

February 17, 1967

Dr. H. D. Bruner  
United States Atomic Energy Commission  
Washington, D. C.

Dear Dr. Bruner:

The requested informal summary of incidents of human exposure to radioisotopes at LRL, Berkeley, follows.

Four cases of beta burns to the hands from radioisotopes prior to 1958 with damage minor.

One accidental single exposure to strontium-90 below permissible level.

One case in 1957 of americium-241 in a hand wound from a broken pipette 25 times permissible. Surgery and EDTA reduced the amount to twice the permissible level. This is the only case at LRL, Berkeley, requiring specific treatment.

There have been a number of minor cases far below permissible, since whole body counters and more elaborate bioassay chemistry have been used include detectible burdens of cesium-137, zinc-65, promethium-147, strontium-90, yttrium-90, curium-244 and others. One extended investigation in 1962 into repeated small exposures below permissible of three experimenters using strontium-yttrium-90, probably by inhalation with measurable urinary excretion. One single inhalation exposure of five experimenters in 1965 to sulfur-35 sulfanilic acid was below permissible with measurable urinary excretion for more than two months.

Curium inhalation incident at the Hilac in 1959 potentially involving twenty-seven individuals showed detectible burdens in seven in stool and urine and serial studies established them all as well below permissible.

In addition to these above specific incidents with measurable human contamination, some body burdens of unknown origin have

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been detected. In preparing this summary we have compiled a list of whole body counting results from our files, and I am enclosing a copy of it for your information. Note that it includes measurements made on some individuals exposed elsewhere.

I hope this information will be useful to you. I regret that it was not immediately available, but took some time to collect, even for this informal report. If we can assist you further, please don't hesitate to let me know.

Sincerely,

Howard G. Parker, M.D., Ph.D.  
Medical Services Department

Enclosures

HOP:mcw

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