

Division of Environmental Health and Safety

317 McKinley Hospital
1109 South Lincoln Avenue
Urbana
Illinois 61801

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September 10, 1985

PRIORITY ROUTING

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J. A. Hind, Director
Division of Radiation
Safety and Safeguards
United States Nuclear
Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Hind:


This is in response to your letter dated July 12, 1985, regarding allegations you received concerning unsafe practices in the handling of byproduct materials authorized by NRC License No. 12-00330-05. The allegations referred to activities in the laboratories of Dr. Konisky and Dr. Maloy.

Dr. Konisky has assured us that members of his laboratory pipette all radioactive material mechanically. Dr. Maloy has indicated that no "direct" mouth pipetting of radioactive materials takes place in his lab. However our investigation has revealed that some researchers may not regard as "mouth pipetting" a specific procedure in which it is necessary to dispense very small volumes of radioactive materials to lanes of DNA sequencing gel using a capillary tube via a rubber hose which is connected to the mouth for suction. In order to correct this ambiguity, a letter (copy enclosed) is being distributed to all Radiation Laboratory Supervisors at UTUC to make it clear that such a procedure is regarded by the UTUC Radiation Hazards Committee as "mouth pipetting."

Dr. Konisky and Dr. Maloy are not aware of any incident of P-32 ingestion occurring in their labs, and none of the lab members are aware of such an incident.

Please be assured that it is our policy that all mouth actuated techniques, including pipetting by mouth, either directly or indirectly, in the vicinity of radioactive materials are prohibited at UIUC. Should you have further questions regarding this matter, please direct them to me.

Sincerely

Sincerely,

Hector Mandel, Head
Health Physics

ws:985:hind.hm
cc: P. J. Doebel, Swanlund
S. Kaplan, 164 Burrill Hall
D. F. Wendel, Swanlund

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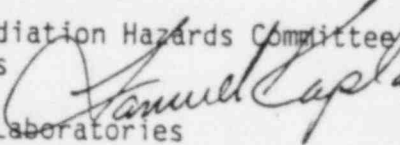
ATTACHMENT C

SEP 13 1985

September 10, 1985

M E M O R A N D U M

TO: All Users of Radioactive Materials

FROM: Samuel Kaplan, Chairman, UIUC Radiation Hazards Committee
Director, School of Life Sciences 

RE: Mouth Pipetting in Radioisotope Laboratories

I am writing to you on behalf of the Radiation Hazards Committee in order to clarify our policy on mouth pipetting in radioisotope laboratories. As you know, mouth pipetting in general is considered an unsafe practice which should be avoided in any situation. The UIUC Radiation Safety Manual (Page 5, Section C.10) specifically prohibits pipetting by mouth in any radioisotope laboratory.

Concerns have been expressed that some radioisotope workers at UIUC may be pipetting radioactive materials by mouth. The U.S. Nuclear Regulatory Commission has recently asked us to look into this matter. The Health Physics Staff has conducted several surveys recently which indicate that, although "direct" pipetting of radioactivity by mouth is not taking place, some researchers may be using other "mouth actuated techniques" in order to transfer very small volumes of radioactive material. Apparently, some feel that this practice is not particularly hazardous due to the miniscule quantities of radioactivity -- usually less than 1 μ Ci of P-32 -- and the presence of a cotton plug to prevent accidental ingestion of material. This represents a misunderstanding of the true hazards associated with the implementation of such techniques; although the likelihood of ingestion through the suction tube or "spit tube" may be miniscule, it is much more likely that accidental ingestion of radioactivity could occur as a result of external contamination which may be present on the surfaces of the apparatus or any other devices which may be brought in contact with the lips. Since this contamination could result from contaminated benchtops, glassware, fingertips, etc., it is possible that the amount of contamination which may be ingested could be quite large.

For the reasons stated above, the Radiation Hazards Committee has concluded that this communication is necessary in order to make it clear that it is our policy that all "mouth actuated techniques," including pipetting by mouth, either directly or indirectly, in the vicinity of radioactive materials are prohibited at UIUC.

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