

**NOTICE**

**CERTAIN DATA  
CONTAINED IN THIS  
DOCUMENT MAY BE  
DIFFICULT TO READ  
IN MICROFICHE  
PRODUCTS.**

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6-19

- CC: 1. Hood Northington HW-3-2643  
2. S. Mon-Hickey-Smith-700 Area  
3. P.M. Crane  
4. C.M. Crane - 700 Area  
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OSI  
HW  
89

TRANSMISSION NUMBER

HW-3-2643  
51715

201. NAME: WHITINGTON

THIS DOCUMENT CONSISTS OF 3 PAGES

100-L UNIT PURGE  
JUNE 4, 1944

HW-3-2643

DE91 002387

EXPERIMENTAL

The 100-L unit was purged with 100 ppm. ~~silver~~ Cu for less than one hour on June 4th.

RESULTS

1. Considerable plugging of the 30-mesh header screens was experienced. The duration of the purge was less than the required one hour because of this plugging.
2. Most of the screens recovered after the purge showed traces of Cu.
3. The percentage Cu recovery was about normal for a purge of this shorter duration.

DETAILS

The solid feed was started to the process water at 8:25 A.M. and was discontinued at 8:44 A.M. because the riser flow rates indicated that header screens off of A and B risers started to plug. Very slight improvement in flow rates was realized with the feed shut off so the solids feed was resumed at 8:45 A.M. At 9:00 A.M. the solids feed to riser B was stopped because of the decrease in flow rate on this riser. This feed was again resumed at 9:10 A.M. and discontinued for ten minutes when the solids feed to A and C risers was discontinued. At 9:30 A.M. the solids feed was also discontinued for A and B risers. The total duration of solids feed to the individual risers is shown in the following tables:

RISE	INTAKE, HOURS
A	0.97
B	0.6
C	0.10
D	0.97

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CHANGED TO UNCLASSIFIED  
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BY S.E. Gysen DATE 5-1-90

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None of the riser flow rates were permitted to fall below 6,000 gpm.

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A total of twenty-two cross-header screws were replaced after the purge and the gas flow rates then became better balanced than they were prior to the purge. Inspection of the screens which were removed revealed traces of tar on some of the screens. This is the first time that tar has been found on screens in this area.

#### PRESSURE DROP

The pressure drop data for Sample Rock B and granulit tubes are given in Tables I and II. These tables allow the pressure drop increases before and after the purge on the basis of 0 and 265 MW power. The 265 MW data after the purge, June 6th data, were the lowest pressure drops reached after the purge. The pressure drop recoveries are given in Table III. These recoveries are about as expected for the shorter duration of purge.

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**TABLE I**  
**3 SAMPLE ROOM DATA**  
**PRESSURE DROP - DMC, 21ST BASE TUBE**

PSI Above Base

Power Level-MW	Before Purge		After Purge	
	June 3	June 4	June 4	June 6
265	265	0	0	265
2575	-6.1	22.0	3.4	-7.8
2475	-4.7	20.2	2.0	-8.0
2473	-4.3	20.7	3.1	-4.7
2375	-10.8	18.6	1.2	-5.4
Average	34.0	20.4	3.7	4.6

**PRESSURE DROP - APRIL 1971 BASE TUBES**

PSI Above Base

Power Level-MW	Before Purge		After Purge	
	June 3	June 4	June 4	June 6
265	265	0	0	265
2483	18.8	9.1	0	-1.7
2479	17.6	7.8	-1.6	-2.6
2469	18.7	9.5	1.1	-2.1
2465	19.0	10.1	0.2	-2.2
Average	18.9	9.2	0	-2.1

**TABLE II**  
**PANELING DATA**  
**PRESSURE - PSI ABOVE JAR, 10 BASE**

	Orifice Zones			
	0.240"	0.200"	0.175"	0.140"
Before Purge (May 31st)	36	36	34	36
After Purge (June 6th)	11	8	15	21

**TABLE III**  
**PRESSURE DROP IN COVEX**

**% Recovery**

0.240" Orifice Zone	70
0.200" Orifice Zone	77
0.175" Orifice Zone	56
0.140" Orifice Zone	42
12/21/44 Base Pressure Drop Tubes	86

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11/28/90

