Monsanto

→ V. R. HAUPT

FROM (NAME & LOCATION) R. W. Peterson - General Offices

DATE: June 5, 1968

SUBJECT: CEA 1430 - Expand Aroclor at Anniston
Proposed Ventilation - Dust Collection Plan

REFERENCE:

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Our plans for ventilation and dust collection for the flaker-packaging area are shaping up along the following lines. I would appreciate your comments on the flaker-scrubber at an early date, as we are behind schedule in defining this area.

I. Systems

A. Flaker-Bagging Ventilation

We propose one wet scrubber system, about 4,000 CFM, to ventilate the flakers and bagging machines. (Details follow).

B. Aroclor 1268 Mill

We propose a small portable bag collector to ventilate the 1268 Mill and the fiberpak filling hood right below it.

C. Flaker Room Ventilation

The flaker operating platform "penthouse" will have a low-profile roof fan, in addition to adjustable louvres in the east and west walls. Open grating in the floor spots designed for flaker rigging will allow air inflow from the warehouse-packaging area.

D. Liquid Drum Filling

A portable pedestal fan and the overhead unit heater fan will remove fumes from the 100°C Aroclor being drummed. Submerged lance filling will reduce fumes below the level of existing facilities.

E. Solid Aroclor Drumming ("Casting") 0285236

Solid Aroclors at 220°C will be put in galvanized drums in lots of about 100, and allowed to cool overnight before stacking pallets in the warehouse zone. The operator filling drums can be protected by a portable pedestal fan. The area heat will rise through the flaker bay openings and through the warehouse ridge line ventilators. If natural draft proves inadequate a fan can later be placed in the ~~second~~ first vent stack from the south. The hot drums are reported to "smoke after filling.

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II. Selection of Wet Scrubbing For Biphenyl

Samples of biphenyl from your present flaker, with considerable fines, will be given to several vendors of broad line dust collection equipment. The problems with sublimation-caking and sticking to walls have been described to them. Possible problems with sublimation blinding of filter bags has revived examination of wet scrubbers.

One vendor has done some work on biphenyl behavior in water and notes the following: The small particles sink and the large particles float and some particles later sink and some later float. However, with a very small amount of wetting agent, all particles sink. We do not expect large particles in the air flow since the bagging machine vents through the flake surge bin as a knockout chamber. Also, the new flaker will give less biphenyl fines so the pounds collected per day will not be large.

The recovered decanted sludge would be drummed off and handed to the dump. Since we plan a combined ventilation system for both flakers, some Aroclor 5460 particles would be recovered also.

City water charged to the wet collector would be decanted and recycled with a pump through open piping (no spray nozzles). The water would be distributed by air flow as in a wetted wall cyclone. With this recycle, very little water should get to the sewer. In fact, daily make-up of evaporation loss is required. However, the solubility of all products is very low, should some water overflow the decanting operation. Drumming off wet sludge weekly (or as required) will provide blowdown of water hardness.

We believe that the wet scrubber provides more safety and more on-stream reliability for biphenyl handling than does a bag-filter.

After vendor proposals are received, we will discuss the details of the brands available. Provisions for steaming out accumulated biphenyl not wetted will be made.

The fan would be on the discharge of the wet scrubbed to reduce build-up on the blades. This would be in lieu of the air to air aspirating jets we previously considered.

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III. 1268 Mill Bag Collector

Here we feel that the pounds of dust will warrant dry recovery of saleable product. Thus, a separate portable system is proposed. We do not have the CFM worked out as it depends on the mill design. I am considering mills with air recirculation and cyclones to supplement the bag-filter. This might reduce or omit the need for dry-ice. However, this area of work will be well behind the main flaker design now underway.

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