



R. J. Lee

Interoffice Communication

To J. J. Hall
From T. G. Grumbles
Date October 23, 1980
Subject ANTIMONY TRIOXIDE HANDLING AT ABERDEEN

The results of several recent toxicological testing programs has shown antimony trioxide to cause lung cancer in rats. This material is used in the compounding area at Aberdeen as a PVC additive. In response to this new information the use, handling and exposure potentials at Aberdeen were reviewed.

USAGE

Antimony trioxide is used as an additive for PVC compounds that have electrical wire coating applications. This is due to its flame retardant properties. It is currently purchased from Anzon America under the trade name Red Star or TMS.

It is typically received in 50 pound bags and stored with the rest of the PVC additives in the compounding warehouse area. Through September of 1980, 147,400 pounds have been used. The average monthly use rate is approximately 16,500 pounds.

HANDLING

The handling of the Antimony trioxide occurs in two areas. It is "weighed-out" into smaller quantities in the color-weigh room. It is handled here in the same manner as lead compounds.

It is added to the process in compounding lines 1, 3, and 5. This is done in small quantities from the color weigh room and/or in 50 pound bag quantities. In most cases it is a manual dumping operation.

EXPOSURE POTENTIAL

When in use the potential for exposure to Antimony trioxide is similar to that for lead or other additives. It is handled in the same areas. There is already local exhaust ventilation in the color weigh room, and on the compounding lines where the bags are dumped. Personal protective equipment is already being utilized in these operations to protect from lead exposures. No actual exposure measurements have been made.

CONCLUSIONS

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- 1) Air samples will be analyzed for Antimony trioxide to determine current exposure levels.
- 2) Any recommendations that would be made for ventilation or personal protective equipment use are already being done to control lead exposures.

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- 3) The new information received on potential antimony trioxide health effects will be communicated to the employees through normal plant procedures (i.e. safety meetings).

Unless the air sampling results indicate unacceptable exposure levels, no further steps need be taken at this time.


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