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CONTINUOUS BASELINE STUDY

✓ Project 1108-B

Progress Report 61

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

August 1, 1952

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

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In conjunction with the F.K.I. Continuous Baseline Study, sixty-eight different sample lots of 42-lb. Fourdrinier kraft linerboard were submitted by ten different F.K.I. mills to The Institute of Paper Chemistry for testing during the period July 1 through July 31. In addition to the 42-lb. kraft linerboard, three samples of special drum stock were also submitted for evaluation by one of the participating mills. The results on the special stock are tabulated separately in this report. A tabulation of the number of samples classified according to mill may be seen in Table I.

TABLE I
DISTRIBUTION OF 42-LB. LINERBOARD SAMPLES

Mill Code	Samples Submitted
A	8
B	16
C	8
D	8
E	0
F	5
G	6
H	3
I	2
J	4
K	0
L	8
M	<u>0</u>
	68

These sample lots were tested for basis weight, caliper, bursting strength, G. E. puncture, and Elmendorf tear. The average strength results for each mill may be seen in Table II and are graphically presented in Figures 1 to 6. In addition to a comparison of the mill averages for the various tests, Table II also shows the current F.K.I. averages, the cumulative F.K.I. averages, and the F.K.I. indexes. The cumulative F.K.I. average includes all the results up to but not including the current period; the current period in the case of this report is July 1 through July 31. The F.K.I. indexes are obtained as follows:

$$\frac{\text{current F.K.I. average}}{\text{cumulative F.K.I. average}} \times 100 = \text{F.K.I. index (\%)}$$

The F.K.I. index provides a ready means of comparing the current quality with previous results. For example, the current F.K.I. average basis weight is 43.3 lb., and the cumulative F.K.I. average basis weight is 43.1 lb. Hence, the index for basis weight determined in per cent as indicated above is 100.5. This signifies that the current average basis weight is slightly higher than the cumulative average, which in this case covered the period from July 25, 1947, through June 30, 1952.

A comparison of the results in Table II and Figure 1 shows that the average basis weight results for all mills conform to the 42-lb. specification set forth in Rule 41. Mill F has the highest average basis weight, it being 44.6 lb. or approximately 6.2% higher than the 42-lb. specification. On the other hand, Mill C has the lowest average basis weight, it being 42.6 lb., approximately 1.4% higher than the 42-lb. specification.

The amount by which the mills vary from the 42-lb. specification is as follows:

Mill Code	Per Cent
A	+1.9
B	+3.6
C	+1.4
D	+3.8
E	--
F	+6.2
G	+3.1
H	+4.0
I	+1.9
J	+3.1
K	--
L	+2.9
M	--

A comparison of the average basis weight data for the previous period with the current F.K.I. average indicates that the basis weight results have increased slightly.

A comparison of the average caliper values for the various mills (see Figure 2) shows that the mill averages vary from a low of 12.1 for Mill H to a high of 14.6 for Mill F, the average being 13.4 which is somewhat lower than the cumulative average of 14.0.

The average bursting strength values obtained for each mill are presented graphically in Figure 3. It may be observed that the

average bursting strength values for the various mills range from a low of 103 for Mill D to a high of 114 for Mill H. The current F.K.I. average bursting strength is 108, slightly higher than the cumulative average of 106.

The data of Table II and Figure 4 show that the average G. E. puncture result for all mills is 35 units. Mill F has the highest G. E. puncture average, 41 units, and Mill J has the lowest average, 30 units. The current F.K.I. G. E. puncture average of 35 units is slightly lower than the cumulative F.K.I. average which is 36 units.

A graphic comparison of the Elmendorf tear results for the various mills is given in Figures 5 and 6. The data of Table II show that Mill F has the highest average machine direction tear value while Mill A has the lowest. Mill F has the highest average cross-machine direction tear value, whereas Mill J has the lowest value. It may be noted that the current F.K.I. average machine and cross-machine direction tear results are lower than the cumulative averages.

A comparison of the F.K.I. indexes indicates that, for the current period, the current F.K.I. averages for caliper, G. E. puncture, and Elmendorf tear are lower than the respective cumulative F.K.I. averages, whereas the current F.K.I. averages for basis weight and bursting strength are higher.

In order to compare the variation within a given mill, the test results for each particular mill have been tabulated in Tables III to XV for Mills A to M, respectively. In addition to the current and cumulative averages, the mill factor and mill index are given for each

mill. The cumulative mill average is the average test result obtained on the samples submitted by the particular mill up to, but not including, the current average. The mill factor and the mill index are obtained as follows:

$$\frac{\text{current mill average}}{\text{cumulative mill average}} \times 100 = \text{mill factor } (\%)$$

$$\frac{\text{current mill average}}{\text{cumulative F.K.I. average}} \times 100 = \text{mill index } (\%)$$

The mill factor and the mill index serve as a ready means for comparing the current mill results either with the previous results for that particular mill or with the cumulative F.K.I. results. As the test data accumulate, the factors and indexes acquire added significance. The reports also contain a comparison of the test data obtained at the mills with test data obtained at The Institute of Paper Chemistry.

The results obtained on the special drum stock may be seen in Table XVI.

It may be noted in Tables III through XVI that the data have been separated on the basis of the sheet finish. The summarized results for the mills which submitted sample lots during the current period are as follows:

Mill Code	No. of Sample Lots		
	W.F.	D.F.	Misc.
A	8 ^a		
B	16 ^a		
C	8		
D	8		
E	3 ^b		

(Continued on next page.)

Mill Code	No. of Sample Lots		
	W.F.	D.F.	Misc.
F	4		1 ^c
G	6		
H	3 ^a		
I	2 ^a		
J			4 ^d
L			8 ^c

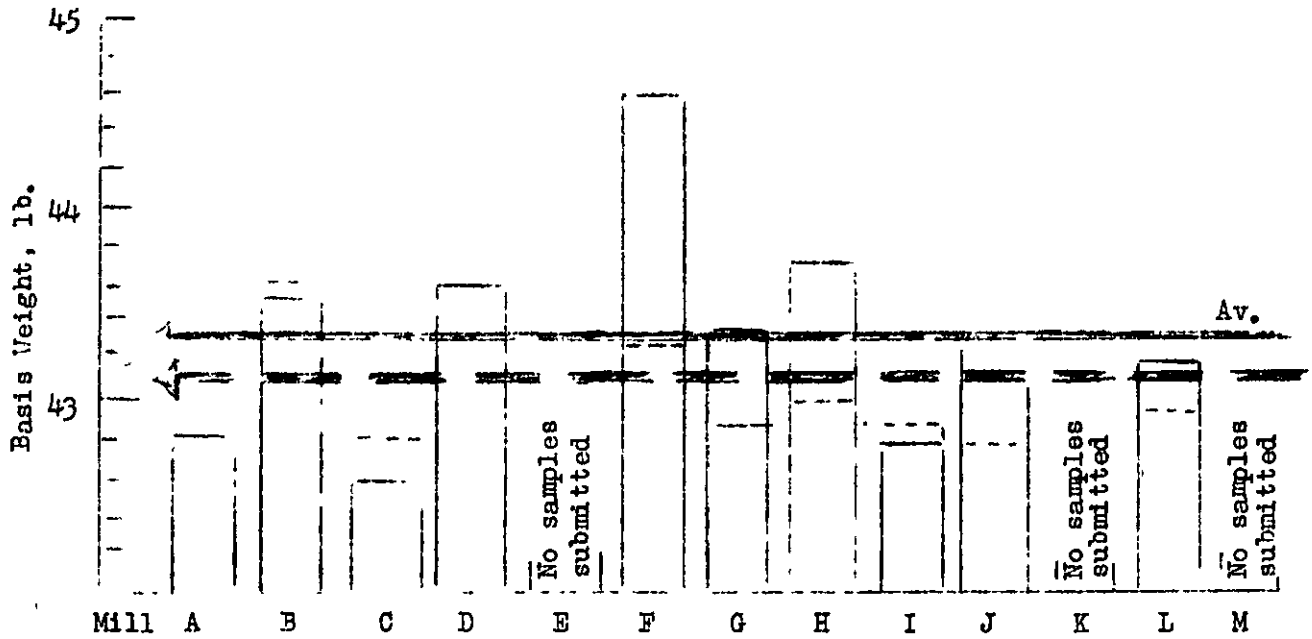
- ^a One side only.
- ^b Drum linerboard.
- ^c Sheet finish not reported.
- ^d Semi-water finish

The results indicate that a majority of the mills are using a water finish on their 42-lb. linerboard.

TABLE II
 SUMMARY OF COMPOSITE MILL AVERAGES--JULY 1 THROUGH JULY 31, 1952

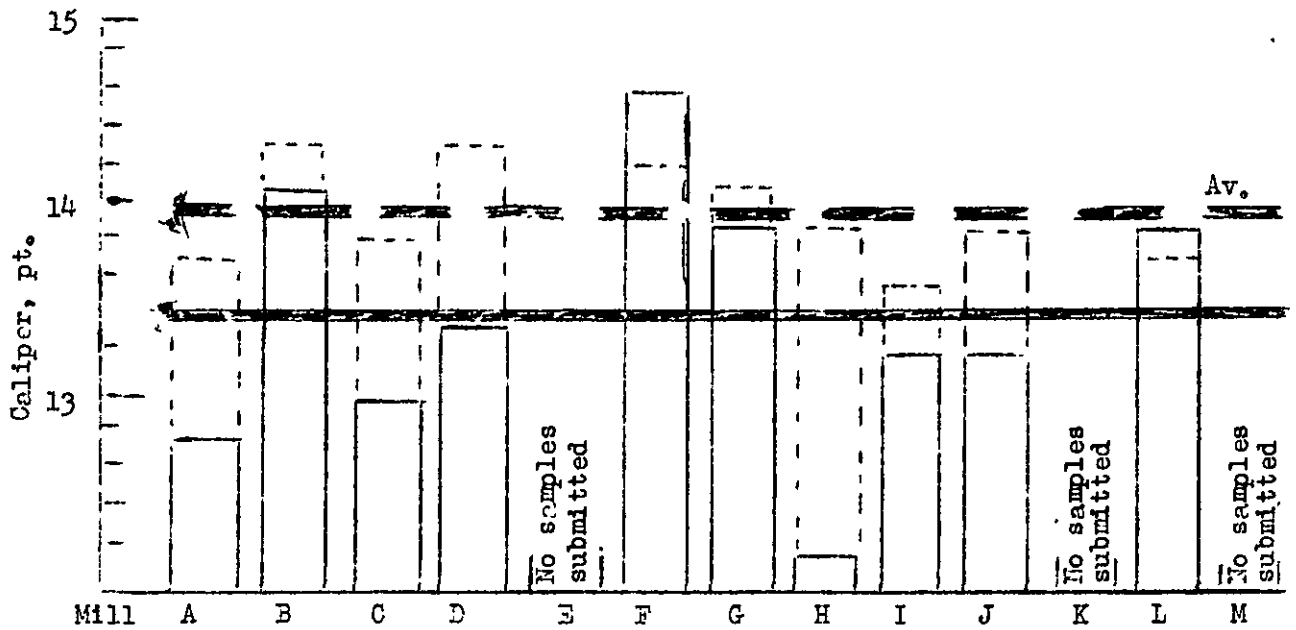
Code No.	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	G. E. Puncture, units	Elmendorf Tear, g./sheet
					In Direction Across Direction
A	42.8	12.7	112	34	338
B	43.5	14.1	109	33	343
C	42.6	13.0	112	35	370
D	43.6	13.3	103	38	374
E	No samples submitted.				
F	44.6	14.6	105	41	408
G	43.3	13.9	106	36	359
H	43.7	12.1	114	36	373
I	42.8	13.2	105	32	355
J	43.3	13.2	108	30	356
K	No samples submitted.				
L	43.2	13.5	106	35	358
M	No samples submitted.				
Current FKI Average:	43.3	13.4	108	35	363
Cumulative FKI Average:	43.1	14.0	106	36	374
FKI Index, %:	100.5	95.7	101.9	97.2	97.1
					98.3

Figure 1



COMPARISON OF BASIS WEIGHT RESULTS
 (Period July 1 - July 31)

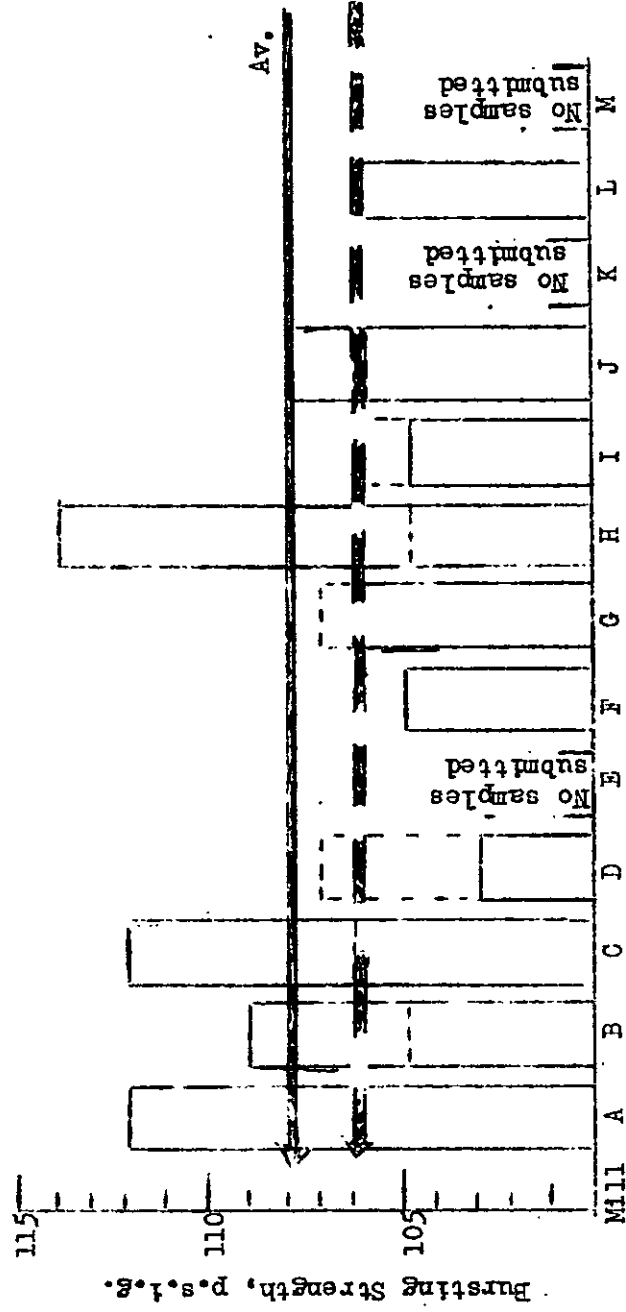
Figure 2



COMPARISON OF CALIPER RESULTS
 (Period July 1 - July 31)

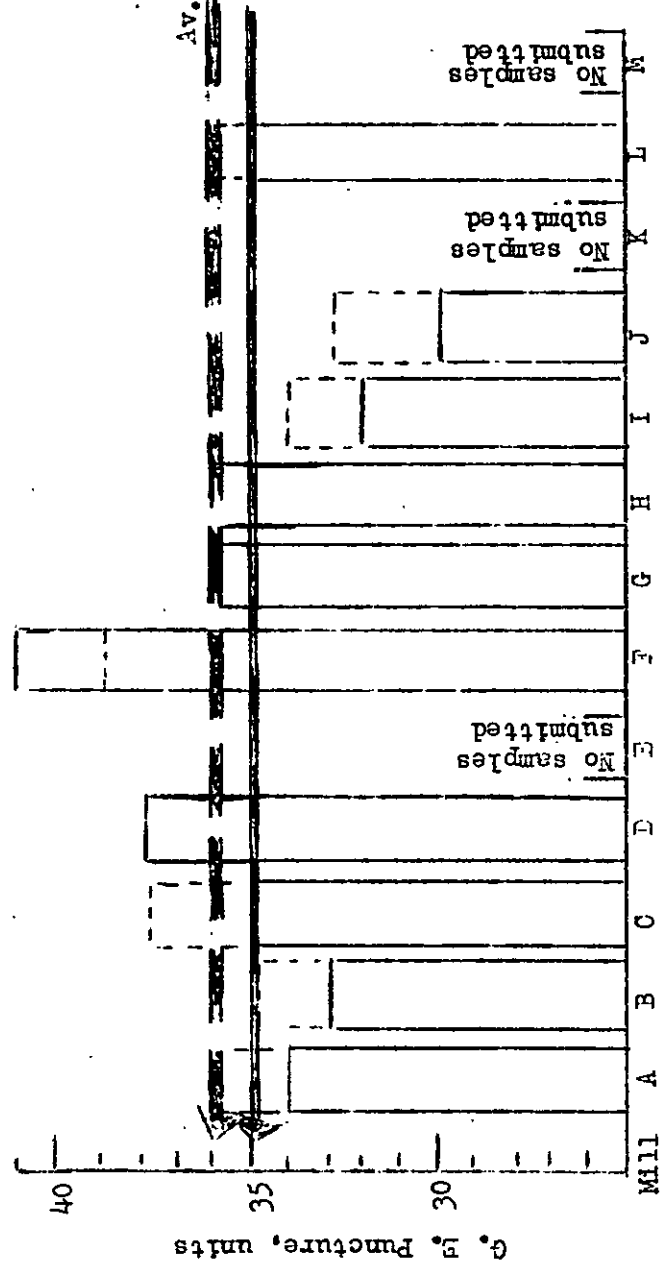
————— Current Mill Average
 - - - - - Cumulative Average

Figure 3



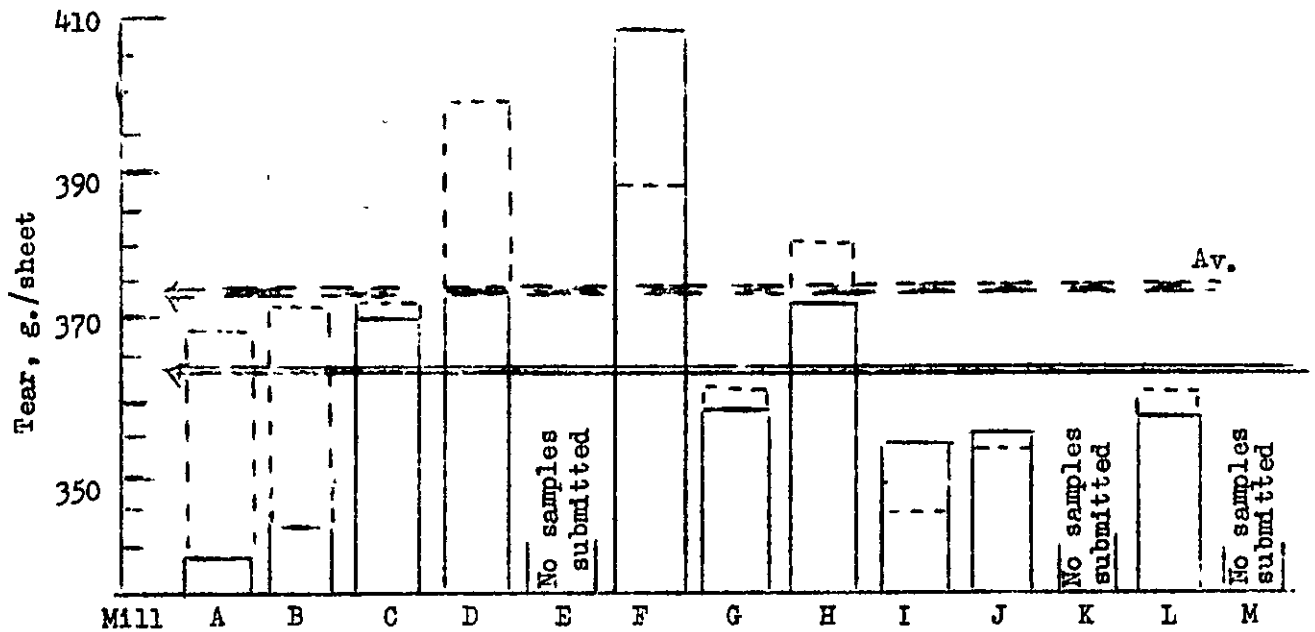
COMPARISON OF BURSTING STRENGTH RESULTS
(Period July 1 - July 31)

Figure 4



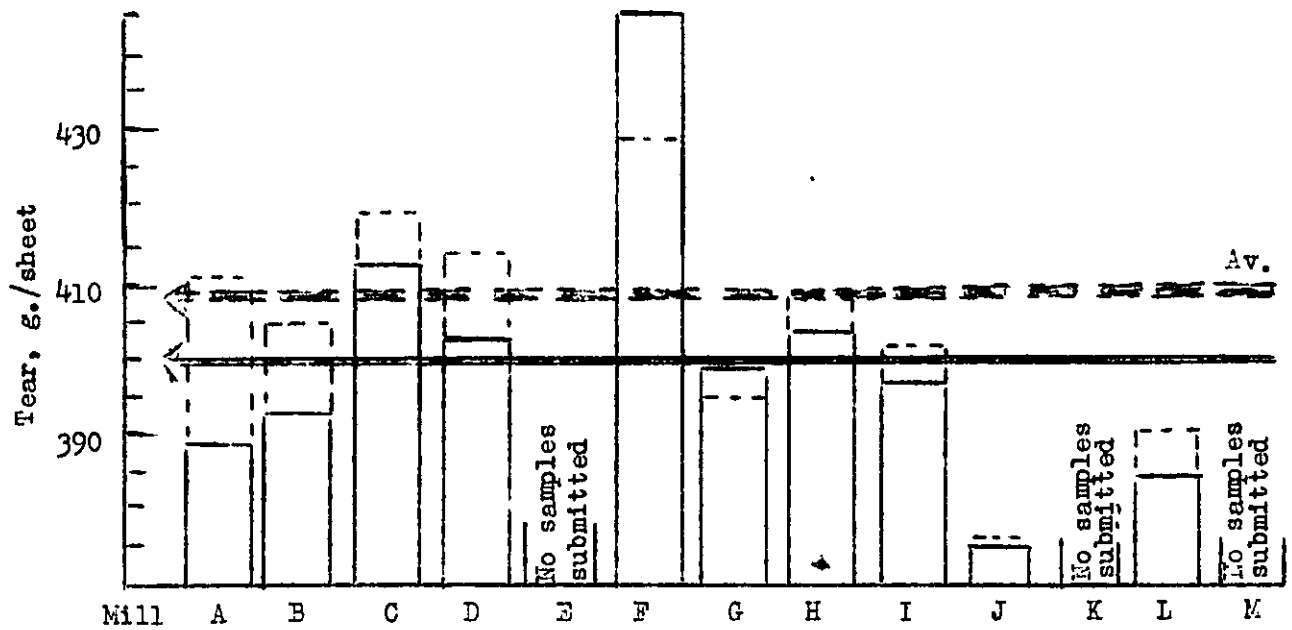
COMPARISON OF G. E. PUNCTURE RESULTS
(Period July 1 - July 31)

Figure 5



COMPARISON OF TEAR RESULTS, Machine Direction
(Period July 1 - July 31)

Figure 6



COMPARISON OF TEAR RESULTS, Across-machine Direction
(Period July 1 - July 31)

TABLE III

VARY OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952

Basis Weight, lb.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		In		Across						
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.				
<u>Mill A--42-lb. Linerboard</u>																	
3.4	42.0	42.5	12.5	11.9	12.1	122	81	103	34	29	32	392	288	332 ^a	392	336	361 ^a
3.8	41.8	42.2	13.0	12.0	12.6	136	96	114	36	30	32	400	304	349 ^a	432	368	397 ^a
3.0	41.8	42.2	13.0	12.0	12.6	142	102	121	35	30	32	408	272	347 ^a	424	344	384 ^a
3.0	42.0	42.3	12.5	11.7	12.0	141	88	115	36	30	33	400	288	325	400	336	370 ^a
3.6	42.0	42.8	13.4	12.5	13.0	124	91	108	38	32	36	416	272	332 ^a	464	368	412 ^a
3.8	42.0	42.9	13.5	12.3	13.0	129	79	113	39	32	36	360	304	331 ^a	416	328	384 ^a
4.0	42.4	43.5	13.0	12.0	12.4	134	85	113	39	32	35	448	248	341 ^a	440	360	397 ^a
4.0	43.0	43.8	14.1	12.5	13.4	139	89	113	39	32	34	416	264	347	464	360	406 ^a
		42.8			12.7			112			34			338			389
		42.8			13.7			106			36			368			410
		100.0			92.7			105.7			94.4			91.8			94.9
		99.3			90.7			105.7			94.4			90.4			95.6

more specimens which tore beyond the 3/8-inch limit.

TABLE III

SUMMARY OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952

File No.	Mill Code	Fin- ish	Date R-ccd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units			
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.
<u>Mill A--42-lb. Linerboard</u>																
151227	A-356	WF1S	7/ 1/52	6/22/52	2	43.4	42.0	42.5	12.5	11.9	12.1	122	81	103	34	29
151228	A-357	WF1S	7/ 1/52	6/22/52	1	43.8	41.8	42.2	13.0	12.0	12.6	136	96	114	36	30
151248	A-358	WF1S	7/ 7/52	6/29/52	1	43.0	41.8	42.2	13.0	12.0	12.6	142	102	121	35	30
151249	A-359	WF1S	7/ 7/52	6/29/52	2	43.0	42.0	42.3	12.5	11.7	12.0	141	88	115	36	30
151296	A-360	WF1S	7/14/52	7/ 8/52	2	43.6	42.0	42.8	13.4	12.5	13.0	124	91	108	38	32
151297	A-361	WF1S	7/14/52	7/ 8/52	2	43.8	42.0	42.9	13.5	12.3	13.0	129	79	113	39	32
151351	A-362	WF1S	7/22/52	7/13/52	2	44.0	42.4	43.5	13.0	12.0	12.4	134	85	113	39	32
151352	A-363	WF1S	7/22/52	7/13/52	1	44.0	43.0	43.8	14.1	12.5	13.4	139	89	113	39	32
Current Mill Average:						42.8			12.7		112		112		34	
Cumulative Mill Average:						42.8			13.7		106		106		36	
Mill Factor, %:						100.0			92.7		105.7		105.7		94.1	
Mill Index, %:						99.3			90.7		105.7		105.7		94.1	

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE IV
OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

s Weight, lb.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		Across							
	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.					
<u>Mill B--42-lb. Linerboard</u>																
42.0	43.7	14.9	13.1	14.1	125	75	108	36	30	32	384	296	335	424	368	385 ^a
42.0	43.6	14.8	13.7	14.2	130	81	111	36	27	32	392	288	348	472	360	387 ^a
42.0	43.8	15.0	13.4	14.2	123	76	106	36	29	32	376	208	324	432	352	388 ^a
41.0	43.3	15.1	13.2	14.2	138	68	106	35	30	32	400	312	347	448	336	395 ^a
43.4	44.4	14.8	12.6	14.1	134	89	113	36	29	33	440	296	363 ^a	504	352	399 ^a
42.6	43.9	15.0	13.9	14.3	129	92	107	37	30	33	376	256	328 ^a	440	352	389 ^a
43.4	44.2	15.0	13.0	14.3	122	88	105	34	29	32	376	296	344 ^a	456	344	394 ^a
43.0	44.2	15.0	13.0	14.2	141	90	112	34	30	32	400	288	353 ^a	456	336	387 ^a
41.8	42.6	14.8	13.1	13.8	125	72	107	37	29	33	384	288	331 ^a	488	328	391 ^a
40.4	42.3	14.3	13.1	13.8	126	80	107	34	30	32	360	264	316	432	336	378 ^a
41.0	42.4	14.2	12.9	13.7	119	81	104	36	29	32	352	272	315 ^a	432	328	372 ^a
40.4	42.3	14.5	13.1	13.7	141	90	112	34	28	32	400	272	340 ^a	472	352	407 ^a
43.0	43.8	15.0	13.2	14.4	130	95	113	38	32	36	448	272	349 ^a	448	360	390 ^a
42.0	43.4	14.8	13.7	14.2	128	91	111	36	31	34	400	296	357 ^a	464	352	404 ^a
43.2	44.1	15.0	13.9	14.4	130	89	111	37	32	35	448	304	365 ^a	456	368	419 ^a
43.0	43.9	15.0	13.9	14.5	125	81	108	34	30	32	408	344	377 ^a	456	352	409 ^a
43.5				14.1			109			33			343			393
43.6				14.3			105			35			372			404
99.8				98.6			103.8			94.3			92.2			97.3
100.9				100.7			102.8			91.7			91.7			96.6

specimens which tore beyond the 3/8-inch limit.

TABLE IV

SUMMARY OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continuu

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units					
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
<u>Mill B--42-lb. Linerboard</u>																	
151237	B-615	WF1S	7/ 2/52	6/20/52	1	45.0	42.0	43.7	14.9	13.1	14.1	125	75	108	36	30	32
151238	B-616	WF1S	7/ 2/52	6/20/52	1	45.0	42.0	43.6	14.8	13.7	14.2	130	81	111	36	27	32
151239	B-617	WF1S	7/ 2/52	6/20/52	1	45.0	42.0	43.8	15.0	13.4	14.2	123	76	106	36	29	32
151240	B-618	WF1S	7/ 2/52	6/20/52	1	44.4	41.0	43.3	15.1	13.2	14.2	138	68	106	35	30	32
151265	B-619	WF1S	7/10/52	6/30/52	1	45.6	43.4	44.4	14.8	12.6	14.1	134	89	113	36	29	33
151266	B-620	WF1S	7/10/52	6/30/52	1	45.0	42.6	43.9	15.0	13.9	14.3	129	92	107	37	30	33
151267	B-621	WF1S	7/10/52	6/30/52	1	45.4	43.4	44.2	15.0	13.0	14.3	122	88	105	34	29	32
151268	B-622	WF1S	7/10/52	6/30/52	1	46.0	43.0	44.2	15.0	13.0	14.2	141	90	112	34	30	32
151292	B-623	WF1S	7/14/52	7/ 1/52	1	43.8	41.8	42.6	14.8	13.1	13.8	125	72	107	37	29	33
151293	B-624	WF1S	7/14/52	7/ 1/52	1	43.2	40.4	42.3	14.3	13.1	13.8	126	80	107	34	30	32
151294	B-625	WF1S	7/14/52	7/ 1/52	1	43.6	41.0	42.4	14.2	12.9	13.7	119	81	104	36	29	32
151295	B-626	WF1S	7/14/52	7/ 1/52	1	43.0	40.4	42.3	14.5	13.1	13.7	141	90	112	34	28	32
151329	B-627	WF1S	7/21/52	7/ 3/52	1	45.0	43.0	43.8	15.0	13.2	14.4	130	95	113	38	32	36
151330	B-628	WF1S	7/21/52	7/ 3/52	1	44.2	42.0	43.4	14.8	13.7	14.2	128	91	111	36	31	34
151331	B-629	WF1S	7/21/52	7/ 3/52	1	45.2	43.2	44.1	15.0	13.9	14.4	130	89	111	37	32	35
151332	B-630	WF1S	7/21/52	7/ 3/52	1	44.4	43.0	43.9	15.0	13.9	14.5	125	81	108	34	30	32
Current Mill Average:								43.5			14.1			109			33
Cumulative Mill Average:								43.6			14.3			105			35
Mill Factor, %:								99.8			98.6			103.8			94.3
Mill Index, %:								100.9			100.7			102.8			91.7

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE V

INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

Weight, lb.	Min. Av.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet								
		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Av.				
		Mill C--42-lb. Linerboard														
2.2	43.4	14.0	12.6	13.2	141	93	117	40	34	36	512	336	383 ^a	464	384	418 ^a
2.0	41.5	13.0	11.5	12.5	130	94	110	34	30	32	384	312	342	424	368	393 ^a
2.1	41.8	13.0	11.5	12.4	121	91	110	36	30	33	368	280	331	448	360	399 ^a
2.4	43.3	14.1	12.4	13.3	141	78	111	39	34	36	424	328	377 ^a	464	368	408 ^a
2.1	42.7	13.8	11.8	12.4	127	91	113	37	33	35	448	336	386 ^a	464	384	415 ^a
2.0	43.0	14.2	13.1	13.8	129	80	112	40	35	37	456	312	372	456	376	420 ^a
2.0	43.0	14.2	12.3	13.6	124	91	112	40	35	38	464	360	401 ^a	472	392	435 ^a
2.0	42.4	13.3	12.4	12.9	129	84	110	40	34	36	456	312	369	480	369	416 ^a
	42.6			13.0			112			35			370			413
	42.8			13.8			106			38			373			418
	99.5			94.2			105.7			92.1			99.2			98.8
	98.8			92.9			105.7			97.2			98.9			101.5

TABLE VI

Weight, lb.	Min. Av.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet								
		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Av.				
		Mill D--42-lb. Linerboard														
2.2	44.8	13.0	13.9	13.4	76	101	41	33	38	456	288	384 ^a	472	320	399 ^a	
2.0	42.7	13.5	12.0	12.7	121	75	105	39	32	36	424	312	371 ^a	464	328	394 ^a
2.4	43.8	14.0	12.3	13.0	119	80	100	41	32	37	416	336	373 ^a	472	322	424 ^a
2.8	43.7	13.7	12.8	13.2	125	88	107	40	32	36	416	312	363 ^a	480	376	431 ^a
1.8	42.6	13.9	13.1	13.4	137	88	108	42	34	39	424	328	383 ^a	480	368	410 ^a
2.6	43.8	14.3	13.1	13.7	126	64	96	40	34	38	400	320	370 ^a	432	320	381 ^a
2.4	43.7	14.0	12.7	13.4	135	72	101	44	36	39	384	312	357 ^a	464	320	387 ^a
3.4	43.8	13.9	12.9	13.4	124	82	102	43	32	39	464	320	392 ^a	464	344	398 ^a
	43.6			13.3			103			38			374			403
	43.3			14.3			107			38			398			414
	100.7			93.0			96.3			100.0			94.0			97.3
	101.2			95.0			97.2			105.6			100.0			99.0

specimens which tore beyond the 3/8-inch limit.

TABLE V

SUMMARY OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Puncture, units					
						Max.	Av.	Max.	Min.	Max.	Min.	Max.	Min.	Av.	Max.	Min.	
151335	C-387	W.F.	7/21/52	7/ 1/52	1	45.0	42.2	43.4	14.0	12.6	13.2	141	93	117	40	34	36
151336	C-388	W.F.	7/21/52	7/ 2/52	1	43.0	40.2	41.5	13.0	11.5	12.5	130	94	110	34	30	32
151337	C-389	W.F.	7/21/52	7/ 2/52	1	43.0	41.0	41.8	13.0	11.5	12.4	121	91	110	36	30	33
151338	C-390	W.F.	7/21/52	7/ 3/52	1	44.0	42.4	43.3	14.1	12.4	13.3	141	78	111	39	34	36
151339	C-391	W.F.	7/21/52	7/ 4/52	1	43.0	41.6	42.7	13.8	11.8	12.4	127	91	113	37	33	35
151340	C-392	W.F.	7/21/52	7/ 8/52	1	44.0	42.0	43.0	14.2	13.1	13.8	129	80	112	40	35	37
151341	C-393	W.F.	7/21/52	7/ 8/52	1	44.4	42.0	43.0	14.2	12.3	13.6	124	91	112	40	35	38
151342	C-394	W.F.	7/21/52	7/ 9/52	1	43.6	40.8	42.4	13.3	12.4	12.9	129	84	110	40	34	36
Current Mill Average:								42.6			13.0			112			35
Cumulative Mill Average:								42.8			13.8			106			38
Mill Factor, %:								99.5			94.2			105.7			92.
Mill Index, %:								98.8			92.9			105.7			97.

TABLE VI

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Puncture, units					
						Max.	Av.	Max.	Min.	Max.	Min.	Max.	Min.	Av.	Max.	Min.	
151224	D-548	W.F.	7/ 1/52	6/23/52	4	45.8	42.2	44.8	14.8	13.0	13.9	134	76	101	41	33	38
151225	D-549	W.F.	7/ 1/52	6/24/52	4	43.8	42.0	42.7	13.5	12.0	12.7	121	75	105	39	32	36
151226	D-550	W.F.	7/ 1/52	6/25/52	4	44.2	42.4	43.8	14.0	12.3	13.0	119	80	100	41	32	37
151229	D-551	W.F.	7/ 1/52	6/26/52	4	44.6	42.8	43.7	13.7	12.8	13.2	125	88	107	40	32	36
151310	D-552	W.F.	7/16/52	7/13/52	4	44.2	41.8	42.6	13.9	13.1	13.4	137	88	108	42	34	39
151315	D-553	W.F.	7/17/52	7/15/52	4	44.4	42.6	43.8	14.3	13.1	13.7	126	64	96	40	34	38
151328	D-554	W.F.	7/21/52	7/16/52	4	44.6	42.4	43.7	14.0	12.7	13.4	135	72	101	44	36	39
151355	D-555	W.F.	7/22/52	7/18/52	4	44.4	43.4	43.8	13.9	12.9	13.4	124	82	102	43	32	39
Current Mill Average:								43.6			13.3			103			38
Cumulative Mill Average:								43.3			14.3			107			38
Mill Factor, %:								100.7			93.0			96.3			100.
Mill Index, %:								101.2			95.0			97.2			105

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE VII

TABLE OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

Basis Weight, lb.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet								
	Min.	Av.	Max.	Min.	Max.	Min.	Av.	In	Across						
44.1	14.8	13.6	14.2	116	86	104	43	33	39	416	352	383 ^a	472	384	424 ^a
44.2	15.1	13.9	14.5	126	83	104	46	36	41	472	360	413 ^a	488	400	451 ^a
44.4	15.2	13.9	14.5	125	88	107	42	36	38	456	360	407 ^a	504	384	449 ^a
45.6	15.3	14.3	14.8	137	92	110	47	39	44	480	376	429 ^a	488	408	458 ^a
44.5	15.3	14.1	14.8	116	85	102	45	38	41	432	384	409	504	400	443 ^a
44.6			14.6			105						408			445
43.2			14.2			105						388			427
103.2			102.8			100.0						105.2			104.2
103.5			104.3			99.1						109.1			109.3

Mill E--42-lb. Linerboard

No samples submitted.

TABLE VIII

Mill F--42-lb. Linerboard

0	43.6	44.1	14.8	13.6	14.2	116	86	104	43	33	39	416	352	383 ^a	472	384	424 ^a
4	43.6	44.2	15.1	13.9	14.5	126	83	104	46	36	41	472	360	413 ^a	488	400	451 ^a
0	42.4	44.4	15.2	13.9	14.5	125	88	107	42	36	38	456	360	407 ^a	504	384	449 ^a
6	44.2	45.6	15.3	14.3	14.8	137	92	110	47	39	44	480	376	429 ^a	488	408	458 ^a
0	43.6	44.5	15.3	14.1	14.8	116	85	102	45	38	41	432	384	409	504	400	443 ^a
		44.6			14.6			105						408			445
		43.2			14.2			105						388			427
		103.2			102.8			100.0						105.2			104.2
		103.5			104.3			99.1						109.1			109.3

re specimens which tore beyond the 3/8-inch limit.

TABLE VII

SUMMARY OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units
						Max.	Av.	Max.	Min.	Max.	Min.	
<u>Mill E--42-lb. Linerboard</u>												
No samples submitted.												

TABLE VIII

Mill F--42-lb. Linerboard

151236	F-38	---	7/ 1/52	6/ 3/52	--	45.0	43.6	44.1	14.8	13.6	14.2	116	86	104	43	33	39
151269	F-39	W.F.	7/10/52	6/13/52	--	45.4	43.6	44.2	15.1	13.9	14.5	126	83	104	46	36	41
151270	F-40	W.F.	7/10/52	6/14/52	--	46.0	42.4	44.4	15.2	13.9	14.5	125	88	107	42	36	38
151271	F-41	W.F.	7/10/52	6/16/52	--	47.6	44.2	45.6	15.3	14.3	14.8	137	92	110	47	39	44
151272	F-42	W.F.	7/10/52	6/20/52	--	45.0	43.6	44.5	15.3	14.1	14.8	116	85	102	45	38	41
Current Mill Average:							44.6		14.6					105			41
Cumulative Mill Average:							43.2		14.2					105			39
Mill Factor, %:							103.2		102.8					100.0			105.1
Mill Index, %:							103.5		104.3					99.1			113.9

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE IX

INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

Height, in.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		Av.						
	Max.	Min.	Max.	Min.	Max.	Min.	In	Across							
Av.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Av.						
<u>Mill G--42-lb. Linerboard</u>															
43.6	15.0	12.4	13.6	117	83	103	35	31	33	416	288	341 ^a	456	320	383 ^a
43.5	14.9	12.5	13.8	125	84	102	36	30	34	416	320	361 ^a	408	344	377 ^a
44.1	15.3	13.0	14.4	127	80	108	44	36	40	440	344	385 ^a	440	392	418 ^a
43.8	15.0	13.0	14.0	128	84	105	42	38	40	464	328	375 ^a	456	384	423 ^a
42.3	14.2	13.0	13.6	129	74	107	37	32	34	368	312	342 ^a	432	360	397 ^a
42.8	14.5	12.8	13.8	135	95	114	37	33	35	392	320	350 ^a	464	344	395 ^a
43.3			13.9			106			36			359			399
42.9			14.1			107			36			362			395
100.9			98.6			99.1			100.0			99.2			101.0
100.5			99.3			100.0			100.0			96.0			98.0
<u>Mill H--42-lb. Linerboard</u>															
44.2	12.9	12.0	12.4	136	90	113	41	36	39	456	360	408 ^a	480	384	425 ^a
43.7	12.4	11.4	12.0	130	82	113	38	32	35	400	288	347 ^a	440	360	399 ^a
43.1	12.3	11.7	12.0	134	96	114	40	31	35	424	312	363 ^a	448	336	389 ^a
43.7			12.1			114			36			373			404
43.0			13.9			105			36			381			407
101.6			87.1			108.6			100.0			97.9			99.3
101.4			86.4			107.5			100.0			99.7			99.3

specimens which tore beyond the 3/8-inch limit.

TABLE IX

SUMMARY OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

File No.	Mill Code	Fin-ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units					
						Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
<u>Mill G--42-lb. Linerboard</u>																	
151250	G-426	WFL	7/ 7/52	7/ 1/52	1	44.2	42.4	43.6	15.0	12.4	13.6	117	83	103	35	31	33
151251	G-427	WFL	7/ 7/52	7/ 1/52	1	44.0	42.2	43.5	14.9	12.5	13.8	125	84	102	36	30	34
151298	G-428	WFL	7/14/52	7/ 8/52	1	45.0	43.6	44.1	15.3	13.0	14.4	127	80	108	44	36	40
151299	G-429	WFL	7/14/52	7/ 8/52	1	44.8	42.2	43.8	15.0	13.0	14.0	128	84	105	42	38	40
151362	G-430	WFL	7/25/52	7/19/52	1	43.0	41.8	42.3	14.2	13.0	13.6	129	74	107	37	32	34
151363	G-431	WFL	7/25/52	7/19/52	1	43.8	42.2	42.8	14.5	12.8	13.8	135	95	114	37	33	35
Current Mill Average:								43.3			13.9			106			36
Cumulative Mill Average:								42.9			14.1			107			36
Mill Factor, %:								100.9			98.6			99.1			100.0
Mill Index, %:								100.5			99.3			100.0			100.0

TABLE X

<u>Mill H--42-lb. Linerboard</u>																	
151277	H-325	WFLS	7/11/52	7/ 1/52	2	45.0	43.6	44.2	12.9	12.0	12.4	136	90	113	41	36	39
151307	H-326	WFLS	7/16/52	7/ 6/52	2	45.0	42.8	43.7	12.4	11.4	12.0	130	82	113	38	32	35
151308	H-327	WFLS	7/16/52	7/ 6/52	2	43.6	42.2	43.1	12.3	11.7	12.0	134	96	114	40	31	35
Current Mill Average:								43.7			12.1			114			36
Cumulative Mill Average:								43.0			13.9			105			36
Mill Factor, %:								101.6			87.1			108.6			100.0
Mill Index, %:								101.4			86.4			107.5			100.0

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XI

OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

As Weight, lb.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet								
	Min.	Av.	Max.	Min.	Max.	Min.	Max.	Min.	Av.	Max.	Min.	Av.			
41.8	43.1	13.0	13.1	120	91	105	34	30	32	408	312	357	456	328	394a
42.2	42.6	13.5	13.2	120	85	105	34	30	32	456	312	353a	432	368	399a
42.8			13.2		105				32			355			397
42.9			13.5		106				34			345			401
99.8			97.8		99.1				94.1			102.9			99.0
99.3			94.3		99.1				88.9			94.9			97.5

Mill I--42-lb. Linerboard

TABLE XII

Mill J--42-lb. Linerboard

42.2	43.0	13.8	12.5	13.1	127	73	105	34	28	30	408	296	351 ^a	408	328	371 ^a
42.0	43.1	13.3	12.9	13.1	125	91	107	31	28	30	400	328	372 ^a	408	328	361 ^a
43.0	43.8	13.9	13.0	13.2	130	83	110	34	28	31	392	280	343 ^a	456	328	380 ^a
42.8	43.4	13.7	12.9	13.2	127	78	110	32	27	30	424	296	359 ^a	408	344	382 ^a
43.3				13.2		108				30			356			374
42.8				13.9		106				33			355			375
101.2				95.0		101.9			90.9				100.3			99.7
100.5				94.3		101.9			83.3				95.2			91.9

specimens which tore beyond the 3/8-inch limit.

TABLE XI

SUMMARY OF INDIVIDUAL TEST LOIS--JULY 1 THROUGH JULY 31, 1952 (continued)

File No.	Mill Code	Fin-ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			G. E. Puncture, units		
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
151241	I-239	WF1S	7/ 2/52	6/19/52	1	43.8	41.8	43.1	13.9	13.0	13.1	120	91	105	34	30	32
151242	I-240	WF1S	7/ 2/52	6/20/52	1	43.6	42.2	42.6	13.5	13.0	13.2	120	85	105	34	30	32
Current Mill Average:																	
						42.8		42.8	13.2		13.2	105		105		32	
Cumulative Mill Average:																	
						42.9		42.9	13.5		13.5	106		106		34	
Mill Factor, %:																	
						99.8		99.8	97.8		97.8	99.1		99.1		94.1	
Mill Index, %:																	
						99.3		99.3	94.3		94.3	99.1		99.1		88.9	

TABLE XII

Mill J--42-lb. Linerboard

151234	J-365	B.F.	7/ 1/52	6/22/52	1	43.8	42.2	43.0	13.8	12.5	13.1	127	73	105	34	28	30
151235	J-366	B.F.	7/ 1/52	6/22/52	1	43.8	42.0	43.1	13.3	12.9	13.1	125	91	107	31	28	30
151319	J-367	B.F.	7/18/52	7/10/52	1	45.0	43.0	43.8	13.9	13.0	13.2	130	83	110	34	28	31
151320	J-368	B.F.	7/18/52	7/10/52	1	44.4	42.8	43.4	13.7	12.9	13.2	127	78	110	32	27	30
Current Mill Average:																	
						43.3		43.3	13.2		13.2	108		108		30	
Cumulative Mill Average:																	
						42.8		42.8	13.9		13.9	106		106		33	
Mill Factor, %:																	
						101.2		101.2	95.0		95.0	101.9		101.9		90.9	
Mill Index, %:																	
						100.5		100.5	94.3		94.3	101.9		101.9		83.3	

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XIII

OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

Weight, b. Min. Av	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		Across	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Mill K--42-lb. Linerboard										
No samples submitted.										

TABLE XIV

Mill L--42-lb. Linerboard

42.0	43.0	14.9	13.3	14.2	122	80	96	35	31	34	384	328	353 ^a	432	320	386 ^a
42.6	43.6	14.4	13.0	13.7	136	81	108	36	32	34	424	320	363 ^a	440	344	383 ^a
42.2	42.9	13.5	12.2	12.8	134	74	109	39	33	35	400	320	349 ^a	416	352	385 ^a
42.0	42.6	14.9	13.9	14.3	128	95	110	38	32	35	432	320	345 ^a	424	336	383 ^a
42.0	43.0	14.2	13.0	13.6	123	92	108	38	32	36	376	320	347 ^a	416	344	386 ^a
43.4	43.8	15.0	13.5	14.3	130	83	107	42	34	36	416	320	371 ^a	440	352	386 ^a
43.0	43.8	14.8	14.0	14.4	120	91	107	38	32	35	400	304	365 ^a	448	352	391 ^a
41.8	43.0	14.9	13.8	14.2	120	73	103	37	32	35	424	336	369 ^a	416	328	381 ^a
43.2				13.9		106			35				358			385
43.0				13.7		106			36				361			390
100.5				101.5		100.0			97.2				99.2			98.7
100.2				99.3		100.0			97.2				95.7			94.6

TABLE XV

Mill M--42-lb. Linerboard

No samples submitted.
specimens which tore beyond the 3/8-inch limit.

TABLE XIII

SUMMARY OF INDIVIDUAL TEST LOTS - JULY 1 THROUGH JULY 31, 1952 (continue)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p. a. i. gage units		
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.

Mill K-42-lb. Linerboard

No samples submitted.

TABLE XIV

Mill L-42-lb. Linerboard

151230	L-99		7/1/52	6/13/52	1	41.0	42.0	43.0	14.9	13.3	14.2	122	80	96	35	31	34
151231	L-100		7/1/52	6/13/52	1	44.2	42.6	43.6	14.4	13.0	13.7	136	61	108	36	32	34
151278	L-101		7/11/52	6/9/52	1	43.8	42.2	42.9	13.5	12.2	12.8	134	74	109	39	33	35
151279	L-102		7/11/52	6/14/52	1	43.6	42.0	42.6	14.9	13.9	14.3	128	94	110	38	32	35
151333	L-103		7/21/52	6/19/52	1	45.8	42.0	43.0	14.2	13.0	13.6	123	92	108	38	32	36
151334	L-104		7/21/52	6/21/52	1	44.6	43.4	43.8	15.0	13.5	14.3	130	83	107	42	34	36
151353	L-105		7/22/52	7/10/52	1	44.4	43.0	43.8	14.8	14.0	14.4	126	91	107	38	32	35
151354	L-106		7/22/52	7/13/52	1	44.0	41.8	43.0	14.9	13.8	14.2	120	75	103	37	32	35
Current Mill Average:						43.2			13.9			106			35		
Cumulative Mill Average:						43.0			13.7			106			36		
Mill Factor, %:						100.5			101.5			100.0			97		
Mill Index, %:						100.2			99.3			100.0			97		

TABLE XV

Mill M-42-lb. Linerboard

No samples submitted.

a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XVI

TABLE OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

Basis Weight, lb.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet										
	Max.	Min.	Max.	Min.	Max.	Min.	In	Across									
Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.									
<u>Mill E--44/46-lb. Drum Linerboard</u>																	
7 6	45.6	46.7	15.1	13.9	14.4	128	87	112	37	32	35	472	336	407 ^a	488	344	387 ^a
9 6	47.0	48.3	15.9	15.1	15.5	106	75	93	38	34	36	432	336	385 ^a	400	304	345 ^a
		47.5			14.9			103			35			396			366
		47.2			14.3			100			40			444			422
		100.6			104.2			103.0			87.5			89.2			86.7
<u>Mill E--69-lb. Linerboard</u>																	
1.0	66.2	68.4	23.0	21.0	22.1	164	116	141	68	54	63	704	472	598 ^a	680	504	589 ^a

more specimens which tore beyond the 3/8-inch limit.

TABLE XVI

SUMMARY OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units					
						Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.				
151233	E-346	W.F.	7/ 1/52	6/25/52	1	47.6	45.6	46.7	15.1	13.9	14.4	128	87	112	37	32	35
151309	E-347	W.F.	7/16/52	7/ 9/52	1	49.6	47.0	48.3	15.9	15.1	15.5	106	75	93	38	34	36
Current Mill Average:								47.5			14.9		103				35
Cumulative Mill Average:								47.2			14.3		100				40
Mill Factor, %:								100.6			104.2		103.0				87.5
<u>Mill E--44/46-lb. Drum Linerboard</u>																	
151232	E-345	W.F.	7/ 1/52	6/24/52	1	71.0	66.2	68.4	23.0	21.0	22.1	164	116	141	68	54	63
<u>Mill E--69-lb. Linerboard</u>																	

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit

As a supplementary part of the Continuous Baseline Study, comparisons of the mill test results with those obtained at The Institute of Paper Chemistry on corresponding samples have been included in this report. As may be noted in Table XVII, the atmospheric conditions used prior to and during the testing period varied considerably.

TABLE XVII

Mill Code	Preconditioning			Conditioning		
	R.H., %	Temp., ° F.	Time, hr.	R.H., %	Temp., ° F.	Time, hr.
A	No preconditioning			48-60	86-96	--
B	41-68	80-96	1/2	50	70	48-96
C	50-51	73	192-336	50	73	8-24
D	31-33	78	8	48-52	72	16
E	No samples submitted					
F	48-60	74-76	24	44-56	70-72	48
G	No preconditioning			50	73	24-48
H	No preconditioning			50	73	24
I	No preconditioning			60	90-93	--
J	No preconditioning			50	72	1/2
K	No samples submitted					
L	No preconditioning			52-58	96-105	--
M	No samples submitted					
E*	No preconditioning			50-74	88-98	--

* Drum linerboard.

A summary of the mill comparisons for the current period as compared with the previous period may be seen in Tables XVIII and XIX,

respectively. The comparison for the various mills is given in Tables XX to XXXII, for the 42-lb. liner samples. A comparison of the special drum stock is given in Table XXXIII. In all the comparisons given in Tables XVIII to XXXIII, the Institute's test values have been used as the reference line.

A comparison of the test data in Tables XVIII and XIX indicates that in the majority of cases there is good agreement between the mill and Institute data. Table XVIII shows the average difference encountered in the comparison of Institute and mill results for the sample lots submitted by each mill for the current period, as well as the maximum difference encountered in comparing the Institute and mill test results for a given sample lot. In Table XIX, the average differences shown for each test in Table XVIII have been calculated on a percentage basis for each mill. In addition, for purposes of comparison, the average percentage differences for the preceding two periods are shown.

It may be noted in Table XIX that the maximum variation between the average basis weight results of the Institute and those of a given mill on corresponding samples is two per cent for the current period. This figure compares favorably with the maximum variation of two per cent for the preceding two periods. Further, it may be noted that the average basis weight results for Mills A, B, C, D, H, and L are higher than those for the Institute, whereas the results for Mills F, I, and J are lower and the result for Mill G is the same. In general, the agreement in basis weight results is very good for the current period.

The maximum variation in caliper for the current period is three per cent. Compared with the values for the Institute, the average results for Mills A, B, C, D, F, G, I, and L are lower and the average results for Mills H and J are the same. The accord between Institute and mill caliper values is good.

It may be noted in Table XIX that the bursting strength results exhibit a maximum variation of six per cent for the current period. The average results for Mills C, D, F, J, and L are higher than those for the Institute, whereas the results for Mills B, G, and H are lower, and the results for Mills A and I are the same. The agreement in bursting strength results is good.

The G. E. puncture results exhibit a maximum variation of twelve per cent for the current period. Compared with the values for the Institute, the results for Mills A, C, F, G, H, I, and J are higher, whereas the result for Mill B is lower. The agreement between the Institute and mill results is good with the exception of the variation for Mill B.

It may be seen in Table XIX that the average machine direction tear results for Mills A, C, H, I, and L are higher than those for the Institute, whereas the average results for Mills B, D, F, G, and J are lower. The maximum variation for the current period is nine per cent. Only the differences encountered for Mills F and I appear to be excessive.

With regard to the cross-machine direction tear results, it may be noted that the average results for Mills C, H, I, J, and L are

higher than those for the Institute whereas the average results for Mills A, B, D, F, and G are lower. The maximum variation for the current period is nine per cent. Only the differences encountered for Mills G and I appear to be excessive.

TABLE XVIII

SUMMARY OF TEST RESULT COMPARISONS
(Average Mill and Institute Results)

	Mills*									
	A	B	C	D	F	G	H	I	J	L
No. Samples Compared	8	16	8	8	5	6	3	2	4	8
Basis Weight										
Institute	42.8	43.5	42.6	43.6	44.6	43.3	43.7	42.8	43.3	43.2
Mill	43.1	43.6	42.7	43.9	44.4	43.3	43.9	42.5	43.2	42.5
Av. Diff.**	+0.3	+0.1	+0.1	+0.3	-0.2	0.0	+0.2	-0.3	-0.1	+0.7
Max. Diff.***	+1.0	+0.3	+0.4	+0.9	-0.6	-0.3	+0.7	-0.7	-0.4	-1.0
Caliper										
Institute	12.7	14.1	13.0	13.3	14.6	13.9	12.1	13.2	13.2	13.9
Mill	12.6	13.8	12.8	13.0	14.2	13.6	12.2	13.0	13.4	13.7
Av. Diff.**	-0.1	-0.3	-0.2	-0.3	-0.4	-0.3	+0.1	-0.2	+0.2	-0.2
Max. Diff.***	+0.2	-0.5	-0.5	-0.6	-0.5	-0.6	+0.1	-0.2	+0.5	-0.4
Bursting Strength										
Institute	112	109	112	103	105	106	114	105	108	106
Mill	112	107	113	108	111	105	111	105	112	107
Av. Diff.**	0	-2	+1	+5	+6	-1	-3	0	+4	+1
Max. Diff.***	-13	-7	+6	+11	+9	-6	-3	0	+6	+7
G. B. Puncture										
Institute	34	33	35	38	41	36	36	32	30	35
Mill	36	29	37	—	42	38	38	35	32	—
Av. Diff.**	+2	-4	+2	—	+1	+2	+2	+3	+2	—
Max. Diff.***	+9	-7	+3	—	+3	+4	+3	+3	+2	—
Tearing Strength, in										
Institute	338	343	370	374	408	359	373	355	356	358
Mill	341	330	378	351	370	336	380	386	337	377
Av. Diff.**	+3	-13	+8	-23	-38	-23	+7	+31	-19	+19
Max. Diff.***	+25	-36	+31	-41	-50	-38	+20	+34	-35	+43
Tearing Strength, across										
Institute	389	393	413	403	445	399	404	397	374	385
Mill	388	388	429	388	427	368	422	431	379	413
Av. Diff.**	-1	-5	+16	-15	-18	-31	+18	+34	+5	+28
Max. Diff.***	-29	-45	+29	-40	-30	-53	+36	+38	+18	+39

* Comparison based on averages involves only those samples on which mill test data were submitted.
 ** Average difference is the difference between the Institute mill average and the mill average based on mill test data.
 *** Maximum difference encountered in comparing the Institute average and the mill average for any sample submitted by that particular mill.

TABLE XIX
SUMMARY OF TEST RESULTS--COMPARISON BY PERIODS

	Basis Weight	Caliper	Average Bursting Strength	Difference, % G. E. Puncture	Tearing in	Strength across
Mill A						
Current period	+0.7	-0.8	0	+6	+0.9	-0.3
60th period	-0.5	-2	0	+11	+3	+1
59th period	-1	-0.8	-0.9	+6	+3	+2
Mill B						
Current period	+0.2	-2	-2	-12	-4	-1
60th period	-0.2	-1	+2	-6	-7	-3
59th period	+0.7	-4	-5	-9	-9	-5
Mill C						
Current period	+0.2	-2	+0.9	+6	+2	+4
60th period	-0.2	-2	+2	0	+0.8	+4
59th period	0	-0.7	+1	0	-5	+3
Mill D						
Current period	+0.7	-2	+5	--	-6	-4
60th period	-0.7	-1	+6	--	-3	+1
59th period	-0.5	0	+2	--	-4	+2
Mill E						
Current period	--	--	--	--	--	--
60th period	+1	-2	+6	+22	-3	+2
59th period	--	--	--	--	--	--
Mill F						
Current period	-0.4	-3	+6	+2	-9	-4
60th period	+1	-3	+6	+8	-3	+1
59th period	-1	-3	+3	-3	-9	-2
Mill G						
Current period	0	-2	-0.9	+6	-6	-8
60th period	-0.7	-2	+3	+11	-9	-4
59th period	0	-0.8	+0.9	+6	-6	-3
Mill H						
Current period	+0.5	+0.8	-3	+6	+2	+4
60th period	+1	0	0	0	-5	-1
59th period	--	--	--	--	--	--
Mill I						
Current period	-0.7	-2	0	+9	+9	+9
60th period	-0.7	-3	+5	-9	+3	+10
59th period	-0.7	-2	0	+3	+5	+2
Mill J						
Current period	-0.2	+2	+4	+7	-5	+1
60th period	0	+2	+0.9	+3	-2	+0.3
59th period	+0.7	+0.8	+0.9	+3	-4	0
Mill L						
Current period	+2	-1	+0.9	--	+5	+7
60th period	-0.9	-2	+5	--	-3	+0.3
59th period	-2	-3	-2	--	-11	-7
Mill M						
Current period	--	--	--	--	--	--
60th period	+0.2	-2	+6	-39	+6	+12
59th period	-1	-2	+6	-23	+0.5	+9

TABLE XX

OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952

Institute Data versus Mill Data

Caliper, points	Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet									
	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	In Mill Diff.	Across Mill Diff.								
12.1	12.2	+0.1	103	110	+7	32	34	+2	332 ^a	331	-1	361 ^a	378	+17
12.6	12.8	+0.2	114	109	-5	32	41	+9	349 ^a	345	-4	397 ^a	397	0
12.6	12.6	0.0	121	108	-13	32	34	+2	347 ^a	325	-22	384 ^a	384	0
12.0	12.1	+0.1	115	109	-6	33	34	+1	325	319	-6	370 ^a	384	+14
13.0	12.8	-0.2	108	115	+7	36	37	+1	332 ^a	352	+20	412 ^a	402	-10
13.0	12.9	-0.1	113	116	+3	36	37	+1	331 ^a	346	+15	384 ^a	386	+2
12.4	12.4	0.0	113	115	+2	35	36	+1	341 ^a	366	+25	397 ^a	368	-29
13.4	13.2	-0.2	113	110	-3	34	35	+1	347	341	-6	406 ^a	403	-3
12.7	12.6	-0.1	112	112	0	34	36	+2	338	341	+3	389	388	-1

Mill A--42-lb. Linerboard

specimens which tore beyond the 3/8-inch limit.

i from the totals of the individual readings.

TABLE XX

SUMMARY OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952

Institute Data versus Mill Data

File No.	Mill Coae	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmen In Mill Di						
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill		Diff.	IPC	Mill	Diff.		
151227	A-356	WF1S	6/22/52	2	42.5	43.5	+1.0	12.1	12.2	+0.1	103	110	+7	32	34	+2	332 ^a	331	-
151228	A-357	WF1S	6/22/52	1	42.2	43.0	+0.8	12.6	12.8	+0.2	114	109	-5	32	41	+9	349 ^a	345	-
151248	A-358	WF1S	6/29/52	1	42.2	42.4	+0.2	12.6	12.6	0.0	121	108	-13	32	34	+2	347 ^a	325	-2
151249	A-359	WF1S	6/29/52	2	42.3	42.5	+0.2	12.0	12.1	+0.1	115	109	-6	33	34	+1	325	319	-
151296	A-360	WF1S	7/ 8/52	2	42.8	43.4	+0.6	13.0	12.8	-0.2	108	115	+7	36	37	+1	332 ^a	352	+2
151297	A-361	WF1S	7/ 8/52	2	42.9	43.7	+0.8	13.0	12.9	-0.1	113	116	+3	36	37	+1	331 ^a	346	+1
151351	A-362	WF1S	7/13/52	2	43.5	42.9	-0.6	12.4	12.4	0.0	113	115	+2	35	36	+1	341 ^a	366	+2
151352	A-363	WF1S	7/13/52	1	43.8	43.4	-0.4	13.4	13.2	-0.2	113	110	-3	34	35	+1	347	341	-
Current Mill Average:					42.8	43.1	+0.3	12.7	12.6	-0.1	112	112	0	34	36	+2	338	341	+

Mill A--42-lb. Linerboard

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XXI
VARIETY OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

Institute Data versus Mill Data				Bursting Strength, p.s.i. gage				G. E. Puncture, units		Elmendorf Tear, g./sheet					
ht,	Caliper, points	Diff. IPC	IPC Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	In	Across	IPC	Mill Diff.
				Mull B--42-lb. Linerboard											
+0.2	14.1	13.7	-0.4	108	108	0	32	27	- 5	335	318	-17	385 ^a	366	-19
0.0	14.2	13.8	-0.4	111	108	- 3	32	28	- 4	348	313	-35	387 ^a	352	-35
0.0	14.2	13.9	-0.3	106	107	+ 1	32	28	- 4	324	305	-19	388 ^a	375	-13
+0.1	14.2	13.7	-0.5	106	108	+ 2	32	27	- 5	347	322	-25	395 ^a	387	- 8
-0.1	14.1	13.9	-0.2	113	109	- 4	33	29	- 4	363 ^a	327	-36	399 ^a	405	+ 6
0.0	14.3	13.9	-0.4	107	105	- 2	33	28	- 5	328 ^a	339	+11	389 ^a	417	+28
-0.1	14.3	13.9	-0.4	105	108	+ 3	32	29	- 3	344 ^a	340	- 4	394 ^a	405	+11
-0.2	14.2	13.9	-0.3	112	109	- 3	32	29	- 3	353 ^a	343	-10	387 ^a	413	+26
0.0	13.8	13.3	-0.5	107	103	- 4	33	29	- 4	331 ^a	325	- 6	391 ^a	384	- 7
0.0	13.8	13.4	-0.4	107	104	- 3	32	28	- 4	316	327	+11	378 ^a	380	+ 2
+0.2	13.7	13.4	-0.3	104	104	0	32	28	- 4	315 ^a	329	+14	372 ^a	389	+17
+0.3	13.7	13.5	-0.2	112	105	- 7	32	29	- 3	340 ^a	343	+ 3	407 ^a	387	-20
0.0	14.4	14.2	-0.2	113	107	- 6	36	29	- 7	349 ^a	331	-18	390 ^a	385	- 5
+0.1	14.2	14.2	-0.0	111	106	- 5	34	31	- 3	357 ^a	334	-23	404 ^a	393	-11
+0.3	14.4	14.2	-0.2	111	108	- 3	35	31	- 4	365 ^a	334	-31	419 ^a	374	-45
+0.2	14.5	14.1	-0.4	108	106	- 2	32	31	- 1	377 ^a	343	-34	409 ^a	396	-13
+0.1	14.1	13.8	-0.3	109	107	- 2	33	29	- 4	343	330	-13	393	388	- 5

more specimens which tore beyond the 3/8-inch limit.

lated from the totals of the individual readings.

TABLE XXI

SUMMARY OF INDIVIDUAL TEST LOTS - JULY 1 THROUGH JULY 31, 1952 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P. s. i. gage		G. E. Puncture, units						
					IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.					
151237	B-615	WF1S	6/20/52	1	43.7	+0.2	14.1	13.7	-0.4	108	108	0	32	27	- 5	335	
151238	B-616	WF1S	6/20/52	1	43.6	0.0	14.2	13.8	-0.4	111	108	- 3	32	28	- 4	348	
151239	B-617	WF1S	6/20/52	1	43.8	0.0	14.2	13.9	-0.3	106	107	+ 1	32	28	- 4	324	
151240	B-618	WF1S	6/20/52	1	43.3	+0.1	14.2	13.7	-0.5	106	108	+ 2	32	27	- 5	347	
151265	B-619	WF1S	6/30/52	1	44.4	-0.1	14.1	13.9	-0.2	113	109	- 4	33	29	- 4	363 ^a	
151266	B-620	WF1S	6/30/52	1	43.9	0.0	14.3	13.9	-0.4	107	105	- 2	33	28	- 5	328 ^a	
151267	B-621	WF1S	6/30/52	1	44.2	-0.1	14.3	13.9	-0.4	105	108	+ 3	32	29	- 3	344 ^a	
151268	B-622	WF1S	6/30/52	1	44.2	-0.2	14.2	13.9	-0.3	112	109	- 3	32	29	- 3	353 ^a	
151292	B-623	WF1S	7/ 1/52	1	42.6	0.0	13.8	13.3	-0.5	107	103	- 4	33	29	- 4	331 ^a	
151293	B-624	WF1S	7/ 1/52	1	42.3	0.0	13.8	13.4	-0.4	107	104	- 3	32	28	- 4	316	
151294	B-625	WF1S	7/ 1/52	1	42.4	+0.2	13.7	13.4	-0.3	104	104	0	32	28	- 4	315 ^a	
151295	B-626	WF1S	7/ 1/52	1	42.3	+0.3	13.7	13.5	-0.2	112	105	- 7	32	29	- 3	340 ^a	
151329	B-627	WF1S	7/ 3/52	1	43.8	0.0	14.4	14.2	-0.2	113	107	- 6	36	29	- 7	349 ^a	
151330	B-628	WF1S	7/ 3/52	1	43.4	+0.1	14.2	14.2	-0.0	111	106	- 5	34	31	- 3	357 ^a	
151331	B-629	WF1S	7/ 3/52	1	44.1	+0.3	14.4	14.2	-0.2	111	108	- 3	35	31	- 4	365 ^a	
151332	B-630	WF1S	7/ 3/52	1	43.9	+0.2	14.5	14.1	-0.4	108	106	- 2	32	31	- 1	377 ^a	
Current Mill Average:					43.5	43.6	+0.1	14.1	13.8	-0.3	109	107	- 2	33	29	- 4	343

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XXII

OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

Institute Data versus Mill Data

Lot No.	Caliper, points	IPC Mill Diff.	Bursting Strength, p.s.i. gage		IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Elmendorf Tear, g./sheet		IPC Mill Diff.				
			IPC	Mill Diff.					In	Across					
<u>Mill C--42-lb. Linerboard</u>															
2	13.2	12.8	-0.4	117	111	-6	36	38	+2	383 ^a	382	-1	418 ^a	433	+15
4	12.5	12.4	-0.1	110	109	-1	32	35	+3	342	352	+10	393 ^a	411	+18
1	12.4	12.4	0.0	110	114	+4	33	33	0	331	358	+27	399 ^a	407	+8
2	13.3	12.9	-0.4	111	112	+1	36	37	+1	377 ^a	372	-5	408 ^a	438	0
3	12.4	12.5	+0.1	113	119	+6	35	36	+1	386 ^a	387	+1	415 ^a	427	+12
1	13.8	13.3	-0.5	112	115	+3	37	39	+2	372	379	+7	420 ^a	441	+21
0	13.6	13.3	-0.3	112	115	+3	38	40	+2	401 ^a	395	-6	435 ^a	458	+23
3	12.9	12.6	-0.3	110	108	-2	36	39	+3	369	400	+31	416 ^a	445	+29
1	13.0	12.8	-0.2	112	113	+1	35	37	+2	370	378	+8	413	429	+16

TABLE XXIII

<u>Mill D--42-lb. Linerboard</u>															
4	13.9	13.4	-0.5	101	110	+9	38	38		384 ^a	372	-12	399 ^a	332	-17
7	12.7	12.5	-0.2	105	116	+11	36	36		371 ^a	345	-26	394 ^a	396	+2
1	13.0	12.8	-0.2	100	107	+7	37	37		373 ^a	346	-27	424 ^a	384	-40
0	13.2	12.8	-0.4	107	107	0	36	36		363 ^a	351	-12	431 ^a	394	-37
9	13.4	13.0	-0.4	108	110	+2	39	39		383 ^a	342	-41	410 ^a	394	-16
5	13.7	13.1	-0.6	96	104	+8	38	38		370 ^a	333	-37	381 ^a	363	-18
5	13.4	13.1	-0.3	101	104	+3	39	39		357 ^a	368	+11	387 ^a	402	+15
2	13.4	12.9	-0.5	102	106	+4	39	39		392 ^a	352	-40	398 ^a	390	-8
3	13.7	13.0	+0.3	103	108	+5	38	38		374	351	-23	403	338	-15

specimens which tore beyond the 3/8-inch limit.
and from the totals of the individual readings.

TABLE XXIV

SUMMARY OF INDIVIDUAL TEST LOTS - JULY 1 THROUGH JULY 31, 1952 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength		G. E. Puncture, units	
					IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.
Mill E-42-1b, Linerboard												
No. samples submitted.												

TABLE XXV

Mill F-42-1b, Linerboard

151236	F-38	---	6/3/52	---	44.1	43.5	-0.6	14.2	13.8	-0.4	104	109	+5	39	42	+3	385 ^a
151269	F-39	---	W.F. 6/13/52	---	44.2	44.1	-0.1	14.5	14.2	-0.3	104	108	+4	41	43	+2	413 ^a
151270	F-40	---	W.F. 6/14/52	---	44.4	44.3	-0.1	14.5	14.2	-0.3	107	116	+9	38	40	+2	407 ^a
151271	F-41	---	W.F. 6/16/52	---	45.6	45.3	-0.3	14.8	14.3	-0.5	110	115	+5	44	44	0	429 ^a
151272	F-42	---	W.F. 6/20/52	---	44.5	44.7	+0.2	14.8	14.4	-0.4	102	106	+4	41	42	+1	409
Current Mill Average:					44.6	44.4	-0.2	14.6	14.2	-0.4	105	111	+6	41	42	+1	408

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XXVI

TABLE OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

Institute Data versus Mill Data

Lot	Caliper, points	IPC Mill Diff.	Bursting Strength, p.s.i. gage		G. E. Puncture, units	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Elmendorf Tear, g./sheet			
			IPC Mill Diff.	IPC Mill Diff.					In	Across		
			<u>Mill G--42-lb. Linerboard</u>									
.2	13.6	+0.3	103	103	33	- 1	341 ^a	344	+ 3	383 ^a	371	- 12
.3	13.8	+0.1	102	103	34	- 2	361 ^a	340	-21	377 ^a	375	- 2
.3	14.4	-0.4	108	105	40	+ 3	385 ^a	347	-38	418 ^a	377	- 41
.2	14.0	-0.3	105	104	40	+3	375 ^a	337	-38	423 ^a	370	- 53
.2	13.6	-0.6	107	108	34	+ 4	342 ^a	325	-17	397 ^a	355	- 42
.2	13.8	-0.6	114	108	35	+ 4	350 ^a	325	-25	395 ^a	361	- 34
.0	13.9	-0.3	106	105	36	+ 2	359	336	-23	399	368	- 31

TABLE XXVII

Lot	Caliper, points	IPC Mill Diff.	Bursting Strength, p.s.i. gage		G. E. Puncture, units	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.		
			IPC Mill Diff.	IPC Mill Diff.								
			<u>Mill H--42-lb. Linerboard</u>									
.1	12.4	0.0	113	110	39	- 1	408 ^a	403	- 5	425 ^a	430	+ 5
0	12.0	+0.1	113	110	35	+ 3	347 ^a	355	+ 8	399 ^a	411	+ 12
7	12.0	+0.1	114	112	35	+ 3	363 ^a	383	+20	389 ^a	425	+ 36
.2	12.1	+0.1	114	111	36	+ 2	373	380	+ 7	404	422	+ 18

re specimens which tore beyond the 3/8-inch limit.
ted from the totals of the individual readings.

TABLE XXVI

SUMMARY OF INDIVIDUAL TEST LOTS - JULY 1 THROUGH JULY 31, 1952 (Continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting							
					IPC	Mill Diff.	IPC	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.			
151250	G-426	WFL	7/ 1/52	1	43.6	43.4	-0.2	13.6	13.9	+0.3	103	103	0	33	32	- 1	341 ^a	34
151251	G-427	WFL	7/ 1/52	1	43.5	43.2	-0.3	13.8	13.9	+0.1	102	103	+ 1	34	32	- 2	361 ^a	34
151298	G-428	WFL	7/ 8/52	1	44.1	43.8	-0.3	14.4	14.0	-0.4	108	105	- 3	40	43	+ 3	399 ^a	34
151299	G-429	WFL	7/ 8/52	1	43.8	44.0	+0.2	14.0	13.7	-0.3	105	104	- 1	40	43	+ 3	375 ^a	33
151362	G-430	WFL	7/19/52	1	42.3	42.5	+0.2	13.6	13.0	-0.6	107	108	+ 1	34	38	+ 4	342 ^a	32
151363	G-431	WFL	7/19/52	1	42.8	42.6	-0.2	13.8	13.2	-0.6	114	108	- 6	35	39	+ 4	350 ^a	32
Current Mill Average:					43.3	43.3	0.0	13.9	13.6	-0.3	106	105	- 1	36	38	+ 2	359	33

TABLE XXVII

Mill H-42-lb. Linerboard

File No.	Mill Code	Date Made	Mch. No.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.							
151277	H-325	WFLS	7/ 1/52	2	44.2	44.1	-0.1	12.4	12.4	0.0	113	110	- 3	39	38	- 1	408 ^a	40
151307	H-326	WFLS	7/ 6/52	2	43.7	43.7	0.0	12.0	12.1	+0.1	113	110	- 3	35	38	+ 3	347 ^a	35
151308	H-327	WFLS	7/ 6/52	2	43.1	43.3	+0.2	12.0	12.1	+0.1	114	112	- 2	35	38	+ 3	365 ^a	38
Current Mill Average:					43.7	43.9	+0.2	12.1	12.2	+0.1	114	111	- 3	36	38	+ 2	373	38

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XXVIII

TABLE OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

Institute Data versus Mill Data															
Lot Diff.	Caliper, points IPC Mill Diff.	Bursting Strength, P.s.i. gage IPC Mill Diff.	G. E. Puncture, units IPC Mill Diff.	Elmendorf Tear, g./sheet In IPC Mill Diff.	Across IPC Mill Diff.										
						IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.						
-0.7	13.1	13.0	-0.1	105	105	0	32	35	+ 3	357	385	+28	394 ^a	432	+38
0.0	13.2	13.0	-0.2	105	105	0	32	35	+ 3	353 ^a	387	+34	399 ^a	429	+30
-0.3	13.2	13.0	-0.2	105	105	0	32	35	+ 3	355	386	+31	397	431	+34

Mill I--42-lb. Linerboard

TABLE XXIX

Mill J--42-lb. Linerboard															
0.0	13.1	13.4	+0.3	105	107	+ 2	30	32	+ 2	351 ^a	338	-13	371 ^a	363	- 8
0.0	13.1	13.3	+0.2	107	107	0	30	32	+ 2	372 ^a	337	-35	361 ^a	377	+16
0.4	13.2	13.0	-0.2	110	116	+ 6	31	31	0	343 ^a	338	- 5	380 ^a	398	+18
0.1	13.2	13.7	+0.5	110	116	+ 6	30	32	+ 2	359 ^a	335	-24	382 ^a	380	- 2
0.1	13.2	13.4	+0.2	108	112	+ 4	30	32	+ 2	356	337	-19	374	379	+ 5

TABLE XXX

Mill K--42-lb. Linerboard

No samples submitted.
No specimens which tore beyond the 3/8-inch limit.
Noted from the totals of the individual readings.

TABLE XXXI

OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

Institute data versus Mill data

Caliper, points	IPC Mill Diff.	Bursting Strength, p.s.i. gage	IPC Mill Diff.	G. E. Puncture, units	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Elmendorf Tear,		
								In	Across	
f. IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	g./sheet	IPC Mill Diff.	
14.2	-0.2	96	103 + 7	34	353 ^a	383	+30	386 ^a	414	+28
13.7	-0.2	108	107 - 1	34	363 ^a	380	+17	383 ^a	409	+26
12.8	-0.3	109	111 + 2	35	349 ^a	366	+17	385 ^a	402	+17
14.3	-0.4	110	105 - 5	35	345 ^a	374	+29	383 ^a	406	+23
13.6	-0.3	108	114 + 6	36	347 ^a	390	+43	386 ^a	423	+37
14.3	-0.3	107	104 - 3	36	371 ^a	385	+14	386 ^a	425	+39
14.4	-0.2	107	106 - 1	35	365 ^a	378	+13	391 ^a	418	+27
14.2	-0.2	103	102 - 1	35	369 ^a	362	- 7	381 ^a	404	+23
13.9	-0.2	106	107 + 1	35	358	377	+19	385	413	+28

TABLE XXXII

Mill M--42-lb. Linerboard

No samples submitted.

specimens which tore beyond the 3/8-inch limit.

d from the totals of the individual readings.

TABLE XXXI

SUMMARY OF INDIVIDUAL TEST LOYS - JULY 1 THROUGH JULY 31, 1952 (continued)

Institute data versus Mill data

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		IPC Mill Diff.		IPC Mill Diff.		IPC Mill Diff.		IPC Mill
					IPC	Mill	IPC	Mill	IPC	Mill	IPC	Mill			
151230	L-99		6/13/52	1	43.0	42.0	-1.0	14.2	14.0	-0.2	96	103	+ 7	34	353 ^a
151231	L-100		6/13/52	1	43.6	42.6	-1.0	13.7	13.5	-0.2	108	107	- 1	34	363 ^a
151278	L-101		6/ 9/52	1	42.9	42.0	-0.9	12.8	12.5	-0.3	109	111	+ 2	35	349 ^a
151279	L-102		6/14/52	1	42.6	41.7	-0.9	14.3	13.9	-0.4	110	105	- 5	35	345 ^a
151333	L-103		6/19/52	1	43.0	43.1	+0.1	13.6	13.3	-0.3	108	114	+ 6	36	347 ^a
151334	L-104		6/21/52	1	43.8	43.1	-0.7	14.3	14.0	-0.3	107	104	- 3	36	371 ^a
151353	L-105		7/10/52	1	43.8	43.0	-0.8	14.4	14.2	-0.2	107	106	- 1	35	365 ^a
151354	L-106		7/13/52	1	43.0	42.4	-0.6	14.2	14.0	-0.2	103	102	- 1	35	369 ^a
Current Mill Average:					43.2	42.5	+0.7	13.9	13.7	-0.2	106	107	+ 1	35	358

Mill L--42-lb. Linerboard

TABLE XXXII

Mill M--42-lb. Linerboard

No samples submitted.

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XXXIII

LIST OF INDIVIDUAL TEST LOTS--JULY 1 THROUGH JULY 31, 1952 (continued)

Institute Data versus Mill Data

Lot No.	Caliper, points			Bursting Strength, p.s.i. gage			G. E. Puncture, units			Elmendorf Tear, g./sheet							
	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	In		Across		IPC	Mill	Diff.	
<u>Mill E--44/46-lb. Drum Linerboard</u>																	
+0.2	14.4	14.2	-0.2	112	114	+ 2	35	42	+ 7	407 ^a	383	-24	387 ^a	369	-18		
+1.0	15.5	15.0	-0.5	93	86	- 7	36	42	+ 6	385 ^a	403	+18	345 ^a	379	+34		
-0.6	14.9	14.6	-0.3	103	100	- 3	35	42	+ 7	396	393	- 3	366	374	+ 8		
<u>Mill E--69-lb. Linerboard</u>																	
2.5	22.1	21.9	-0.2	141	151	+10	63	76	+13	598 ^a	533	-65	589 ^a	588	- 1		

more specimens which tore beyond the 3/8-inch limit.

deducted from the totals of the individual readings.

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TABLE XXVIII

SUMMARY OF INDIVIDUAL TEST LOTS - JULY 1 THROUGH JULY 31, 1952 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I. gage		G. E. Puncture, units							
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.		
151233	E-346	W.F.	6/25/52	1	46.7	46.9	+0.2	14.4	14.2	-0.2	112	114	+ 2	35	42	+ 7	407 ^a	38
151309	E-347	W.F.	7/ 9/52	1	48.3	49.3	+1.0	15.5	15.0	-0.5	93	86	- 7	36	42	+ 6	385 ^a	40 ²
Current Mill Average:					47.5	48.1	+0.6	14.9	14.6	-0.3	103	100	- 3	35	42	+ 7	396	39 ²
<u>Mill E--44/46-lb. Drum Linerboard</u>																		
151232	E-345	W.F.	6/24/52	1	68.4	70.9	+2.5	22.1	21.9	-0.2	141	151	+10	63	76	+13	598 ^a	533
<u>Mill E--69-lb. Linerboard</u>																		

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

