



Department of Pesticide Regulation



Mary-Ann Warmerdam
Director

MEMORANDUM

Arnold Schwarzenegger
Governor

TO: George Farnsworth
Environmental Program Manager I
Worker Health and Safety Branch

HSM-10010

FROM: Harvard R. Fong, CIH *(original signed by H. Fong)*
Senior Industrial Hygienist
Worker Health and Safety Branch
(916) 445-4211

DATE: August 25, 2010

SUBJECT: RECOMMENDATIONS FOR EXPOSURE CONTROL METHODS AT A SEED TREATMENT FACILITY IN SUTTER COUNTY AND INTERPRETATION OF RESPIRATORY PROTECTION REQUIREMENTS FOR AN INADEQUATE PESTICIDE LABEL

On August 12, 2010, I traveled to Sutter County to conduct a pesticide workplace evaluation regarding a seed treatment facility. The Sutter County Agricultural Commissioner had asked me to do a pesticide workplace evaluation and to provide an interpretation of a pesticide label's respiratory protection requirements, since the label text is non-specific as to the appropriate respiratory protective equipment.

The pesticide product in question, NUSAN 30 EC (EPA Reg. No. 2935-389; active ingredient 2-[thiocyanomethylthio] benzothiazole, also called TCMTB) requires the use of certain personal protective equipment (PPE), including "protective clothing and gloves", "protective eyewear" and a "...mask or pesticide respirator jointly approved by the Mine Safety and Health Administration and the National Institute for Occupational Safety and health [*sic*]." The Mine Safety and Health Administration has not had joint approval of non-mining respiratory protection equipment since 1998. Furthermore, no "pesticide" respirator cartridge has been manufactured since that date. In addition, the label does not identify the type of respirator body or the type of cartridge. All these errors on the label should have been addressed by the registrant to be in compliance with the Pesticide Registration (PR) Notice 98-9: **Modification of Respirator Statements for Pesticide Product Labels**. The registrant has been contacted by the Registration Branch to assist in the resolution of these labeling problems.

My onsite observation was primarily to ascertain the appropriate respiratory protection. The facility, Valley Commodities, in Sutter, California, processes seed for packaging and shipping. The seeds are required to be treated with fungicide before bagging. This is accomplished by misting a mixture of NUSAN 30 EC and water over the seeds as they are transported by an auger and loaded into a bucket conveyer (Photo One). The conveyer carries the treated seed to the dump area above the bagging/sealing operation (Photo Two). Gravity-fed seed is transferred into bags, which are then sealed by a sewing sealer (Photo Three). The completed bag is then



George Farnsworth
August 25, 2010
Page 2

removed and loaded onto pallets (Photo Four). During the observation, there were two work activities in process: bag filling/sealing and palletizing. The NUSAN 30 EC had already been loaded into the mixing device.



Photo One: Bucket Conveyer with Treated Seed



Photo Two: Overhead Seed Dump Area



Photo Three: Bagging and Sealing Area



Photo Four: Loading Pallets

The operator work area for the filler/sealer did not show signs of excessive dust exposure. The use of the pesticide liquid effectively suppressed any fines that might be generated by the bag loading process. The palletizer was far enough removed from the bagging/sealing area to be considered non-exposed to any actions occurring in the bagging/sealing area.

In the area of the mixing and application equipment, an odor one could associate with hydrocarbon solvents was apparent. The label does state that “xylene range hydrocarbons” are present in the formulation. There was also evidence of suspected spills on and around the mixing and application equipment. The carrier hose from the mixer to the application equipment showed evidence of failure and repair (Photo Five), and should be replaced and a more permanent hose support system installed (as opposed to the make-shift string support). General housekeeping in the area of the mixer, application and bagging equipment should also be upgraded, though the facility manager did indicate that a device normally installed to capture seed spilling from the

bucket conveyor was not present at this time. A more frequent power washing of the contaminated equipment is also strongly recommended.



Photo Five: Hose from Mixer to Application Device (two views)

The facility manager stated that he was in the process of developing local exhaust ventilation for the bagger operation, to scavenge any dust or vapors potentially emitted from the bag during filling. This is an excellent approach to exposure control. I also recommended that a hood or other vapor capture device be installed over the area of the mixer and application equipment, to remove any fugitive vapor emissions from that area. I suggested to the facility manager that he consult the American Conference of Governmental Industrial Hygienists publication “Industrial Ventilation: A Manual of Recommended Practice” (22nd edition or later) for guidance on developing a local exhaust ventilation system.

As for the respiratory protection requirements, after observing the operation, the minimum required respiratory protection for the applicator/handler would be a half-face respirator with organic vapor cartridges. Since the material is pumped from a 30 gallon drum, no appreciable aerosol should be generated. The use of a full-face mask would preclude the need for separate eye protection. Respiratory protection does not appear to be necessary for the bagger/sealer or the palletizer and it is unclear if the label would require such. If respiratory protection were deemed required under label interpretation, an N95 particulate filtering facepiece should be sufficient. These respiratory protection recommendations should be followed unless contradicted by subsequent label changes.

cc: Mark Quisenberry, Commissioner, Sutter County Agricultural Commissioner’s Office
Kim Hicks, Sutter County Agricultural Commissioner’s Office
Jim Shattuck, Acting Supervisor, Enforcement Branch, Northern Regional Office
Tom Babb, County/State Liaison, Department of Pesticide Regulation (DPR)
Susan Edmiston, Environmental Program Manager II, WHS Branch, DPR