UNIVERSITY OF CINCINNATI
COLLEGE OF MEDICINE
DEPARTMENT OF ENVIRONMENTAL HEALTH

KETTERING LABORATORY
EDEN AND BETHESDA AVENUES
CINCINNATI, OHIO 45219

July 26, 1967

Dr. Robert J.M. Horton
Health Effects Research Program
Public Health Service
5008 Federal Office Bldg.
Cincinnati, Ohio 45202

Dear Dr. Horton:

Last week's discussions identified certain areas of the proposed lead study which require modification. The groups felt that repeated aerometric measurements should be conducted at all "Tri-City" sites (except Philadelphia Airport) and that the cadaver study should not be considered at this time. Neither of these changes materially changes the scope of the work, although full-time coverage of sampling sites will become essential. In response to other specific comments, our response would be as follows:

1) Timetable: We believe that the original three cities can be resurveyed in the year running from late 1967 or early 1968. The actual time of initiating the surveys will reflect the rate of progress in re-establishing the original stations and obtaining suitable monitoring personnel. It is not necessary that the entire experimental protocol be established prior to the start of this sampling program.

During the following year the stations will be moved to new sites in Chicago, New York, and the Washington area. Sampling will be undertaken in 1968 to confirm the readings made at low-lead NASN sites (such as Cedar Rapids) and to examine the advisability of air and biological studies there in 1969.

1968 (old)		1969 (new)	
Cincinnati	- 4	New York	- 6
Los Angeles	- 8	Chicago	- 6
Philadelphia	- 7	Washington (& suburban)	- 6
? Cedar Rapids (pilot) 1 or 2		? Cedar Rapids	- 2
	20		20

2) Aerometric sample pooling: To avoid obscuring transient high weekly lead readings in a monthly pool, pooling on a weekly basis will be regarded as the standard procedure.

3) Biological sampling: This will be conducted essentially as proposed with duplicate analyses of blood specimens. Early during the start-up period, the suitability of "old sites" for biological correlations will be established. In all probability

some of these will be representative of a surrounding residential community and others will not. Four stations in Cincinnati, four in Los Angeles, and perhaps two in Philadelphia are desirable for biological measurements and correlations. The extent to which these ten stations are included in the original nineteen will be determined after the re-establishment of the "Tri-City" sites. For planning purposes we will assume that 8 additional sites will be required.

4) Hematocrit factors: Although the effects of hemoglobin levels in population groups will probably not be of significance, microhematocrits will be determined at the time of each blood collection.

5) Control blood specimens: Three rather than two control levels will be utilized and will be available for inter-laboratory comparisons. A nurse at the Cincinnati General Hospital has been selected to carry out the program. She will have custody of the tubes and will introduce them into the analytical process according to a schedule developed by the statistical group. Her post in the hospital will permit her to have correspondence with outside laboratories and access to the Laboratory on a sufficiently regular basis so that control specimens will not be obvious.

6) Tube and filter controls: Batch checks will be conducted to assure continued freedom from contamination.

7) Correlation of old and proposed aerometric analyses: The Laboratory will analyze on a "blind" basis filter wedges retained from the original study.

Volume of Samples

A. Original sites

1)	Cincinnati	- 4	stations	x 1	pool/wk	x 56	wks	= 224
2)	Los Angeles	- 8	"	x 1	" "	x 56	"	= 448
3)	Philadelphia	- 7	"	x 1	" "	x 56	"	= 392
								1064

(Most filters will be changed on a 2 - 3 x/wk basis. In high filter load areas in Los Angeles, tandem pumps yielding 7 filters/week will be used.)

B. New sites

1) Cedar Rapids (or equivalent NASN low-lead, pending confirmation; pilot studies at various stations)
2 stations x 1 pool/wk. x 56 wks. = 112

2) Neighborhood stations (assuming 8 in addition to above)
8 stations x 1 pool/wk. x 56 wks. = 448

C. Blood Specimens (to be run in duplicate)

10 geographical (neighborhood) groups x 100 persons = 1000
10 occupational groups x 50 persons = 500

D. Metabolic Specimens

6 groups x 10 persons/group x 10 days x 2 specimens/day = 1200 specimens

E. Controls, rechecks, and misc.

= 500 specimens

We shall of course be pleased to discuss details of this work with you at any time.

Very truly yours,

Lloyd B. Tepper, M.D.
Associate Director

LBT/lh