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Boxed 113-22

OH.27

June 20, 1951

W.B. Harris

F. A. Thomas, Jr.

HERRING-HALL-MARVIN SAFE CO., HAMILTON, OHIO

REFERENCED DOCUMENT

SYMBOL: HSH:FAT:hmb

MATERIALS (2hr.)

On May 1, 1951 the Herring-Hall-Marvin Safe Company in Hamilton, Ohio started machining uranium slugs for North American Aviation Company, from rolled stock. This operation lasted around 3 weeks. On May 4th an industrial hygiene survey was made of the machining operation in order to determine the extent of the exposure of the machinist to uranium dust. A total of 15 samples was taken. The computed daily weighted average exposure for the machinist was 3.65 ug of uranium per cubic meter of air. The maximum exposure according to data obtained was 7 ug/m³ with the lowest being in the neighborhood of 1.

The turning operations were being done on an Acme turret lathe size 1-0-25. The billets which were used were Simonds 1-3/8" billets. Our work was done at an rpm of 149. The billets were faced to 0.005", the circumference cut was 0.007" and the cutoff was 35 ten thousandths. The work was flooded with a soluble cooling oil. There was no ventilation and there was frequent burning of chips.

The work was broken down into 2 ten hour shifts for 5 days a week, and 1 double 5 hour shift on Saturday. There was 1 man on each shift. The day work was done by Mr. Ludwick "Lou" Scherer. The night shift man was Carl McCracken.

The machining of these slugs was performed in the midst of a large machine room. However, there was no intermingling of other operators with the operators on the machines on which uranium was machined. People present during the work on May 4th were Mr. Noto of the AEC, Mr. Scherer and the writer.

The chips were removed from the bed of the machine and placed in 55 gallon drums. The chips were covered with the same coolant that was used in the machining process. The janitor shoveled the chips from the bed of the lathe into the drums. This was his only contact with the material.

The exposures recorded in this report are well within the tolerance limit of 50 ug/m³. This is encouraging in that it points out that minor machining operations can be performed on uranium rods with a minimum hazard to those people doing the work.

CC: Moore - R&C

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DATE →	6/20/51				