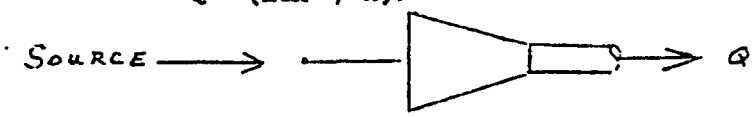
DISCUSSION

Provision of an engineered dust control system maintains airborne lead below the threshold limit except the dry line in the Compounding Department. Of course, there are areas where the threshold limit is approached and these are evaluated as borderline health hazards. However, on an overall basis, airborne lead is within reasonable limits and the health hazard is under control.

In the Compound Department dry line, lead for the batch is removed from the fiber drum container without the benefit of local exhaust. Moreover, the handling technique was poor and accounted for the high airborne lead contamination. Local exhaust at the storage drum is required to maintain the exposure at a minimum. This can be accomplished by providing an exhaust for at least two-thirds of the periphery of the fiber drum. Moreover, sufficient capacity is required to maintain an inward draft of at least 100 feet per minute at the source of contamination. The capacity required for the hood can be computed as follows:

$$Q = (10x^2 + A)V$$



Q = Required exhaust volume, cfm.

X = Distance from hood face to farthest point of contaminant release, feet.

A = Hood face area, square feet.

V = Capture velocity, fpm at distance x.

Application of this equation will provide the minimum capacity required to remove the airborne lead from the operator's breathing zone. However, the operator should be required to remove the material from the container without spillage or careless handling.

The blender, hammermill, mixer and discharging cycle in Dry Compounding did not produce exceedingly high airborne lead contamination. However, it is felt that improved inward draft can be achieved by addition of baffles. This is a semi-automatic transfer cycle and properly placed baffles should not interfere with the operating cycle.

In the Rolling Department, airborne lead approached the hygienic standard and a borderline health hazard may exist. It is felt that the primary source of airborne lead is associated with the hopper feed as raw material is introduced. A partial cover for the hopper and enclosure for the feed chute would reduce the airborne lead.