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STANDARD FORM NO. 64

MD.03-2

Office Memorandum • UNITED STATES GOVERNMENT

TO : B. S. Wolf, Medical Director DATE: April 7, 1948

FROM : W. B. Harris, Industrial Hygienist WBH

SUBJECT: ROLLING OF BILLETS AT ARMCO - RUSTLESS IRON & STEEL, BALTIMORE, MD.

REFER TO
SYMBOL: DH:WBH

Mise survey

The following comments pertain to rolling of a test run of 8 uranium billets at Armco. Weighted results of airborne material over rolling mills.

		d/m³/min.
1.	General area - transporting piece	80
2.	Upstream of 1st roll/billet	15000
3.	Upstream of 1st roll/billet	1500
4.	Both sides of last 3 mills/billet	20000
5.	Downstream of 1st roll/billet	23000
6.	" " " " "	40000
7.	" " " roll/billet - wet	220000

It is to be expected that the maximum airborne exposure caused by the production rolling (dry) of this material would be of the order of from 30 - 40000 d/m³/m or from 450 to 500 x tolerance. The average air concentration after equilibrium should reach from 5000 - 15000 d/m³/m, or from 75 to 200 x tolerance, in the vicinity of the rolls. Dispersion of settled dust in the form of scale would materially add to this level. These figures assume the absence of any ventilation other than natural infiltration. The use of wet rolling apparently would increase this figure by some 5x. In order that this operation may be safely carried on, the following precautions would be necessary:

1. Local ventilation at the rolls to remove the smoke.
2. Floor grating to minimize dispersion of scale.
3. Grated location for rolled rod storage. Recommendations for other portions of the process are contained in the report of R. E. Hayden dated March 8th, covering operations at the Joselyn Plant.