June 17, 1935

Dr. John D. Ellis
122 South Michigan Avenue
Chicago, Illinois

Dear Dr. Ellis:

In reply to your letter of June 12th concerning a spectrographic analysis of a specimen of spinal fluid, I should like to point out two things. First, a sample of spinal fluid for spectrographic analysis is very likely to be contaminated with lead in the process of collection, unless a specially made lead-free spinal puncture needle is used in withdrawing the fluid. The hub of the usual spinal fluid needle contains significant amounts of lead and is likely to cause misleading analytical findings. Second, the available data on the lead content of spinal fluid is rather meager with relation to lead absorption, so that a diagnosis on the basis of such evidence is considerably less conclusive than it would be if based upon analyses of blood, and more particularly, urine. In the case of blood withdrawn for spectrographic analysis, it is necessary also to use a special needle, and in the case of any material it is necessary to have a carefully prepared, chemically clean container for the sample. Analyses made on materials without these precautions are likely to be misleading, and are only trustworthy if the amounts of lead actually found by analysis are exceedingly low. That is to say if the results obtained fall within the normal values, one may ignore the significance of possible contamination. Thus lead may be in some measure excluded but its presence can not be ascertained accurately unless one is absolutely certain that no contamination has occurred.

Within the limits of these reservations we should be quite willing to make a spectrographic analysis of a sample which you may wish to send to us. This is not a diagnostic laboratory and for that reason we are not in the habit of charging fees beyond the actual cost of us of carrying out the analysis, which is approximately $5.00 per sample. Our interest is rather along investigative lines and for that reason I should be quite agreeable to making the analysis without charge, providing we are supplied with the clinical information on the patient. I should hesitate to make an interpretation of the analytical results

Dr. John D. Ellis

without having adequate information as to the character of the lead exposure, the period of time which has elapsed since cessation of exposure, and the general clinical picture.

Very truly yours,

RAK:is

Robert A. Kehoe, M.D.