

HW-3-2638

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DATE
For The Atomic Energy Commission
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Chief, Declassification Branch

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TO: HOOD WORTHINGTON

100-B UNIT PURGE
JUNE 14, 1945

INV.
727

INTRODUCTION

The 100-B unit was purged with 100 ppm. Super Cel for 50 minutes on June 14th.

CONCLUSIONS

1. Plugging of the 50-mesh header screens was less serious than that usually experienced at the other areas and was about the same as that experienced at this area during the previous purge.
2. The pressure drop recovery was satisfactory for the 0.240" and 0.175" orifice zones but was not equal to the amount of film built up since the previous purge for the 0.140" orifice zone.

DETAILS

The solids feed was started to the process water at 7:30 A.M. The riser flow rates indicated that some of the cross-header screens off of D riser were gradually becoming plugged, inasmuch as it was desirable to prevent the plugging of the screens to the point that some would have to be replaced, the solids feed was stopped at 8:20 A.M. None of the header screens were replaced following the purge and the riser flow rates were better balanced after the purge than they were prior to the purge.

Pressure Drop

The pressure drop data for Sample Room B and Panellit tubes are given in Tables I and II. These tables show the pressure drop increases before and after the purge on the basis of 0 and 250 MW power. The 250 MW data after the purge, June 16th data, were the lowest pressure drops reached after the purge. The pressure drop recoveries are given in Table III.

The pressure drop recoveries for the 0.240" and 0.175" zones are about the same as those realized during previous purges. For the 0.140" zone, however, about 4 psi less film was removed during the purge than was deposited during the interval

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Hood Worthington

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between the last two purges. This is the third successive purge in this area in which the film deposition between purges has exceeded the film removal resulting from a purge in the 0.140" Zone.

C. P. KIDDER
TECHNICAL DEPARTMENT

CPK

Per

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TABLE I

B SAMPLE ROOM DATA

PRESSURE DROP - PSI ABOVE BASE

FEB. 24TH BASE TUBES

<u>Power Level - MW</u>	<u>Before Purge</u>		<u>After Purge</u>	
	<u>June 13th</u>	<u>June 14th</u>	<u>June 14th</u>	<u>June 16th</u>
	<u>250</u>	<u>0</u>	<u>0</u>	<u>250</u>
2465	15.4	9.0	2.0	0.5
2469	17.7	8.3	-1.3	-1.2
2473	15.3	7.4	-1.2	-1.2
2483	<u>22.5</u>	<u>8.7</u>	<u>-1.4</u>	<u>-1.7</u>
Average	17.7	8.3	-0.5	-0.9

PRESSURE DROP - PSI ABOVE BASE

APRIL 29TH BASE TUBES

<u>Power Level - MW</u>	<u>Before Purge</u>		<u>After Purge</u>	
	<u>June 13th</u>	<u>June 14th</u>	<u>June 14th</u>	<u>June 16th</u>
	<u>250</u>	<u>0</u>	<u>0</u>	<u>250</u>
2375	17.8	8.8	0.3	-2.3
2475	19.4	8.7	-1.5	-1.6
2479	18.5	7.7	-0.5	0.0
2575	<u>17.1</u>	<u>9.7</u>	<u>2.1</u>	<u>0.4</u>
Average	18.2	8.7	0.1	-0.9

TABLE II

PANELLET DATA

PRESSURE DROP - PSI ABOVE JAN. 29TH BASES

	<u>Orifice Zones</u>		
	<u>0.240"</u>	<u>0.175"</u>	<u>0.140"</u>
Before Purge (June 13th)	21	34	41
After Purge (June 16th)	6	4	16

TABLE III

PRESSURE DROP RECOVERY

	<u>Percent Recovery</u>
0.240" Orifice Zone	72
0.175" Orifice Zone	88
0.140" Orifice Zone	61
2/24 Base Pressure Drop Tubes	84*

* Calculated using the low point of March 15th, -3.9 psi above base, as the zero point.

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3/28/94

