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INDUSTRIAL HYGIENE
AIR POLLUTION

March 27, 1969

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Dear John:

I am writing to summarize the progress made during our visit to the Port Allegheny plant, March 26, 1969. The points summarized below were discussed at our meeting with Messers Binder, Bergason, Dalloway and Ryan.

1. Initial Hood Design

I presented initial designs for builder and feeder hoods for the unibestos lines. There were some modifications made by personnel of the plant with regard to the dimensions of the final builder hood; Pete Ryan will confirm the final dimension change. The concept of the hood was acceptable, as were two back-up hoods for the builder line.

With respect to the feeder hoods, my modifications of the latest design by Ted Bergason were not thought to be satisfactory. The arrangement I had made would prohibit the man from properly cutting the bag. Therefore, I will redesign this hood for submission to personnel at the plant during our next trip up there. However, I might note that, in my opinion, the design will not greatly alter the cfm requirements for the feeder hood.

2. Additional Local Exhaust Sites

We selected the additional local exhaust take off points in the unibestos line. I now have all critical locations where we will exhaust air from the process. An important finding on this trip, and one which I should have been aware of before, was that the cyclone system is a closed circuit. Therefore, it will not be necessary to consider this portion of the process. However, I will provide a hood for the transfer from the conveyor line in this closed circuit to the grinder. Material flows off of an inclined chute to a bag container. This operation will be enclosed.

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3. Decisions to be Made by Port Allegheny Personnel

The decisions which must be made by the members of the Company at Port Allegheny are described below. These decisions are crucial before I can go any further in the design. The steps which I can take without these decisions are (2. above) design of the local exhaust ventilation for the pick up points. However, the following two decisions are crucial for locating mainlines and laying out the entire system. Also, the specs for the collectors are dependent on these decisions.

A. Butler Scrap Building

What is to be done about the Butler Scrap heap? My suggestion is that this entire storage unit be scrapped and that a bin elevated above the ground be substituted. The bin would receive the material collected by the scrap cyclone, which apparently works well. The dust collector for this exhaust line (12" bags) also works satisfactorily and will be retained. From the bottom of the cyclone to the bin effluent would be a closed system. At the base of the bin a mechanical conveyor, either screw type, bar push type, or bucket type would move the material to the weighing platform of the scrap feeder and.

The resistance on the part of personnel at Port Allegheny to this type of system is real, but I believe we can overcome this resistance. I think we can do this by gathering information from vendors of solid materials handling equipment and showing the personnel at Port Allegheny that this is not an unusual job. I believe the scrap will not be severely altered in form during transfer and that the conveyor will not clog. If we were dealing with the amosite directly I would not recommend this type of system. ✓

I do not believe personnel at Port Allegheny will contact the vendors. They appear to have a very insular view of their operation and try to resolve all problems on their own without searching out others in the field for information.

Therefore, I ask that you collect information relative to these bin-conveyor systems.

B. Location of Dust Collector

The location of the dust collectors must be decided upon. If the collectors can be located adjacent to the wall that runs parallel to the truck access road, this will make for the most efficient layout of the ventilation system. If this cannot be done and collectors must be installed adjacent to the present collector location, then it will mean longer lines. Someone must make this decision based on future plans for plant expansion and savings to be accrued from optimum design of the ventilation system.

Mr. John L. Hyde

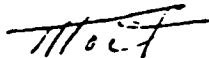
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4. Use of Norblo Bag Collector

Finally, I expressed the viewpoint that it would be possible to salvage the present dust collector (6" bags). A blower could be obtained from the Norblo Company which would be in the same series as the present one, but which would have a static pressure capacity of 12" of water. This is a stock item in the manufacturer's catalog. The pressure drop of the system would be in the neighborhood of the 12" H₂O with a cyclone precleaner. I hope to use this collector (11,500 cfm) and a cyclone on the feed lines in order to recover the useful fiber.

Sincerely yours,



Morton Corn, Ph.D.
Consultant

MC:pfh