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April 22, 1948

TO: W. K. Woods
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TIME REQUIREMENTS FOR CURRENT DISCHARGE OPERATIONS

COPY 1 OF 1

In order to evaluate the feasibility of segmental discharge equipment, it is necessary to determine the time required for segmental discharge during the current operating procedures.

Average time requirements for current discharge operations have been established and are given in Table I.

The unit times were determined by a time study made with Mr. H. L. Henry of the P Division. Data given here are based on 100-F Area; slightly different times were observed at 100-D Area. During these studies a two-man crew operated each charging machine. It is not always possible to maintain a two-man crew.

The number of operational units per rear face entry and exit were determined by a detailed study of recent shutdown operations at 100-F. These data are summarized in Table II.

Table II shows that 61% of the setups cover two adjacent horizontal rows. This indicates the desirability of segmental discharge equipment which will cover adjacent horizontal rows. The "clam-shell" machine has been modified to meet this requirement.

C. P. Cabell / W. K. W.

CPC:bt

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TABLE I

AVERAGE DISCHARGE DATA

Based on Average Number of Operations per Rear Face Entry
100-F AREA

FRONT FACE				REAR FACE			
	Unit	Time (sec)	Total (sec)		Unit	Time (sec)	Total (sec)
Reload elevator (during waiting period for set-ups larger than average)			--	Wait for door	1	15	15
				Enter area	1	15	15
				Lower elevator to 30'	1	26	26
				Enter elevator	1	08	08
				Lower to working row	1	43	43
				Remove tip offs & recap tubes	5	25	125
Reset & cap tubes	5	13	(65)	Place trough on elevator & drain	1	60	60
Reset valves	1.29	81	(105)	Wait for front face (& preset valves)	1	110	110
				Set valves to normal	1.29	42	42
				Set valves to drain (4 pos'n elev.)	1.29	66	8
Set valves to 20"	1.29	81	(105)	Place trough	1	53	5
				Wait for front face	1	52	5
				Remove caps & place tip-offs	5	24	12
				Raise elev. to 30' & unload	1	48	4
				Leave elevator	1	11	1
				Raise elevator to roof	1	26	2
				Leave area	1	15	1
				Total Seconds (elapsed time)			86
Attach & pos'n charger 3*	3*	83	253				
Charge 17 rear dummies 3*	3*	30	90				
Charge 6 1/4 uranium 3*	3*	93	279				
Chg. 1 1/4 front dummies 3*	3*	35	105				
Total Seconds (elapsed time)			729				72
				Grand Total Seconds			158
				Minutes per tube			2.6
				Tubes per hour			11.

* 2 machines operating. One discharges 3 tubes, one 2 tubes. Time figures include waiting periods when changing from 1 type slug to next.

This column lists the average number of repetitive operations per rear face entry as derived in Table II.

By Authority of CH Henager,

CG-PR-2, 1-3-92

by DK Hanson, 2-10-92

Verified By DA Burk 2-11-92

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