



# Department of Pesticide Regulation



Mary-Ann Warmerdam  
Director

## MEMORANDUM

Arnold Schwarzenegger  
Governor

TO: Susan Edmiston  
Agricultural Program Supervisor III  
Worker Health and Safety Branch

**HSM-06001**

FROM: Harvard R. Fong, CIH *(original signed by H. Fong)*  
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DATE: January 31, 2006

SUBJECT: REPORT ON OBSERVATIONAL VISIT TO RESIDENTIAL STRUCTURE  
ALLEGED TO HAVE BEEN SUBJECT TO PESTICIDE MISAPPLICATION

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On January 13, 2006 I met with Sherry Bercu of the Sacramento County Agricultural Commissioner's (CAC) office at the site of a suspected pesticide-related misapplication. The site, a residential structure in the city of Folsom, had allegedly been treated with a fungicidal cleaner (MODEC MDF-500), in such a manner as to leave noticeable amounts of surface residue. Sacramento CAC requested a consultation with Worker Health and Safety's industrial hygienist, to help assess the extent of the problem and to recommend potential remediation.

Previous to visiting the site, I contacted the manufacturer of MDF-500, MODEC Inc. of Denver Colorado, to discuss the properties of the material. MDF-500 is a binary pesticide, Component A being a quaternary ammonium compound, Component B a stabilized hydrogen peroxide material. Combining the two does not result in the formation of a new material, but does allow the hydrogen peroxide to degrade, releasing H<sub>2</sub>O and O<sub>2</sub>. According to the manufacturer, there should be no noticeable residue when properly applied. The use of a "fogger" in a residential structure may have led to excessive application, resulting in film formation.

On arrival at the site, I was briefed by both the CAC staff and the resident of the structure. The resident explained that a leak from a second story tub had caused water damage to the room located directly beneath the tub and that there was subsequently suspected fungal growth within that room. The resident stated that a fungal detection company sampled the rooms associated with the leak, taking air and surface samples, and that high fungal levels were detected. I did not see the actual report. The resident is a renter, and deferred to the landlord for the repair and remediation contracting. The landlord supposedly hired an out-of-state company to remove structural components damaged by either water contact or fungal contamination. After this phase was completed, the company then applied the fungicide, not only to the affected room, but also to all the other rooms of the house. According to the resident, the remediation company stated that they would guarantee their work for one year (no subsequent fungal infestation), but only if the entire interior of the structure were treated with the fungicide. The resident also stated that a "fogger" type of application device was used in the application of the fungicide.



Generally speaking, fungal growth associated with water damage is normally confined to the area of water infiltration. Treatment of the affected areas (damaged first floor room, upstairs tub room and water closet where access door for tub motor was located) would be appropriate sites of application. Areas not associated with the water leak (rest of house) would not necessarily benefit from application of fungicide. This application device may not be well suited for a residential structure, inasmuch as it is non-discriminatory in its application of material.

Although I didn't see that actual fogging device, the fogger most likely used in this instance was something similar to the "Flex-A-Lite" Model 2600 that MODEC sells. This device is designed to put out relatively large volumes of material in several passes. Insecticide foggers that can be purchased over the counter also generate an aerosol, but in a very limited quantity that is applied in essentially one pass. In addition, the over-the-counter foggers contain a high quantity of volatile propellant that dissipates quickly, leaving little surface residue.

The first floor room with the water damage had several holes cut into the wall and ceiling. These holes were supposedly cut to allow removal of the wet insulation. The holes were quite large, with one in the ceiling over 4 ft<sup>2</sup>. The resident stated that the removed material was not bagged or otherwise contained before being carried out of the room and through the house, to be deposited outside. It is not clear how the contractor was able to ascertain that the remaining gypsum board was not contaminated with fungus.

On inspection of the remainder of the structure, a film was noted on most of the horizontal non-absorptive surfaces. This included the tile floor in the kitchen, the tile countertops, the tops of the washer/drier, a mirror in an upstairs bedroom and the hardwood floors. No film was visible on the carpet, nor did the wall exhibit any unusual slickness, though this could be from either absorption of the fungicide into the structural component (walls, carpet fabric) or rapid fallout and primarily horizontal deposition of particles generated by the "fogger". The tile floors were noticeably slippery and the residual film on countertops was so thick that after pushing my finger across the surface, a smudge of the material was left on my fingertip. The label requires food-preparation surfaces be rinsed with water before use. This would be appropriate advice for all horizontal surfaces, thus removal of the film may be accomplished with water. It is advised that the person engaged in the clean up of these residues follow the advice on the Material Safety Data Sheet (MSDS) for personal protective equipment. This would include rubber or polyvinyl chloride (PVC) gloves and eye protection. General passive ventilation (i.e., open doors, windows) should ensure respiratory safety.

It should be noted that a search of DPR databases did not show MDF-500 to be registered for use in California.

cc: George Farnsworth, Mill Assessment Program, Ag. Program Supervisor III (Pest Management)  
Ralph Shields, Enforcement Branch, North Regional Office Supervisor  
Sherry Bercu, Sacramento County Agricultural Commissioner's Office