



Val Dolcini
Director

MEMORANDUM

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Secretary for
Environmental Protection

TO: Robert Ford, CIH, CSP
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HSM-20001

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DATE: January 27, 2020

SUBJECT: FUMIGATION RECOMMENDATIONS FOR SELECT HARVEST U.S.A.
FACILITY IN TURLOCK, CA

On January 10, 2020, Senior Industrial Hygienist Harvard R. Fong and Associate Industrial Hygienist Emma R. Colson from the Department of Pesticide Regulation (DPR) Worker Health and Safety (WHS) Branch toured the Select Harvest U.S.A. facility in Turlock, CA to provide recommendations on the development of two fumigation chambers. Also present were Derrik Hunger, Milford Esau, and Cari Gansberger from Merced County. Juan-Carlos Veraza from Select Harvest led the tour.

The following WHS recommendations pertain to the two fumigation chambers pictured in Figure 1 and comply with fumigation-related regulations found in 3 CCR 6780 and 6782. Many of the recommendations are drawn from DPR's 1994 Reference Manual on Methyl Bromide Commodity Fumigation (Manual). As with all pesticide applications, applicable label requirements, permit conditions, and regulations must be followed. This memorandum serves as a recommended guidance that can be used by the county in developing permit conditions for this specific facility.

The fumigation chambers are located in the same building and share a common wall. The dimensions are 61'x61'x20', or 74,420 cubic feet each. The proposed operation involves having one chamber under fumigation/aeration while the adjoining is being loaded/unloaded with product. This creates the potential hazard of fumigant migration and potential buildup in the chamber where workers may be present. To mitigate this exposure, the following steps are recommended in the non-fumigated chamber:

- Keep chamber doors open at all times while workers are present.
- Ensure mechanical exhaust ventilation is operating at all times when workers are present.
- Measure air concentrations within the chamber using a direct-read instrument.

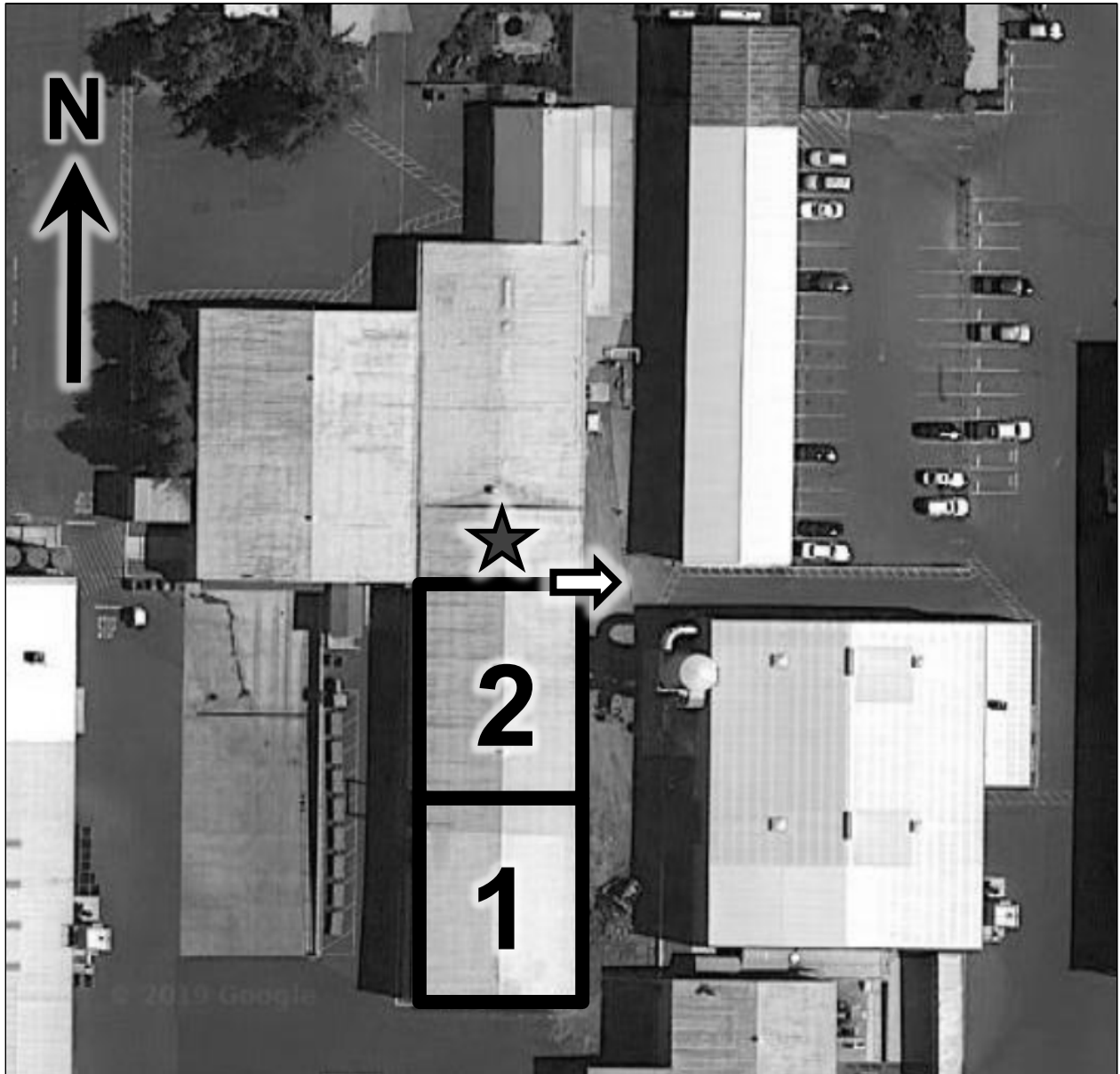


Figure 1. Facility layout. Fumigation chamber 1 and 2 indicated with numbers. Storage area north of chamber 2 indicated with a star symbol. Arrow represents the direction of the airflow from the “air wall” exhaust. Satellite image obtained from Google Maps.

Workers should not enter the fumigated chamber until it has been certified as cleared using a direct-read instrument. Certification of clearance should be done remotely to eliminate exposure to the fumigator conducting the clearance. This can be done by inserting the direct-read instrument into the chamber from a conduit outside the structure (for instance, the hole where the pressure testing is done). Once it has been confirmed that concentrations are less than the clearance concentration on the label, clearance can begin in the rest of the breathing zones within the chamber. If the fumigator enters the chamber to certify clearance *without* first checking concentrations remotely, they must wear a label-required self-contained breathing apparatus (SCBA) since the concentration is unknown.

If the fumigation chambers have passed a pressure test, the buffer zone around the treatment area would be a minimum of 10 feet from the exterior walls of the chambers. Pressure testing should be done annually and in accordance with the Manual. If the wall is damaged in any way (e.g., a forklift accident), the chamber should not be used until additional pressure testing has been conducted or be considered an “untested enclosure,” as described in definition “m” of the Manual.

Another potential hazard exists within the building on the north side of chamber 2 (Figure 1) where a storage area is located. This has been mitigated by constructing an “air wall” between the chamber and storage area. The “air wall” area has an exhaust fan that moves air out of the area, entraining any fumigant emissions in the process. The door to the “air wall” area shall be locked at all times and a light on the wall of the storage area will indicate whether a fumigation is taking place. The following recommendations will improve the efficacy of the “air wall”:

- Add automatically opening louvers or a fan with the same capacity as the current fan on the opposite side of the exhaust fan to provide makeup air.
- Seal or plug any openings that may allow migration of fumigant from the chamber into the “air wall” area.
- If a fumigation is taking place and there are workers in the storage area, a direct-read instrument should be in continuous operation and alarm if concentrations exceed the clearance concentration indicated on the label.
- Extend the exterior 10-foot buffer to include the exhaust port of the “air wall” area. Add signage that instructs workers to avoid prolonged exposure in that area.

For further assistance with the development of buffer zones or other bystander exposure, the facility should contact DPR’s Environmental Monitoring Branch Air Monitoring Program.

cc: Derrick Hunger, Deputy Agricultural Commissioner, Merced County
Cari Gansberger, Deputy Agricultural Commissioner, Merced County
Milford Esau, Agricultural Biologist, Merced County
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