

METHYL BROMIDE EMISSION CONTROL USING A COMMERCIAL SCRUBBER AND ABSORBING FLUID

James F. Thompson¹, Spencer Walse², Wiley Hall²

¹ Postharvest Engineering, LLC, Sacramento, CA

² USDA-ARS San Joaquin Valley Agricultural Sciences Center, Parlier, CA

Abstract. To retain critical export of specialty crops that have quarantine and pre-shipment (QPS) fumigation requirements, a cost effective and technically feasible process must be developed to contain, destroy, or recapture/reuse methyl bromide and its alternatives. This report describes the performance and cost of a commercially available air scrubbing system to capture and destroy methyl bromide after a QPS fumigation process. The system circulates the atmosphere in a fumigation chamber through a horizontal fume scrubber (Duall Air and Water Technologies, Owosso, MI) filled with a proprietary absorbing fluid (Insects Limited, Westfield, IN). The system is operated until the spent fumigant concentration drops below the label-mandated ventilation requirements for methyl bromide, 5 ppm (21µg/L).