



Department of Pesticide Regulation



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January 13, 2000

WHS 00-01

TO: County Agricultural Commissioners

SUBJECT: PESTICIDE WORKPLACE EVALUATION BULLETIN 1

In the summer of 1999, several County Agricultural Commissioners (CAC) staff received training on the fundamentals of industrial hygiene and how these principles relate to pesticide worksites. This training was to expand their ability to anticipate, recognize and evaluate health and safety hazards not addressed in pesticide laws and regulations. This training was part of the Pesticide Workplace Evaluation Program (PWEPE), a program modeled after the Department of Health Services' Sentinel Event Notification of Occupational Risk (SENSOR) group. The goal of PWEPE is to look beyond existing regulations and their enforcement, and to identify situations that may present unanticipated dangers for workers or other persons potentially exposed to pesticides.

PWEPE Bulletins will be used to report the progress of cases referred to Worker Health and Safety (WH&S) Branch, Pesticide Workplace Evaluation Program (PWEPE). This information may be of interest to county agricultural commissioner's (CACs) and their staff to alert them of possible workplace pesticide uses that may lead to illnesses or injuries.

A case was forwarded to WH&S/PWEPE concerning exposure to an unregistered chemical used for a pesticidal effect. Marin CAC filed an "Antimicrobial Exposure Episode Report" in response to an illness caused by the use of paraformaldehyde. Biological laboratory personnel were using paraformaldehyde (a polymerized form of formaldehyde) as a fumigating agent in their tissue culture room. They would heat a beaker of paraformaldehyde, resulting in the formation of formaldehyde vapor, to control molds and bacteria in the room. A second beaker of ammonium bicarbonate, on a timer-controlled heater, would activate six hours after the paraformaldehyde heater, resulting in a "neutralizing" of the formaldehyde by the vaporized ammonium bicarbonate. Obviously, this entire Rube Goldberg apparatus was in violation of several pesticide laws and regulations. Two persons developed illnesses associated with this exposure episode.

The report from the Marin CAC mentioned that both Cal/OSHA and the SENSOR group had also been involved in the investigation of this incident. DPR contacted these agencies and received copies of their investigations. The Cal/OSHA investigation had been triggered by the employee illness from a non-pesticidal chemical. The SENSOR involvement was initiated by the San Francisco Poison Control Center's report of paraformaldehyde exposure.



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From the information in the various reports, there seems to be some indication that the paraformaldehyde fumigation protocol used by the Marin County laboratory is not an uncommon practice. There are no California registrations for paraformaldehyde, although there are three U.S. EPA registrations. There are several California registrations for formaldehyde (primarily animal husbandry facilities), but none appear to be labeled for use in laboratories. Additionally, a recent issue of the "Applied Occupational and Environmental Hygiene" (June 1999), published a study of paraformaldehyde use/exposure in cosmetology schools using one of the U.S. EPA registered paraformaldehyde products. The study was not conducted in California. However, this information does raise questions concerning illegal uses of non-FIFRA-registered or non-California-registered formaldehydes being used in laboratories or cosmetology facilities (schools, salons, barbershops) as fumigants and/or antimicrobials.

WH&S will try to solicit information directly from laboratories in various counties, to determine whether paraformaldehyde is being used as a pesticide throughout California. We also plan on contacting other agencies, including Cal/OSHA and State Compensation Insurance Fund, for any assistance in identifying facilities which may be using paraformaldehyde or formaldehyde illegally.

To report a potential PWEF case, contact Mr. Harvard Fong at (916) 445-4211, or via e-mail at hfong@cdpr.ca.gov.

[Original signed by C. Andrews]

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cc: Mr. Harvard Fong, Worker Health and Safety Branch
Mr. Daniel J. Merkley, CAC Liaison