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TO:  W. N. Mobley  
Superintendent - Process Sub-Section  
MANUFACTURING DEPARTMENT  

FROM:  A. Smith  
Leader - 2-Plant Process Technology  
Technical Section  
ENGINEERING DEPARTMENT  

NUCLEAR SAFETY LIMITS FOR THE POWDER  
RECOVERY HOOD, ROOM 234, 234-5 BUILDING  

Since the operation of the Powder Recovery Hood in Room 234 or the  
234-5 Building involves the handling of plutonium and its compounds,  
it is necessary to establish allowable plutonium concentration limits  
to insure the nuclear safety aspects of the operation.  

In addition to the Powder Recovery Hood there are two decontamination  
hoods located in Room 234. Plutonium containing solutions are routinely  
stored in these hoods in accordance with the nuclear safety limits defined  
in HW-29302, Nuclear Safety - Maximum Allowable Plutonium Mass in Hoods  
Swins, 9, 10, 17, 19, Mating Room and Decontamination Hoods Room 234.  
Using the principles and information set forth in GEM-13844, Nuclear Safety  

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of DF-West Operations, R. E. Schreiber to R. D. Baker, 9-9-48, and in HW-24514, Critical Mass Studies of Plutonium Solutions, F. E. Kruesi et al, 5-19-53, in the analysis of the physical arrangement of the hood, the following batch size limitations are given.

The maximum allowable mass of plutonium in the Powder Recovery Hood including the reactor vessel shall be 2000 grams of plutonium as metal, dry powder and liquid solution provided that the amount of plutonium in liquid solution shall not exceed 800 grams and further provided that the liquid solution will be analyzed before it is transferred from the reactor to RC cans whenever the mass of plutonium in the reactor could conceivably exceed 400 grams.

Approved
W. J. Osheroff
Head Physics Unit
Sept 18 54