IIA.E.30

THE JOHNS HOPKINS UNIVERSITY

SCHOOL OF HYGIENE AND PUBLIC HEALTH

DEPARTMENT OF BIOSTATISTICS

615 North Wolfe Street • Baltimore, Maryland 21205

October 31, 1985

David Weil, Ph.D.
ECAO (MD 52)
U. S. Environmental Protection Agency
Research Triangle Park, North Carolina 27711

Dear Dr. Weil:

I have read the memo which Joel Schwartz sent to you (October 2, 1985) in response to my questions (August 20, 1985) about the relationship between blood lead and blood pressure in the NHANES II data. His final paragraph ("Table 7 shows...significant") and the first statement in the section on "Conclusions" address the point about which I was concerned. Although the estimated coefficients for lead are lower when site variables are present than when they are absent, these coefficients remain large enough to be meaningful and are statistically significant. This is in line with what would be expected if blood lead does indeed affect blood pressure. It contrasts with the duPont finding that when site variables are present the estimated lead coefficient for diastolic pressure becomes essentially zero and the coefficient for systolic pressure, while still large enough to be interesting, is no longer statistically significant.

Although much remains to be clarified about the various analyses which have been presented, I am satisfied that the relationship between blood lead and blood pressure described by Pirkle et al. (American Journal of Epidemiology - 1985) does withstand the simple consistency test which is obtained by adding site variables to the regression model.

Yours truly,

Richard Royall

Richard M. Royall
Professor

RMR/pah