficult to answer, and is a matter of continued disagreement between public health advocates and state pesticide regulators.

People living near pesticide applications have a right to know what they are being exposed to. This memo not only explains what our monitors found, but compares our findings to the safety standards set by the state and the Minimal Risk Levels established by the federal government.

Methyl bromide detected in all samples

- For the first sample, the canister was located approximately 214 feet east of the edge of the fumigated tract. This and subsequent applications used 225 pounds of pesticide per acre, in a mix of 80% methyl bromide and 20% chloropicrin, for a total of 1,800 pounds of methyl bromide per tract. Activated 12 hours after application, the monitor detected 58 parts per billion (ppb) of methyl bromide in the air, averaged over the 23 hours of the sample.

- For the second sample, the canister was about 326 feet east of the treated parcel. It detected 68 ppb, averaged over 23 hours.

- For the final sample, the canister was approximately 438 feet from the tract. It again detected 68 ppb, averaged over 24 hours.

- The three-day (70-hour) average of the samples was 64 ppb. It is important to note that the daily and three-day averages are certainly lower than peak levels of methyl bromide that occurred during the sampling period.

What do the numbers mean?

The state's 24-hour safety standard for exposure to methyl bromide from an agricultural application is 210 ppb. This means that DPR recommends that no one should be exposed to more than that amount over a 24-hour period.

DPR can therefore accurately state that the levels detected at the Lamplighter were below the standard. However, there are a number of reasons to question whether the DPR standard adequately protects citizens.

- **California's double standard:** In 1993, under pressure from agricultural and pesticide interests, state regulators exempted methyl bromide, when applied to farm fields, from the special restrictions of the California Safe Drinking Water and Toxic Enforcement Act, known as Proposition 65. However, when methyl bromide is used indoors to

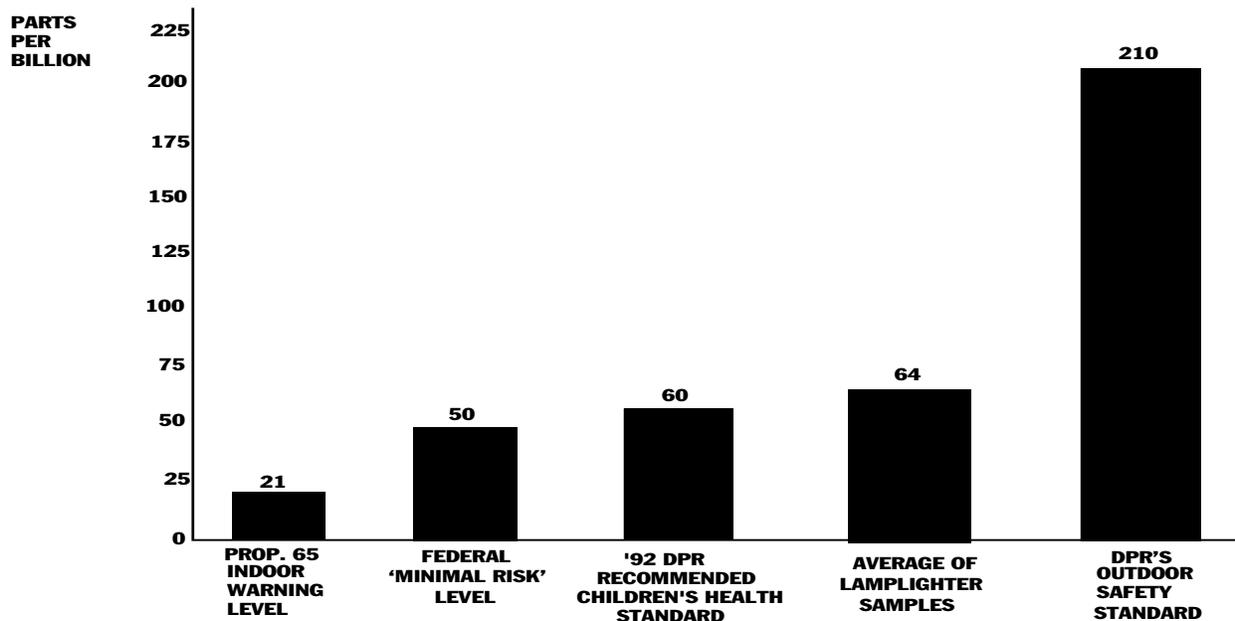
fumigate buildings for termites, DPR's warning level under Prop. 65 is 21 ppb — 10 times more protective than the agricultural-use safety standard.

According to DPR memos, if Proposition 65 were applied to agricultural uses of methyl bromide, warning zones of up to four miles would be necessary to protect public health.¹ Instead, DPR has established “buffer zones” of 30 to 200 feet around fields where methyl bromide is applied. The practical effect of this double standard is that Californians must be warned against low levels of methyl bromide in their living rooms, but can legally be exposed to 10 or more times that amount on their back porches.

• **Children's health:** Current state standards for methyl bromide exposure are based on the amount that is supposedly safe for the average adult. But there is abundant evidence that children are more susceptible to the effects of airborne toxins than adults.

In February 1992, DPR staff toxicologists recommended a methyl bromide safety standard of 60 ppb to protect children, but the recommendation was not adopted.³ Since then, studies accepted by DPR suggest safe levels should be set even lower -- 10 ppb or below.

Conclusion



• **Federal Minimal Risk Level:** The federal Agency for Toxic Substances and Disease Registry (ATSDR) has established a Minimal Risk Level for methyl bromide of 50 ppb for exposure periods of one to 14 days.²

Minimal Risk Levels (MRLs) are used by regulators to determine whether a hazardous waste site may pose a risk to public health. The agency says the MRL is “set below levels that might cause adverse health effects in the people most sensitive.” If levels exceeding the MRL are detected coming from a Superfund site, regulators may order a study of the risk to the public, including air monitoring and health surveys.

While ATSDR says that “exposure to a level above the MRL does not mean that adverse health effects will occur,” the agency also endorses a very conservative approach to setting exposure levels, “consistent with the public health principle of prevention.”

For almost 70 consecutive hours, residents of the Lamplighter were exposed to levels of methyl bromide exceeding the state's Proposition 65 warning level for indoor fumigation and the federal Minimal Risk Level for toxic waste sites. The chart above shows how these levels compare to the state's safety standard.

EWG urges residents of the Lamplighter, and others concerned with this issue, to examine the evidence and decide for yourself. Californians should demand that state regulators enforce public health standards consistent with the principle of prevention.

1. California DPR. Information sheet discussing size of MB warning zone under Prop. 65. Nov. 30, 1993.
 2. ATSDR. MRLs for Hazardous Risk Substances. Updated March 1996.
 3. California DPR. Memo: Preliminary risk assessment for inhalation exposure in structural fumigation. Feb. 11, 1992.