



~~TOP SECRET~~
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Interoffice Communication

To George Haberman
From Tom Grumbles
Date September 23, 1980
Subject LABORATORY BOTTLE WASH FUME HOOD

Following is a summary of our discussion on the subject hood and recommendations for improving the situation in the bottle wash room.

Recent face velocity measurements showed the hood to average 85 feet per minute. As I understand the operation, this should be sufficient velocity to control the vapors emitted during sample dumping activities. However, these measurements were made under static conditions. The hood was installed adjacent to a frequently used door and the turbulence created by it's opening and closing, as well as the fan placed in the room, greatly reduce the efficiency of the hood. Also the exhaust ductwork from the hood has numerous elbows and an unnecessarily long vertical run to the roof of the building. This also decreases the hood efficiency. The barrel which receives the spent samples is in a position to allow vapors to re-enter the room from outside when the prevailing wind is blowing. To improve this situation, I recommend the following:

1. Move the hood to the position we discussed, away from the door.
2. Seal the hood around the bottom. Currently air escapes from large cracks and holes.
3. Assure that the fan is not used in close proximity to the hood during the sample dumping activities.
4. When possible, limit the number of heated, open samples to be discarded in the room. If possible open samples should be placed in the hood before dumping.
5. Reassess the ductwork needed to safely exhaust the hood outside the building. It should have as few elbows as possible and a minimum vertical run to safely exhaust the vapors.

Once these steps are taken the hood should be reevaluated for face velocity. These steps should increase the effectiveness of the hood and help alleviate employee complaints. Please call if you need further information.

Thomas G. Grumbles

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cc Hank Pitera, Harry Garrison

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