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ARGONNE NATIONAL LABORATORY

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November 9, 1973

Dr. Evan E. Campbell  
Industrial Hygiene Group  
Los Alamos Scientific Laboratory  
Los Alamos, New Mexico 87544

Dear Evan:

In your letter of October 3, 1973 you reported the <sup>239</sup>Pu and <sup>242</sup>Pu disintegration rates obtained at LASL for the four alpha plates which had been prepared at ANL. I am pleased to report that both the values which you obtained are in excellent agreement with our values. The averages of your <sup>239</sup>Pu and <sup>242</sup>Pu values were 0.955 and 2.32 disintegrations per minute, respectively, and ours were 0.961 and 2.35. We are now counting the eight LASL plates that you sent; we will report the data when this work has been completed.

As I told you on the phone, the urine samples from the three plutonium recipients are not identified by the system that I discussed in my letter of September 25. I did not realize that a system had already been established prior to my becoming associated with this project. The major identification is by means of a CHR Analytical Group number rather than a CHR case number. The system used is summarized in the following table:

<u>Literature No.</u>	<u>Analytical Group Numbers</u>	<u>CHR Case No.</u>
Cal-3	1129 to 1139	40-003
HP-3	942 to 955	40-009
HP-6	1146 to 1153	40-012

Each bottle that you obtain will have, in addition to one of the numbers in the second column, a number which identifies the aliquot. Thus, 942-2 will be the second aliquot from the first 24 hour specimen obtained during the confinement of HP-3. The order of the Analytical Group numbers corresponds with the order in which the specimens were obtained.

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Our analysis of the specimens obtained from Cal-3 indicate that his  $^{238}\text{Pu}$  excretion rate is very low. We analyzed an aliquot from each specimen and have established that the rate is less than 0.04 pCi per day. To establish the rate, or an upper limit, we feel that it is necessary to recombine the aliquots from each day's excretion and analyze these. For this reason you will not be receiving any of the urine from Cal-3. The fact that we will have values for the excretion rates of HP-3 and HP-6 from three laboratories should clearly establish the reliability of our values for the excretion rate of Cal-3.

Because Pat Starzyk will be leaving ANL at the end of November, I have asked her to ship the aliquots from HP-3 and HP-6. This will be done within the next week. You will be informed by phone when this is done.

Sincerely,



Robert P. Larsen  
Radiological and Environmental  
Research Division

RPL:hmb

bcc: R. E. Rowland  
A. F. Stehney  
J. Rundo  
P. Starzyk  
R. Oldham  
J. Sedlet

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