



Department of Pesticide Regulation



Brian R. Leahy
Director

MEMORANDUM

Edmund G. Brown Jr.
Governor

TO: Saturnino Yanga
Acting Environmental Program Manager I
Worker Health and Safety Branch

HSM-12007

(No. assigned after issuance of memo)

FROM: Harvard R. Fong, CIH
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(original signed by H. Fong)

DATE: May 21, 2012

SUBJECT: RESULTS FROM CONSULTATION WITH MADERA CAC CONCERNING
PROPOSED CONSTRUCTION OF FUMIGATION CHAMBER

On May 7th, 2012, I traveled to Madera County to provide consultation for Madera County Agricultural Commission's (CAC) staff concerning the proposed construction of a fumigation chamber in the county. Melissa Cregan of the Madera CAC accompanied me to the proposed facility site located at El Dorado Almonds, located west of the city of Madera. The facility manager, Adam Salwasser, was present, as well as Brent Whiteman from Industry Pest Management Services, the fumigation company.

The proposed fumigation chamber is to be located within the confines of an existing 3-sided pole barn. Photo One shows the openings located along the long side of the structure, from the vantage point of the door to the proposed chamber.



Photo One: Structure openings



The size and number of openings make this compliant with 1994 Reference Manual: Methyl Bromide Commodity Fumigation; Condition 4: Enclosed Areas. A partially enclosed area does not pose the potential for exposure that a fully enclosed structure would. The facility manager also indicated that a large, structurally integrated fan, as shown in Photo Two, would be installed to exhaust any fugitive emissions that might escape from the chamber into the storage area. In my professional judgment, the structure's unenclosed configuration, as well as the use of a large air mover, would be sufficient to ensure compliance with Condition 4: Enclosed Areas.



Photo Two: Structurally integrated fan

The existing structure's walls and ceiling would be retrofitted to become the chamber walls and ceiling. One of the existing walls would be a shared wall with an adjoining storage room that shares the same building envelope. This would potentially conflict with Condition 4: Common Wall. Potential solutions to this non-compliance include:

1. Application scheduled when no workers present (test before allowing entry)
2. Limited access (5 ppm maximum/1 hour time limit; requires testing)
3. Mechanical ventilation with periodic testing

If mechanical ventilation is used, it must be active during both fumigation and aeration phases and can be switched off otherwise.

Noted structural defects must be addressed. These include, but are not limited to, exterior corner damage of the main structure (see Photo Three) and full, gas-tight sealing of all penetrations and other structural gaps (Photo Four and Photo Five).

A structural addition, currently under construction, must be of the same pole-barn configuration as the present structure. A structural fan of adequate CFM capacity, installed adjacent to the shared wall in the future structure, will mitigate any concerns for compliance with Condition 4: Common Wall.

All buffer zone requirements must be met when operating the fumigation chamber. The appropriate aeration buffer zone must be computed for the aeration stack installed. Marking the minimum perimeter buffer zones around the structure with permanent methods (painted lines, fencing, etc.) is advised.



Photo Three: Exterior structural damage



Photo Four: Gaps in sheet metal walls



Photo Five: Gaps in sheet metal ceiling

I strongly advise that bollards be installed around the exterior of the structure (including the shared wall of the addition presently under construction), at the 10 foot minimum buffer zone perimeter, to prevent damage to the chamber walls.

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All appropriate structural and procedural requirements as specified in the 1994 Reference Manual: Methyl Bromide Commodity Fumigation should be followed.

cc: Melissa Cregan, Deputy Commissioner, Madera County Department of Agriculture
Pamela Wofford, Senior Environmental Scientist, Environmental Monitoring Branch, DPR