RESEARCH LABORATORIES DIVISION
GENERAL MOTORS CORPORATION
POST OFFICE BOX 188, NORTH END STATION
DETROIT 2, MICHIGAN

July 20, 1949

Dr. Robert A. Kehoe, Director
Kettering Laboratory of Applied Physiology
University of Cincinnati
College of Medicine
Cincinnati 19, Ohio

Dear Bob:

I thank you for your letter of June 16 in which you express your opinions regarding probable causes of elevated concentrations of lead in blood and urine of employees engaged in the application and removal of a high lead, low tin solder. I don't have to tell you that we have a very high regard for your opinions.

We have made observations and tests at the plant concerned and these indicate that in this plant, as well as in others where we have made tests for air-borne lead, excessive exposures are not found around tinning, torch soldering, and wiping operations. They are found wherever mechanical grinding or sanding of solder is done and they may occur from vigorous hand-sanding, but probably not from hand filing.

It appears to me that these results more or less eliminate the necessity for consideration of the vapor and fume angle you mentioned. For that reason I question the value to us of tests to determine the amount of vapor and fume evolved from the different lead alloys at our working temperatures (below 650° F.). After further consideration of the field data collected, along with your opinions and suggestions, if studies of the nature you mention are desired by our executives, we shall contact you further.

Again let me express my appreciation of your reply to our questions.

Best personal regards,

Frank

F. A. Patty, Head
Industrial Hygiene Dept.

FAP:gc