



# Department of Pesticide Regulation



Mary-Ann Warmerdam  
Director

## MEMORANDUM

Arnold Schwarzenegger  
Governor

TO: Sue Edmiston, Agriculture Program Supervisor III  
Worker Health and Safety Branch **HSM-05006**

FROM: Frank Schneider, Associate Industrial Hygienist *(original signed by F. Schneider)*  
Worker Health and Safety Branch  
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DATE: March 28, 2005

SUBJECT: CHLOROPICRIN RESULTS FROM AIR SAMPLE BAGS TAKEN AS PART OF  
AN INVESTIGATION INTO PRIORITY INCIDENT 5-SD-05

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On March 10, 2005 I traveled to San Diego County and met with Rick Walsh and Simone Hardy of the San Diego County Agricultural Commissioners' office. After signing a chain of custody form, six samples bags (SKC catalog number 232-0945A) that were stored in a freezer were turned over to me. The bag samples were taken by the San Diego County Department of Environmental Health, at the request of the commissioners' office, as part of priority incident investigation 5-SD-05. The samples were taken at an apartment complex at 4205 Ohio Street, San Diego, California. Department of Environmental Health personnel drew these samples approximately 24-hours after the initial fumigation. I transported these samples chilled to Sacramento and they were stored chilled until March 14, 2005.

On March 14, the sampled air was drawn out of one bag sample and assigned as WHS sample number SD 6. This sample was drawn off until all air was expended from the bag using an SKC Low Flow Pump Model 222 with XAD4-200/400 mg air tubes as a matrix. Start and end counts were recorded for each sample so  $\mu\text{g/liter}$  sample results could be calculated. Only one air bag sample was drawn off at this time because it was decided to combine other samples if this first sample found no detectable levels of chloropicrin. The sample was taken to the California Department of Food Agriculture Center for Analytical Chemistry for analysis that day. On the afternoon of March 15, 2005 the chemist, Scott Fredrickson, reported to me by phone that the sample was positive for chloropicrin. The following morning of March 16, 2005 the remaining five air sample bags were sampled in a like manner. These remaining five samples along with one blank sample drawn from the ambient air around the sampling procedure were transported to the laboratory that same morning for analysis.

Results for the sampling ranged from 0.28 to 0.34 PPM. The levels are above American Conference of Governmental Industrial Hygienists TWA of 0.1 PPM<sup>1</sup>. Chloropicrin levels of 0.3 to 0.37 PPM caused painful irritation to the eyes in 3 to 30 seconds<sup>1</sup>. Since these samples were taken 24-hours after the initial fumigation, it is likely chloropicrin levels were higher prior to this sampling period. Table I (below) provides additional details for sampling as part of the investigation for 5-SD-05.



Table I. Chloropicrin results for Priority 5-SD-05.

WHS No.	Location <sup>1</sup>	µg/sample	µg/Liter <sup>2</sup>	PPM <sup>3</sup>
SD 1	hallway outside unit 108 #1	1.77	1.89	0.28
SD 2	hallway outside unit 108 #2	1.69	2.17	0.32
SD 3	hallway outside unit 108 #3	1.78	2.25	0.34
SD 4	bedroom on left unit 108	1.79	2.16	0.32
SD 5	bedroom on right unit 108	1.69	1.84	0.27
SD 6	living room unit 108	1.54	1.85	0.28
SD 7	blank XAD 4 only	0	0	0

<sup>1</sup> Apartment complex 4205 Ohio Street, San Diego, California

<sup>2</sup> µg/Liter = µg/sample divided by milliliters of air drawn from sampling bag x 1000

<sup>3</sup> PPM = µg/Liter x 24.45 Liters/mole divided by 164.39 (molecular weight) grams/mole

References:

American Conference of Governmental Industrial Hygienists. 2005. Chloropicrin: TLV®  
Chemical Substances 7th Edition Documentation. Cincinnati, Ohio.