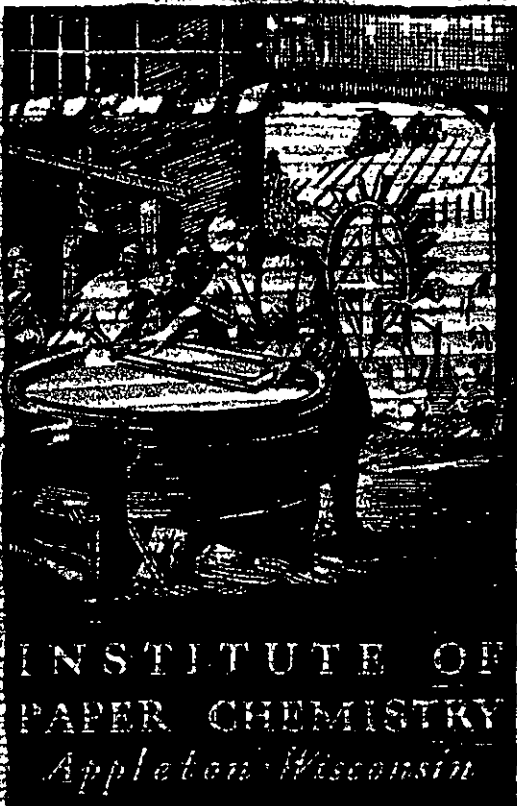




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CONTINUOUS-BASELINE STUDY

✓ Project 1108-B

Progress Report 69

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

April 1, 1953

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

CONTINUOUS BASELINE STUDY

Project 1108-B

Progress Report 69

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

April 1, 1953

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

In conjunction with the F.K.I. Continuous Baseline Study, one hundred and five different sample lots of 42-lb. Fourdrinier kraft linerboard were submitted by twelve different F.K.I. mills to The Institute of Paper Chemistry for testing during the period March 1 through March 31. In addition to the 42-lb. kraft linerboard, six 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	12
B	16
C	8
D	11
E	3
F	13
G	10
H	8
I	8
J	8
K	0
L	4
M	<u>4</u>
	105

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 March 1 through March 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 43.0 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 99.8. This signifies that the current average basis weight is slightly lower than the cumulative average, which in this case covered the period from July 25, 1947, through February 28, 1953.

A comparison of the results in Table II and Figure 1 shows that with the exception of Mill E, the average basis weight results for all mills conform to the 42-lb. specification set forth in Rule 41. Mill D has the highest average basis weight, it being 43.8 lb. or approximately 4.3% higher than the 42-lb. specification. On the other hand, Mill E has the lowest average basis weight, it being 41.9 lb., approximately 0.2% lower 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	+3.1
B	+3.8
C	+2.6
D	+4.3
E	-0.2
F	+2.4
G	+3.3
H	+1.9
I	+1.7
J	+0.7
K	--
L	+2.4
M	+3.3

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 remained the same.

A comparison of the average caliper values for the various mills (see Figure 2) shows that the mill averages vary from a low of 12.3 for Mill H to a high of 14.1 for Mill C, the average being 13.2 which is somewhat lower than the cumulative average of 13.9.

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

average bursting strength values for the various mills range from a low of 105 for Mill F to a high of 118 for Mill M. The current F.K.I. average bursting strength is 110, somewhat 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 D has the highest G. E. puncture average, 39 units, and Mill B has the lowest average, 31 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 E has the highest average machine direction tear value while Mill B has the lowest. Mill D has the highest average cross-machine direction tear value, whereas Mill E 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 basis weight, caliper, G. E. puncture, and Elmendorf tear are lower than the respective cumulative F.K.I. averages, whereas the current F.K.I. average for bursting strength is 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

average bursting strength values for the various mills range from a low of 105 for Mill F to a high of 118 for Mill M. The current F.K.I. average bursting strength is 110, somewhat 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 D has the highest G. E. puncture average, 39 units, and Mill B has the lowest average, 31 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 E has the highest average machine direction tear value while Mill B has the lowest. Mill D has the highest average cross-machine direction tear value, whereas Mill E 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 basis weight, caliper, G. E. puncture, and Elmendorf tear are lower than the respective cumulative F.K.I. averages, whereas the current F.K.I. average for bursting strength is 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	12 ^a		
B	16 ^a		
C	8		

(Continued on next page)

Mill Code	No. of Sample Lots		
	W.F.	D.F.	Misc.
D	10	1	
E	2, 3 ^b		1 ^c , 3 ^{bc}
F	13		
G	10		
H	8 ^a		
I	8 ^a		
J			8 ^d
L			4 ^c
M	4		

^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--MARCH 1 THROUGH MARCH 31, 1953

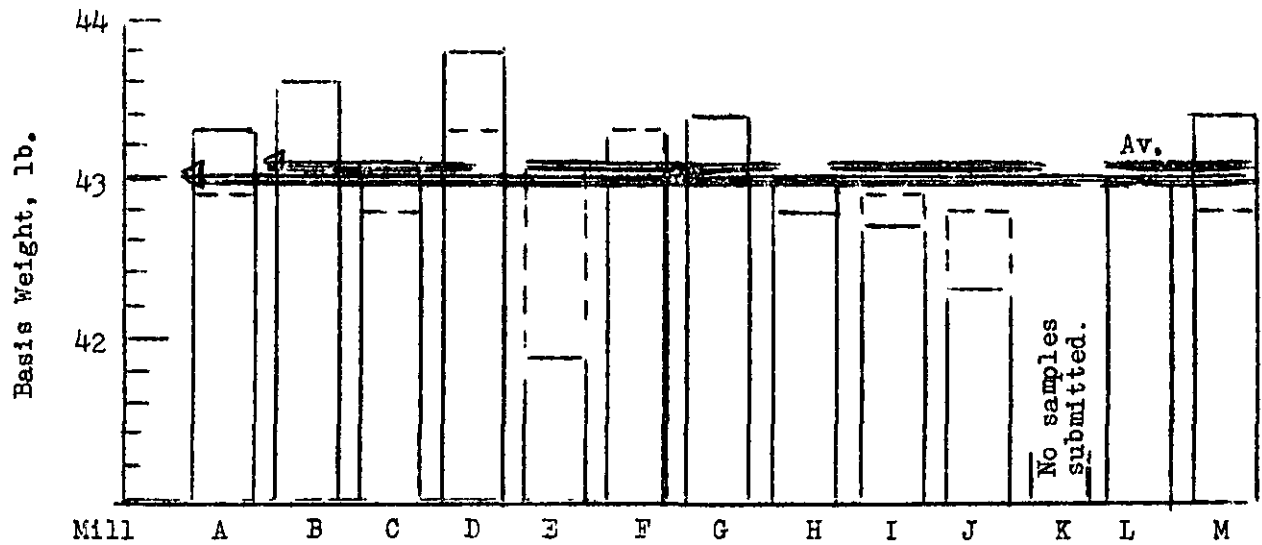
Weight, lb	Caliper, points	Bursting Strength p.s.i. gage	G. E. Puncture units	Elmendorf Tear	
				In Direction	Across Direction
	12.6	111	34	343	391
	12.9	115	31	323	371
	14.1	112	36	367	410
	13.1	109	39	368	431
	13.9	110	34	402	365
	13.0	105	38	398	430
	12.6	109	35	348	387
	12.3	107	34	346	400
	13.2	110	32	339	390
	13.2	109	33	363	382
submitted					
	13.5	108	36	359	389
	13.7	118	35	386	418
	13.2	110	35	363	397
	13.9	106	36	372	405
	95.0	103.8	97.2	97.6	98.0

TABLE II

SUMMARY OF COMPOSITE MILL AVERAGES--MARCH 1 THROUGH MARCH 31, 1953

Code No..	Basis Weight, lb.	Caliper, points	Bursting Strength p.s.i. gage	G. E. Puncture units	Elmer In Direction
A	43.3	12.6	111	34	343
B	43.6	12.9	115	31	323
C	43.1	14.1	112	36	367
D	43.8	13.1	109	39	368
E	41.9	13.9	110	34	402
F	43.0	13.0	105	38	398
G	43.4	12.6	109	35	348
H	42.8	12.3	107	34	346
I	42.7	13.2	110	32	339
J	42.3	13.2	109	33	363
K	No samples submitted				
L	43.0	13.5	108	36	359
M	43.4	13.7	118	35	386
Current FKl Average:	43.0	13.2	110	35	363
Cumulative FKl Average:	43.1	13.9	106	36	372
FKl Index:	99.8	95.0	103.8	97.2	97.6

Figure 1



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

Figure 2



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

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

Figure 3

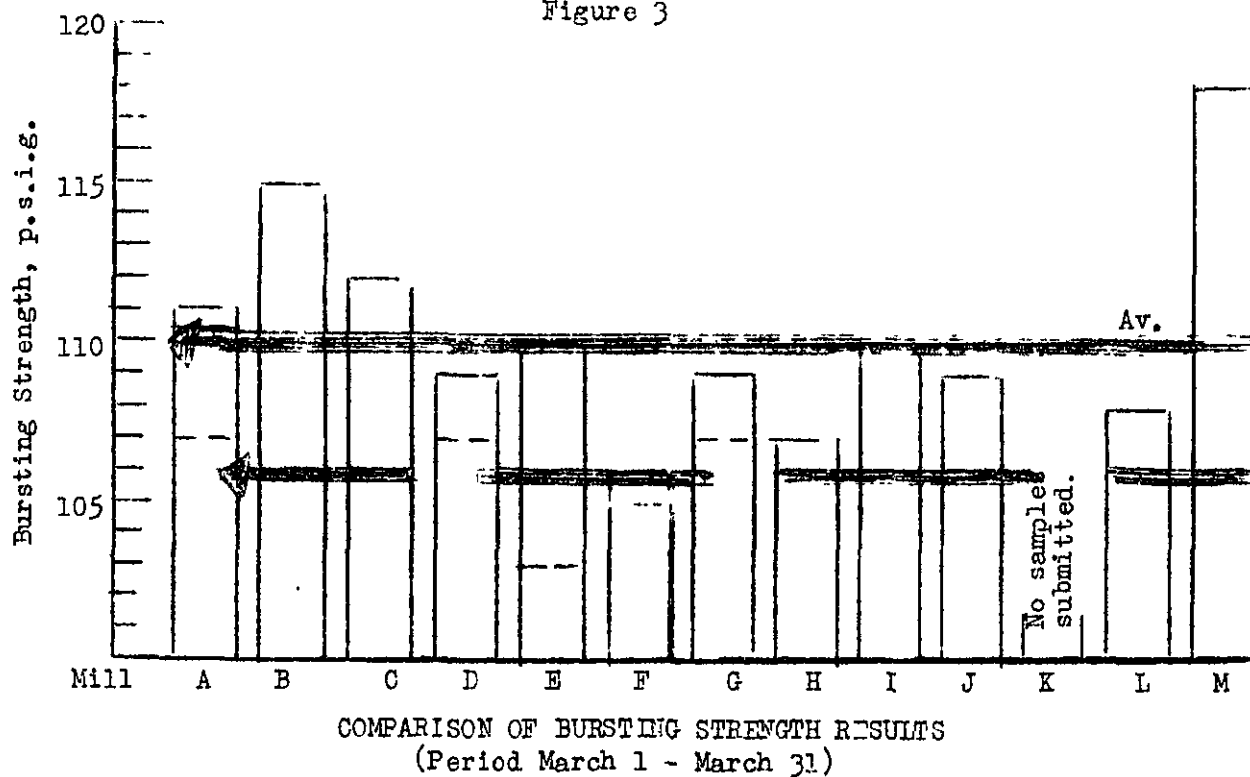
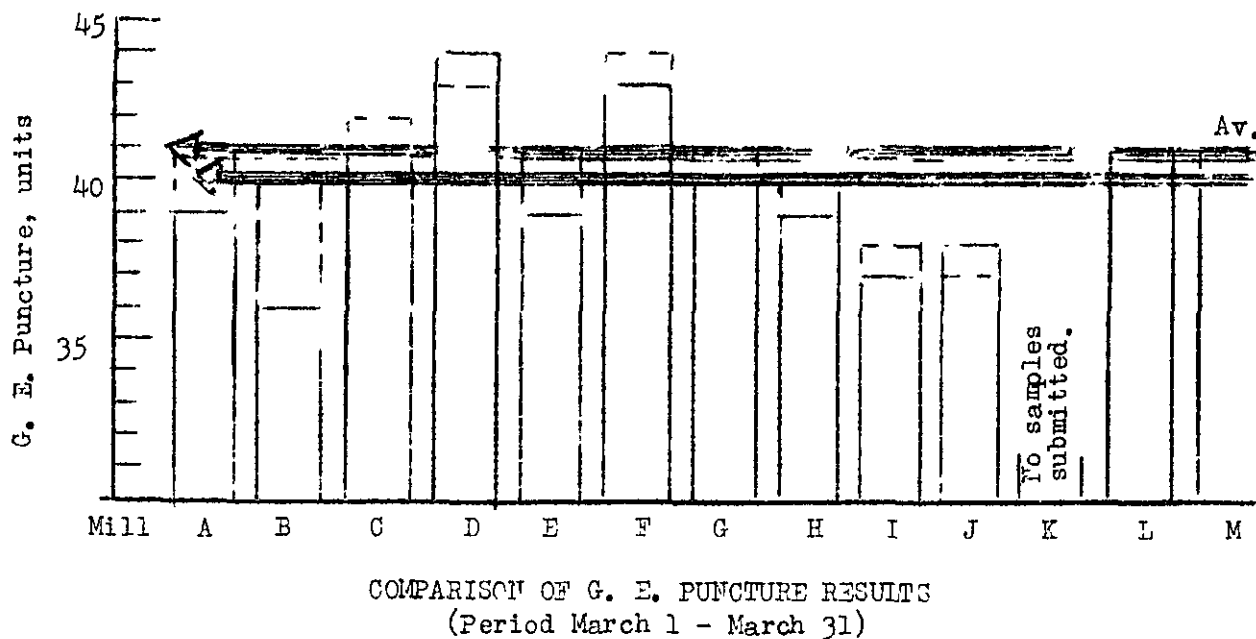


Figure 4



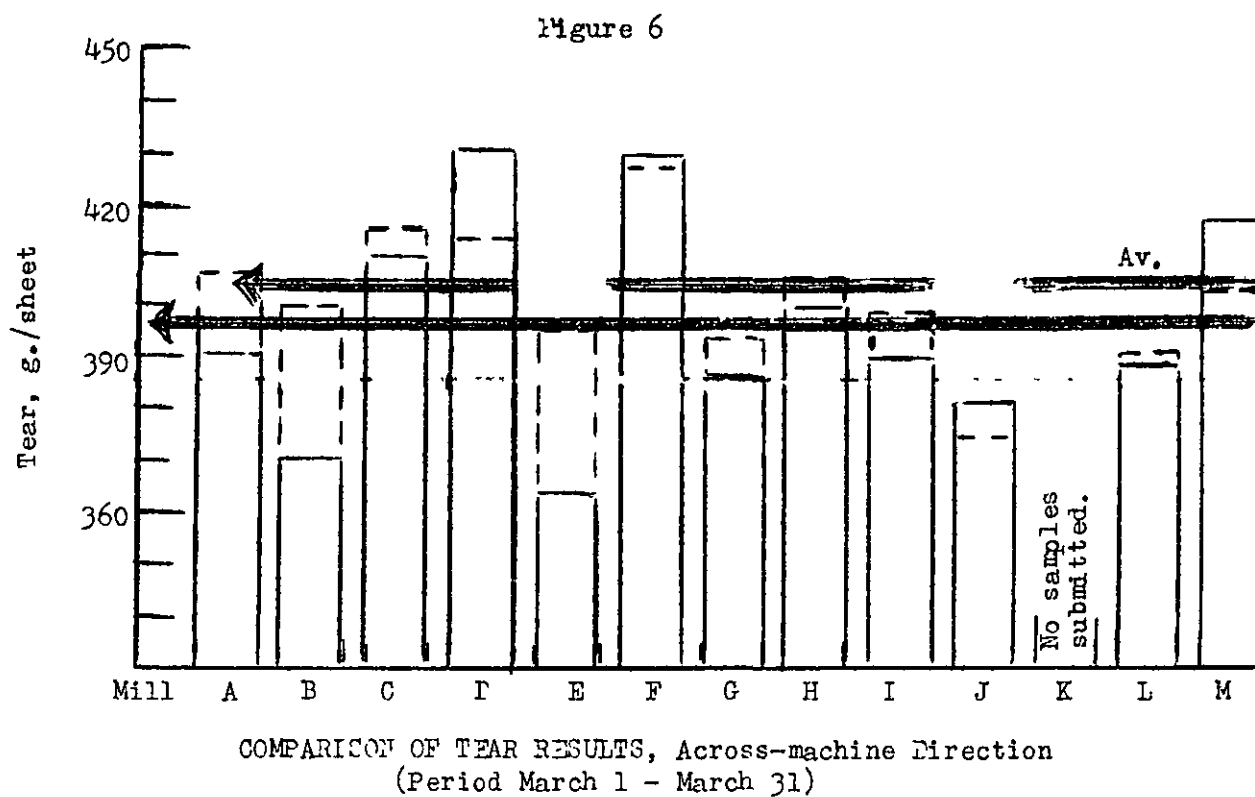
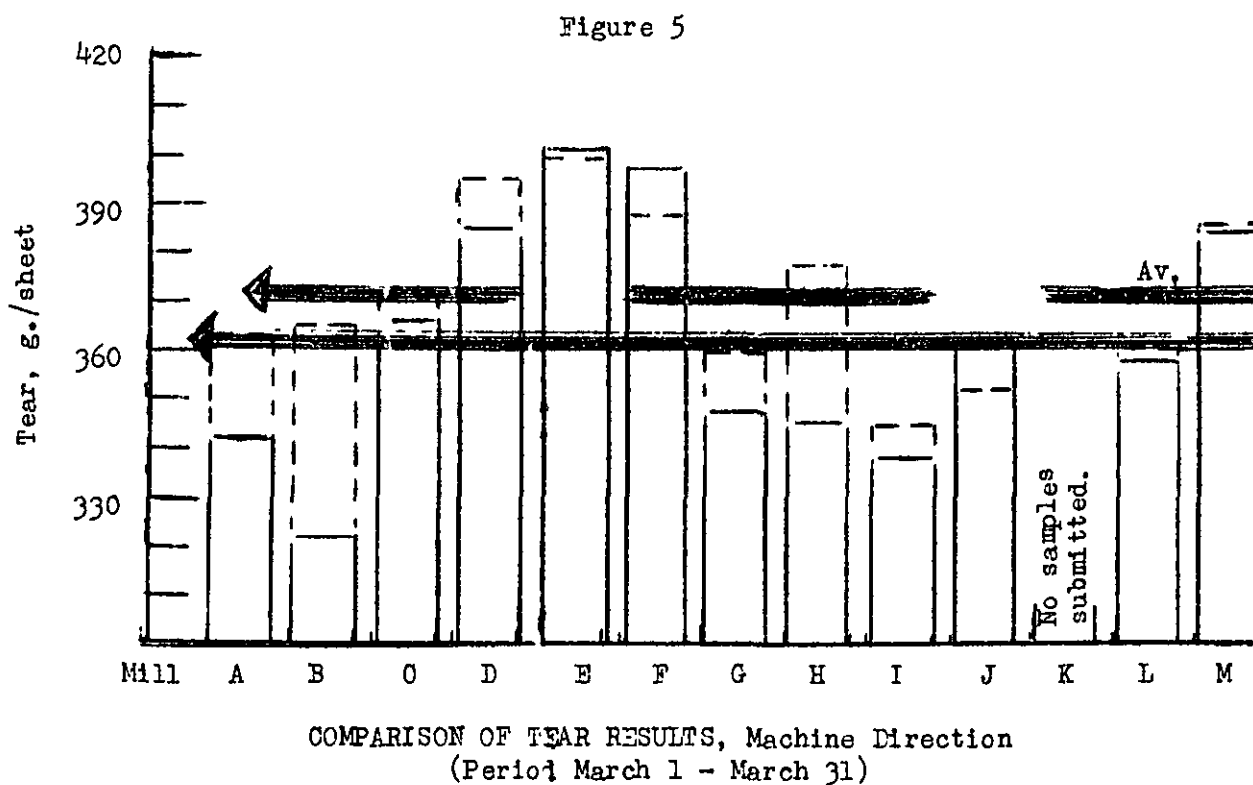


TABLE III
OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953

eight, in.	Caliper, points	Bursting Strength, p.s.i. gage		G. E. Puncture, units		In		Elmendorf Tear g./sheet		Across						
		Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.		Av.					
Mill A --- 42-lb. Linerboard																
1.2	43.5	13.3	12.1	12.8	132	86	109	39	34	36	400	288	335 ^a	432	336	395 ^a
2.2	43.7	13.1	12.1	12.7	126	86	106	41	34	37	400	272	348 ^a	464	360	403 ^a
3.8	43.7	12.6	11.8	12.2	143	84	114	37	30	34	432	296	348 ^a	424	352	387 ^a
2.2	42.7	13.0	12.0	12.5	133	93	111	36	31	33	392	248	331	400	352	378 ^a
2.0	42.6	13.2	12.1	12.6	133	97	110	36	31	33	360	320	339 ^a	456	386	399 ^a
2.6	43.6	13.0	12.3	12.8	124	95	108	38	32	36	392	304	339	464	352	401 ^a
2.0	42.9	13.9	12.7	13.2	139	70	112	34	30	32	352	304	331	432	360	385 ^a
2.0	43.0	13.3	12.4	12.9	138	92	113	36	30	33	400	288	340	424	360	388 ^a
4.0	44.2	13.1	12.2	12.8	139	80	115	35	30	33	424	296	372 ^a	456	368	409 ^a
4.0	44.1	13.0	12.2	12.8	141	98	119	35	30	33	416	328	370	440	376	401 ^a
2.4	43.0	12.9	12.0	12.4	129	86	112	34	30	32	384	304	345	416	352	379 ^a
2.0	42.7	12.8	12.0	12.2	131	79	107	32	29	30	352	280	323 ^a	424	336	370 ^a
				12.6			111			34			343			391
				13.6			107			36			364			407
				92.6			103.7			94.4			94.2			96.1
				90.6			104.7			94.4			92.2			96.5

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

TABLE III

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i.			G. E. Puncture, units		
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
Mill A -- 42-lb. Linerboard																	
153409	A-422	WF1S	3/ 2/53	2/ 8/53	2	44.0	42.2	43.5	13.3	12.1	12.8	86	132	109	39	34	36
153410	A-423	WF1S	3/ 2/53	2/ 14/53	2	44.4	42.2	43.7	13.1	12.1	12.7	86	126	106	41	34	37
153461	A-424	WF1S	3/ 5/53	2/ 18/53	1	44.2	42.8	43.7	12.6	11.8	12.2	84	143	114	37	30	34
153462	A-425	WF1S	3/ 5/53	2/ 20/53	2	43.4	42.2	42.7	13.0	12.0	12.5	93	133	111	36	31	33
153463	A-426	WF1S	3/ 5/53	2/ 23/53	2	43.8	42.0	42.6	13.2	12.1	12.6	97	133	110	36	31	33
153464	A-427	WF1S	3/ 5/53	2/ 23/53	2	44.4	42.6	43.6	13.0	12.3	12.8	95	124	108	38	32	36
153574	A-428	WF1S	3/ 11/53	3/ 3/53	2	43.8	42.0	42.9	13.9	12.7	13.2	70	139	112	34	30	32
153575	A-429	WF1S	3/ 11/53	3/ 3/53	2	44.0	42.0	43.0	13.3	12.4	12.9	92	138	113	36	30	33
153607	A-430	WF1S	3/ 16/53	3/ 9/53	2	44.6	44.0	44.2	13.1	12.2	12.8	80	139	115	35	30	33
153608	A-431	WF1S	3/ 16/53	3/ 9/53	2	44.4	44.0	44.1	13.0	12.2	12.8	98	141	119	35	30	33
153670	A-432	WF1S	3/ 21/53	3/ 15/53	2	43.8	42.4	43.0	12.9	12.0	12.4	86	129	112	34	30	32
153671	A-433	WF1S	3/ 21/53	3/ 15/53	1	44.0	42.0	42.7	12.8	12.0	12.2	79	131	107	32	29	30
Current Mill Average:						43.3					12.6			111			34
Cumulative Mill Average:						42.9					13.6			107			36
Mill Factor, %:						100.9					92.6			103.7			94.4
Mill Index, %:						100.5					90.6			104.7			94.4

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

TABLE IV

DIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (continued)

Av.	Caliper points		Purstring Strength, p.s.i. gage		C. E. Puncture, units		Elmendorf Tear, g./sheet		Av.	In		Av.	Across		
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		Max.	Min.		Max.	Min.	Av.
Mill B --42-lb. Linerboard															
3.3	13.0	11.5	12.6	130	78	113	33	29	31	352	256	305	400	304	365 ^a
3.0	13.1	12.0	12.6	141	92	113	33	28	30	3328	264	299	403	328	361 ^a
3.5	13.4	12.1	12.8	132	98	114	36	28	30	384	264	311	403	336	366 ^a
3.4	13.0	12.0	12.5	140	88	113	34	28	31	368	224	319	392	320	359 ^a
4.3	13.8	12.9	13.3	130	105	117	36	31	33	408	280	339 ^a	432	336	379 ^a
3.9	13.9	12.7	13.2	137	86	115	36	30	32	400	320	353	403	344	367 ^a
4.2	13.9	12.8	13.3	135	104	118	34	30	32	400	280	347	424	320	380 ^a
4.0	13.9	12.8	13.2	134	86	115	36	30	33	376	320	346	415	304	368 ^a
4.2	13.8	12.9	13.2	135	104	120	36	30	33	368	256	317 ^a	432	312	360 ^a
3.9	13.8	12.7	13.1	131	96	117	36	31	34	400	280	327 ^a	424	312	375 ^a
4.3	13.7	13.0	13.3	142	88	114	38	30	34	408	304	353	432	328	383 ^a
4.2	13.9	12.8	13.3	133	104	116	36	31	34	440	272	341	456	360	393 ^a
2.4	13.3	12.0	12.5	133	93	114	32	27	29	352	248	299 ^a	408	272	338 ^a
2.8	13.2	12.0	12.6	142	83	113	30	25	28	352	256	304	403	328	364 ^a
2.8	13.5	12.0	12.6	127	97	110	30	26	28	400	280	317	424	344	377 ^a
3.2	13.0	12.0	12.6	130	84	113	31	26	28	320	264	294 ^a	496	326	379 ^a
3.6			12.9			115			31			323			371
3.6			14.1			106			35			366			400
3.0			91.5			108.5			88.6			88.3			92.8
1.2			92.8			108.5			86.1			86.8			91.6

specimens which tore beyond the 3/8-inch limit

TABLE IV

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (contin

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper points			Bursting Strength, p.s.i. gage			C. E. Puncture, units		
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
Mill B --42--lb. Linerboard																	
153451	B-751	WFIS	3/ 4/53	2/16/53	1	44.2	42.0	43.3	13.0	11.5	12.6	130	78	113	33	29	31
153452	B-752	WFIS	3/ 4/53	2/16/53	1	43.6	41.8	43.0	13.1	12.0	12.6	141	92	113	33	28	30
153453	B-753	WFIS	3/ 4/53	2/16/53	1	44.0	42.8	43.5	13.4	12.1	12.8	132	98	114	36	28	30
153454	B-754	WFIS	3/ 4/53	2/16/53	1	44.2	42.0	43.4	13.0	12.0	12.5	140	88	113	34	28	31
153501	B-755	WFIS	3/ 7/53	2/25/53	1	45.0	44.0	44.3	13.8	12.9	13.3	130	105	117	36	31	33
153502	B-756	WFIS	3/ 7/53	2/25/53	1	44.6	42.2	43.9	13.9	12.7	13.2	137	86	115	36	30	32
153503	B-757	WFIS	3/ 7/53	2/25/53	1	44.6	43.8	44.2	13.9	12.8	13.3	135	104	118	34	30	32
153504	B-758	WFIS	3/ 7/53	2/25/53	1	45.0	43.6	44.0	13.9	12.8	13.2	134	86	115	36	30	33
153505	B-759	WFIS	3/ 7/53	2/25/53	1	45.2	43.4	44.2	13.8	12.9	13.2	135	104	120	36	30	33
153506	B-760	WFIS	3/ 7/53	2/25/53	1	44.2	43.4	43.9	13.8	12.7	13.1	131	96	117	36	31	34
153507	B-761	WFIS	3/ 7/53	2/25/53	1	44.6	44.0	44.3	13.7	13.0	13.3	142	88	114	38	30	34
153508	B-762	WFIS	3/ 7/53	2/25/53	1	45.0	43.4	44.2	13.9	12.8	13.3	133	104	116	36	31	34
153601	B-763	WFIS	3/14/53	3/ 3/53	1	44.0	41.0	42.4	13.3	12.0	12.5	133	93	114	32	27	29
153602	B-764	WFIS	3/14/53	3/ 3/53	1	43.8	42.0	42.8	13.2	12.0	12.6	142	83	113	30	25	28
153603	B-765	WFIS	3/14/53	3/ 3/53	1	43.8	42.0	42.8	13.5	12.0	12.6	127	97	110	30	26	28
153604	B-766	WFIS	3/14/53	3/ 3/53	1	44.0	42.2	43.2	13.0	12.0	12.6	130	84	113	31	26	28
Current Mill Average:								43.6			12.9			115			31
Cumulative Mill Average:								43.6			14.1			106			35
Mill Factor, %:								100.0			91.5			108.5			88.6
Mill Index, %:								101.2			92.8			108.5			86.1

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

TABLE V

IDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (continued)

Weight	Caliper,		Bursting		G. E.		Elmendorf Tear,									
	Max.	Min.	points	Av.	Strength,	p.s.i. gage	Puncture,	units	In	Across						
n. Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.				
Mill C -- 42-lb. Linerboard																
.4	43.6	15.1	13.8	14.3	134	88	107	38	32	35	432	320	375	432	368	406 ^a
.8	43.0	15.2	14.0	14.5	121	85	108	41	34	37	448	312	371	440	376	407 ^a
.0	43.0	14.0	13.0	13.5	145	92	115	38	32	35	368	328	351	432	352	403 ^a
.0	43.2	14.0	13.0	13.5	138	100	119	36	32	35	432	304	360	480	376	416 ^a
.8	42.6	14.3	13.3	14.0	131	96	114	37	31	35	392	320	357	456	352	406 ^a
.8	42.6	14.5	13.3	14.1	135	85	113	39	34	37	424	312	361	440	368	412 ^a
.2	43.3	15.0	13.8	14.4	130	95	111	38	32	36	400	328	378	440	392	420 ^a
.0	43.4	14.8	13.9	14.4	131	92	110	40	34	36	448	352	384	464	368	411 ^a
43.1			14.1			112		36					367		410	
42.8			13.9			106		37					371		416	
100.7			101.4			105.7		97.3					98.9		98.6	
100.0			101.4			105.7		100.0					98.7		101.2	

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

TABLE V

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units						
						lb.		Max.	Min.	Max.	Min.	Max.	Min.					
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	
Mill C -- 42-lb. Linerboard																		
153623	C-451	W.F.	3/17/53	3/ 6/53	1	45.0	42.4	43.6	15.1	13.8	14.3	134	88	107	38	32	35	4
153624	C-452	W.F.	3/17/53	3/ 6/53	1	44.4	41.8	43.0	15.2	14.0	14.5	121	85	108	41	34	37	4
153625	C-453	W.F.	3/17/53	3/ 7/53	1	43.8	42.0	43.0	14.0	13.0	13.5	145	92	115	38	32	35	3
153626	C-454	W.F.	3/17/53	3/ 7/53	1	44.2	42.0	43.2	14.0	13.0	13.5	138	100	119	36	32	35	4
153627	C-455	W.F.	3/17/53	3/ 8/53	1	43.8	41.8	42.6	14.3	13.3	14.0	131	96	114	37	31	35	3
153628	C-456	W.F.	3/17/53	3/ 8/53	1	43.6	41.8	42.6	14.5	13.3	14.1	135	85	113	39	34	37	4
153629	C-457	W.F.	3/17/53	3/10/53	1	44.2	42.2	43.3	15.0	13.8	14.4	130	95	111	38	32	36	4
153630	C-458	W.F.	3/17/53	3/10/53	1	44.2	42.0	43.4	14.8	13.9	14.4	131	92	110	40	34	36	4
Current Mill Average:								43.1			14.1			112			36	
Cumulative Mill Average:								42.8			13.9			106			37	
Mill Factor, %:								100.7			101.4			105.7			97.3	
Mill Index, %:								100.0			101.4			105.7			100.0	

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

TABLE VI

INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (continued)

Weight in. 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 D -- 42-lb. Linerboard										
2.8	44.0	13.5	12.2	12.9	140	91	115	44	36	40
1.4	42.4	13.0	11.5	12.4	135	92	111	40	33	37
2.8	44.4	14.0	12.7	13.4	126	83	106	40	35	38
2.2	43.6	13.8	13.0	13.4	130	69	107	45	37	41
3.8	44.5	13.5	12.1	13.0	131	86	105	42	36	39
2.4	43.6	13.3	11.5	12.6	135	81	113	43	34	40
2.2	43.4	13.9	12.0	13.1	131	88	109	43	35	39
4.0	44.8	13.1	12.0	12.5	142	88	116	43	36	39
2.2	43.4	13.8	13.0	13.4	131	87	112	41	34	38
2.4	43.8	14.9	13.1	13.9	130	81	101	45	33	40
2.2	44.0	14.0	12.3	13.2	136	81	107	43	34	39
43.8			13.1				109		39	
43.3			14.2				107		38	
101.2			92.3				101.9		102.6	
101.6			94.2				102.8		108.3	

TABLE VII.

Mill E -- 42-lb. Linerboard

1.0	41.0	13.6	12.0	12.8	132	91	111	35	29	32	464	312	377 ^a	424	312	347 ^a
.8	42.0	14.6	13.8	14.2	123	86	107	38	32	35	480	352	426 ^a	384	320	360 ^a
.8	42.7	15.1	14.0	14.6	136	91	114	38	31	34	464	360	404 ^a	432	352	388 ^a
	41.9		13.9				110			34			402			365
	43.1		14.1				103			36			400			396
	97.2		98.6				106.8			94.4			100.5			92.2
	97.2		100.0				103.8			94.4			108.1			90.1

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

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TABLE VI

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (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.			
Mill D -- 42-lb. Linerboard																	
153401	D-628	S.F.	3/ 2/53	2/21/53	4	44.6	42.8	44.0	13.5	12.2	12.9	140	91	115	44	36	40
153402	D-629	S.F.	3/ 2/53	2/22/53	4	43.0	41.4	42.4	13.0	11.5	12.4	135	92	111	40	33	37
153406	D-630	S.F.	3/ 2/53	2/23/53	4	45.6	42.8	44.4	14.0	12.7	13.4	126	83	106	40	35	38
153439	D-631	S.F.	3/ 3/53	3/ 1/53	4	44.6	42.2	43.6	13.8	13.0	13.4	130	69	107	45	37	41
153509	D-632	S.F.	3/ 9/53	3/ 5/53	4	45.8	43.8	44.5	13.5	12.1	13.0	131	86	105	42	36	39
153558	D-633	S.F.	3/11/53	3/ 8/53	4	44.8	42.4	43.6	13.3	11.5	12.6	135	81	113	43	34	40
153579	D-634	S.F.	3/12/53	3/ 9/53	4	44.4	42.2	43.4	13.9	12.0	13.1	131	88	109	43	35	39
153589	D-635	D.F.	3/13/53	3/10/53	4	45.8	44.0	44.8	13.1	12.0	12.5	142	88	116	43	36	39
153647	D-636	S.F.	3/19/53	3/14/53	4	44.2	42.2	43.4	13.8	13.0	13.4	131	87	112	41	34	38
153648	D-637	S.F.	3/19/53	3/15/53	4	45.0	42.4	43.8	14.9	13.1	13.9	130	81	101	45	33	40
153714	D-638	S.F.	3/27/53	3/23/53	4	45.6	42.2	44.0	14.0	12.3	13.2	136	81	107	43	34	39
Current Mill Average:								43.8			13.1			109			39
Cumulative Mill Average:								43.3			14.2			107			38
Mill Factor, %:								101.2			92.3			101.9			102.
Mill Index, %:								101.6			94.2			102.8			108.

TABLE-VII.

Mill E -- 42-lb. Linerboard

153413	E-345	W.F.	3/ 2/53	2/24/53	1	42.0	40.0	41.0	13.6	12.0	12.8	132	91	111	35	29	32
153414	E-346	---	3/ 2/53	2/25/53	1	42.4	41.8	42.0	14.6	13.8	14.2	123	86	107	38	32	35
153667	E-351	W.F.	3/20/53	3/17/53	1	44.0	41.8	42.7	15.1	14.0	14.6	136	91	114	38	31	34
Current Mill Average:						41.9											
Cumulative Mill Average:						43.1											
Mill Factor, %:						97.2											
Mill Index, %:						97.2											

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

TABLE VIII

INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (continued)

Weight, lb.	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.	Across			
Mill F -- 42-lb. Linerboard															
1.8	43.7	14.3	12.9	13.7	119	86	103	45	39	41	368	411 ^a	512	384	435 ^a
1.8	42.9	14.0	12.9	13.5	119	79	103	43	33	39	368	398 ^a	464	384	421 ^a
1.8	42.9	13.8	12.4	13.1	128	85	101	42	34	39	360	387 ^a	496	392	437 ^a
1.0	43.4	14.0	12.0	13.2	122	82	104	44	35	39	352	387 ^a	496	408	440 ^a
1.8	43.3	13.7	10.6	12.4	141	86	110	40	34	38	336	383 ^a	480	392	429 ^a
1.8	43.8	14.7	12.0	13.5	128	86	103	42	35	39	344	396 ^a	528	408	462 ^a
1.0	41.7	12.9	12.0	12.2	130	92	111	40	34	37	320	358 ^a	464	368	413 ^a
1.0	42.4	13.2	12.3	12.8	135	88	113	41	33	36	328	373 ^a	456	392	434 ^a
2.4	43.3	13.7	12.5	13.1	127	70	105	46	37	40	336	430 ^a	472	368	418 ^a
2.6	43.6	14.0	12.5	13.1	117	74	101	42	36	38	384	421 ^a	520	400	437 ^a
2.0	43.3	13.7	12.1	12.8	129	82	103	40	34	37	368	410 ^a	480	368	419 ^a
1.4	42.8	13.8	12.2	13.1	130	83	102	40	32	37	400	425 ^a	480	360	426 ^a
1.6	42.5	13.3	12.0	12.5	125	90	113	41	34	37	352	398 ^a	448	360	417 ^a
43.0			13.0				105		38			398		430	
43.3			14.2				105		39			389		428	
99.3			91.5				100.0		97.4			102.3		100.5	
99.8			93.5				99.1		105.6			107.0		106.2	

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

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TABLE VIII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (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.				
						Mill F -- 42-lb. Linerboard											
153590	F-6	W.F.	3/13/53	2/17/53	--	45.0	41.8	43.7	14.3	12.9	13.7	119	86	103	45	39	40
153591	F-7	W.F.	3/13/53	2/18/53	--	44.4	40.8	42.9	14.0	12.9	13.5	119	79	103	43	33	39
153592	F-8	W.F.	3/13/53	2/19/53	--	44.2	41.8	42.9	13.8	12.4	13.1	128	85	101	42	34	39
153605	F-9	W.F.	3/14/53	2/19/53	--	44.6	40.0	43.4	14.0	12.0	13.2	122	82	104	44	35	39
153593	F-10	W.F.	3/13/53	2/19/53	--	45.0	40.8	43.3	13.7	10.6	12.4	141	86	110	40	34	38
153594	F-11	W.F.	3/13/53	2/24/53	--	45.8	41.8	43.8	14.7	12.0	13.5	128	86	103	42	35	39
153660	F-12	W.F.	3/20/53	3/ 4/53	--	43.0	40.0	41.7	12.9	12.0	12.2	130	92	111	40	34	37
153661	F-13	W.F.	3/20/53	3/ 4/53	--	44.0	40.0	42.4	13.2	12.3	12.8	135	88	113	41	33	38
153662	F-14	W.F.	3/20/53	2/ 5/53	--	44.4	42.4	43.3	13.7	12.5	13.1	127	70	105	46	37	40
153663	F-15	W.F.	3/20/53	3/ 5/53	--	44.4	42.6	43.6	14.0	12.5	13.1	117	74	101	42	36	38
153664	F-16	W.F.	3/20/53	3/ 5/53	--	44.6	42.0	43.3	13.7	12.1	12.8	129	82	103	40	34	37
153665	F-17	W.F.	3/20/53	3/ 7/53	--	45.0	40.4	42.8	13.8	12.2	13.1	130	83	102	40	32	37
153666	F-18	W.F.	3/20/53	3/ 7/53	--	44.0	40.6	42.5	13.3	12.0	12.5	125	90	113	41	34	37
Current Mill Average:						43.0		13.0		105		38					
Cumulative Mill Average:						43.3		14.2		105		39					
Mill Factor, %:						99.3		91.5		100.0		97					
Mill Index, %:						99.8		93.5		99.1		105					

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

TABLE IX

DIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (continued)

s Weight, lb.	Caliper points		Bursting Strength		G. E. Puncture Units		Elmendorf Tear, g./sheet				Across					
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	In	Av.	Min.	Max.	Av.			
Mill G --- 42-lb. Linerboard																
42.8	43.8	12.3	10.9	11.7	139	89	112	38	33	35	432	280	346 ^a	440	320	373 ^a
41.8	42.9	13.3	11.9	12.7	120	75	101	37	33	35	392	328	359	432	328	383 ^a
44.0	44.2	13.0	11.9	12.4	120	86	105	40	35	37	424	320	364	448	352	409 ^a
42.6	43.4	13.1	12.0	12.6	122	69	99	42	34	38	408	304	365	496	368	401 ^a
41.8	42.4	13.3	12.0	12.5	141	81	110	38	29	35	424	288	329 ^a	424	328	379 ^a
41.6	42.2	13.0	12.0	12.4	131	66	108	38	32	34	352	264	328	416	336	374 ^a
43.0	43.7	13.4	12.1	12.7	128	85	109	35	30	33	376	304	338	408	344	375 ^a
42.8	44.0	13.8	11.7	12.6	132	85	114	34	30	32	392	200	325 ^a	400	328	365 ^a
42.2	43.1	13.7	12.7	13.2	151	91	117	41	34	36	392	312	352 ^a	432	376	405 ^a
43.6	44.4	13.8	12.0	13.0	141	91	119	42	34	39	448	328	371 ^a	440	376	405 ^a
43.4				12.6			109			35			348			387
43.0				13.9			107			36			360			394
100.9				90.6			101.9			97.2			96.7			98.2
100.7				90.6			102.8			97.2			93.5			95.6

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

TABLE IX

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (continued)

File No.	Mill Code	Pin- 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.			
Mill G --- 42-lb. Linerboard																	
153407	G-474	WFL	3/ 2/53	2/21/53	1	45.4	42.8	43.8	12.3	10.9	11.7	139	89	112	38	33	3
153408	G-475	WFL	3/ 2/53	2/21/53	1	43.8	41.8	42.9	13.3	11.9	12.7	120	75	101	37	33	3
153415	G-476	WFL	3/ 2/53	2/25/53	1	45.0	44.0	44.2	13.0	11.9	12.4	120	86	105	40	35	3
153416	G-477	WFL	3/ 2/53	2/25/53	1	44.0	42.6	43.4	13.1	12.0	12.6	122	69	99	42	34	3
153441	G-478	WFL	3/10/53	3/ 5/53	1	43.4	41.8	42.4	13.3	12.0	12.5	141	81	110	38	29	3
153542	G-479	WFL	3/10/53	3/ 5/53	1	43.0	41.6	42.2	13.0	12.0	12.4	131	66	108	38	32	3
153610	G-480	WFL	3/16/53	3/10/53	1	44.0	43.0	43.7	13.4	12.1	12.7	128	85	109	35	30	3
153611	G-481	WFL	3/16/53	3/10/53	1	44.6	42.8	44.0	13.8	11.7	12.6	132	85	114	34	30	3
153708	G-482	WFL	3/25/53	3/20/53	1	44.0	42.2	43.1	13.7	12.7	13.2	151	91	117	41	34	3
153709	G-483	WFL	3/25/53	3/20/53	1	45.8	43.6	44.4	13.8	12.0	13.0	141	91	119	42	34	3
Current Mill Average:						43.4		12.6		109		33					
Cumulative Mill Average:						43.0		13.9		107		33					
Mill Factor, %:						100.9		90.6		101.9		97					
Mill Index, %:						100.7		90.6		102.8		97					

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

TABLE X

INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (continued)

Basis Weight lb.		Caliper points		Bursting Strength P.s.i. gage		G. E. puncture, Units		Elmendorf Tear,									
								g./sheet									
. . Min. Av.		Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.				
Mill H -- 42-lb. Linerboard																	
0	42.4	43.2	12.7	11.5	12.2	137	80	111	38	31	35	424	280	356	456	360	403 ^a
6	42.8	43.9	13.1	12.4	12.8	140	76	103	40	34	37	384	288	339	448	352	404 ^a
4	42.0	43.4	12.9	11.9	12.2	136	80	110	39	31	35	416	304	360	528	336	413 ^a
4	41.6	42.6	12.9	12.0	12.3	132	89	106	38	30	35	392	304	343	416	344	381 ^a
0	41.6	42.1	12.8	11.9	12.2	123	88	108	37	30	34	416	312	349	472	368	409 ^a
0	41.6	42.3	12.8	12.0	12.2	130	80	106	36	30	33	416	280	343	448	360	405 ^a
4	42.0	42.5	12.8	12.0	12.3	123	89	106	36	30	33	376	320	341	432	320	390 ^a
5	41.6	42.5	12.4	11.6	12.1	136	81	109	36	30	33	392	296	341	432	328	391 ^a
	42.8				12.3			107			34			346			400
	43.0				13.7			106			35			378			406
	99.5				89.8			100.9			97.1			91.5			98.5
	99.3				88.5			100.9			94.4			93.0			98.8
are specimens which tore beyond the 3/8-inch limit.																	

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

TABLE XI

MILL I -- 42-lb. Linerboard

0	42.2	42.8	14.2	13.2	13.8	126	89	112	36	32	33	376	304	347	424	360	393 ^a
5	42.2	43.2	14.4	13.0	13.8	127	87	114	32	28	31	384	280	329 ^a	432	368	387 ^a
3	42.2	43.1	13.3	12.7	13.0	131	97	110	34	29	31	392	280	340	408	368	378 ^a
3	41.8	43.1	13.4	12.7	13.0	131	100	114	36	29	31	392	312	341 ^a	408	344	381 ^a
0	42.0	42.3	13.5	12.5	13.1	124	86	106	34	30	32	400	296	337 ^a	416	352	385 ^a
5	41.6	42.4	13.7	12.1	13.0	125	90	110	36	31	33	376	272	337	440	344	391 ^a
5	42.0	42.6	13.8	12.8	13.1	132	100	110	36	30	33	392	288	344 ^a	504	368	419 ^a
0	42.0	42.4	13.8	12.7	13.1	123	90	108	35	32	33	416	272	335 ^a	424	352	383 ^a
																	390
																	399
																	97.7
																	96.3

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

TABLE X

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mchk. No.	Basis Weight lb.		Caliper points	Bursting Strength p.s.i. gage		G. E. puncture, Units						
						Max.	Min.		Max.	Min.	Max.	Min.					
Mill H -- 42-lb. Linerboard																	
153404	H-383	WF1S	3/ 2/53	2/17/53	2	44.0	42.4	43.2	12.7	11.5	12.2	137	80	111	38	31	35
153405	H-384	WF1S	3/ 2/53	2/18/53	2	44.6	42.8	43.9	13.1	12.4	12.8	140	76	103	40	34	37
153510	H-385	WF1S	3/ 9/53	3/ 1/53	2	44.4	42.0	43.4	12.9	11.9	12.2	136	80	110	39	31	35
153511	H-386	WF1S	3/ 9/53	3/ 2/53	2	43.4	41.6	42.6	12.9	12.0	12.3	132	89	106	38	30	35
153649	H-387	WF1S	3/19/53	3/ 9/53	2	43.0	41.6	42.1	12.8	11.9	12.2	123	88	108	37	30	34
153650	H-388	WF1S	3/19/53	3/10/53	2	43.0	41.6	42.3	12.8	12.0	12.2	130	80	106	36	30	33
153679	H-389	WF1S	3/23/53	3/16/53	2	43.4	42.0	42.5	12.8	12.0	12.3	123	89	106	36	39	33
153680	H-390	WF1S	3/23/53	3/17/53	2	43.6	41.6	42.5	12.4	11.6	12.1	136	81	109	36	30	33
Current Mill Average:						42.8		12.3		107		34					
Cumulative Mill Average:						43.0		13.7		106		35					
Mill Factor, %:						99.5		89.8		100.9		97.					
Mill Index, %:						99.3		88.5		100.9		94.					
This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.																	

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

TABLE XI

MILL I -- 42-lb. Linerboard

153543	I-276	WF1S	3/10/53	3/ 3/53	1	44.0	42.2	42.8	14.2	13.2	13.8	126	89	112	36	32	33
153612	I-277	WF1S	3/16/53	3/10/53	1	43.6	42.2	43.2	14.4	13.0	13.8	127	87	114	32	28	31
153613	I-278	WF1S	3/16/53	3/10/53	1	43.8	42.2	43.1	13.3	12.7	13.0	131	97	110	34	29	31
153614	I-279	WF1S	3/16/53	3/11/53	1	43.8	41.8	43.1	13.4	12.7	13.0	131	100	114	36	29	31
153615	I-280	WF1S	3/16/53	3/11/53	1	43.0	42.0	42.3	13.5	12.5	13.1	124	86	106	34	30	32
153672	I-281	WF1S	3/21/53	3/14/53	1	43.6	41.6	42.4	13.7	12.1	13.0	125	90	110	36	31	33
153673	I-282	WF1S	3/21/53	3/16/53	1	43.6	42.0	42.6	13.8	12.8	13.1	132	100	110	36	30	33
153674	I-283	WF1S	3/21/53	3/16/53	1	43.0	42.0	42.4	13.8	12.7	13.1	123	90	108	35	32	33
Current Mill Average:								42.7			13.2			110			32
Cumulative Mill Average:								42.9			13.4			106			33
Mill Factor, %:								99.5			98.5			103.8			97.0
Mill Index, %:								99.1			95.0			103.8			88.5

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

TABLE XII

INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1953 (continued)

Weight,		Caliper,		Bursting		G. E.		Elmendorf Tear,								
lb.		points		Strength,		Puncture,		In	Across							
Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.					
<u>Mill J--42-lb. Linerboard</u>																
42.0	43.0	13.7	12.8	13.1	133	100	116	36	32	34	440	312	361 ^a	448	320	383 ^a
42.0	42.6	13.7	12.7	13.1	134	88	116	37	32	34	440	312	372	432	344	376 ^a
40.2	41.3	13.4	12.8	13.0	126	91	107	34	30	32	464	328	372 ^a	472	336	381 ^a
40.0	41.0	13.5	12.5	12.9	120	82	106	36	30	32	440	296	361 ^a	432	336	383 ^a
42.0	42.8	13.8	13.0	13.3	131	74	105	37	31	34	448	320	377 ^a	432	352	391 ^a
42.2	42.8	13.3	12.8	13.1	124	75	105	37	30	33	440	312	368 ^a	480	352	403 ^a
41.8	42.4	13.8	13.0	13.3	125	92	108	33	30	32	416	280	339 ^a	408	320	355 ^a
42.0	42.2	13.7	13.0	13.2	130	96	111	36	30	33	400	288	352 ^a	432	344	386 ^a
42.3				13.2			109			33			363			382
42.8				13.8			106			32			353			375
98.8				95.7			102.8			103.1			102.8			101.9
98.1				95.0			102.8			91.7			97.6			94.3

TABLE XIII

Mill K--42-lb. Linerboard

No samples submitted.

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

TABLE XII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (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.			
<u>Mill J--42--lb. Linerboard</u>																	
1 411	J-409	B.F.	3/ 2/53	2/16/53	—	43.8	42.0	43.0	13.7	12.8	13.1	133	100	116	36	32	34
153412	J-410	B.F.	3/ 2/53	2/16/53	—	43.0	42.0	42.6	13.7	12.7	13.1	134	88	116	37	32	34
153512	J-411	B.F.	3/ 9/53	2/24/53	—	42.0	40.2	41.3	13.4	12.8	13.0	126	91	107	34	30	32
153513	J-412	B.F.	3/ 9/53	1/24/53	—	41.8	40.0	41.0	13.5	12.5	12.9	120	82	106	36	30	32
153644	J-413	B.F.	3/18/53	3/ 2/53	—	44.0	42.0	42.8	13.8	13.0	13.3	131	74	105	37	31	34
153645	J-414	B.F.	3/18/53	3/ 2/53	—	44.2	42.2	42.8	13.3	12.8	13.1	124	75	105	37	30	33
153720	J-415	B.F.	3/27/53	3/11/53	1	43.2	41.8	42.4	13.8	13.0	13.3	125	92	108	33	30	32
153721	J-416	B.F.	3/27/53	3/11/53	1	42.6	42.0	42.2	13.7	13.0	13.2	130	96	111	36	30	33
Current Mill Average:						42.3		13.2		109		33					
Cumulative Mill Average:						42.8		13.8		106		32					
Mill Factor, %:						98.8		95.7		102.8		103.1					
Mill Index, %:						98.1		95.0		102.8		91.7					

TABLE XIII

Mill K--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 XIV
OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1953 (continued)

Weight, b. Min.	Av.	Caliper, points Max.	Min.	Av.	Bursting Strength, p.s.i. Max.	Min.	Av.	G.E. Puncture, units Max.	Min.	Av.	Max.	Min.	In Elmendorf Tear, g./sheet Max.	Min.	Av.	
																Across
Mill L-42-1b. Linerboard																
3.0	43.9	15.0	13.9	14.3	135	95	116	40	34	37	416	320	379	456	376	411 ^a
0.4	41.9	14.9	13.0	13.9	121	91	106	38	32	35	384	320	353 ^a	416	336	380 ^a
.0	43.0	13.9	12.1	12.9	128	78	101	40	32	36	408	296	357	432	344	379 ^a
2.2	43.1	14.1	12.3	13.0	132	83	110	38	34	36	376	296	345 ^a	416	344	385 ^a
43.0				13.5			108			36			359		389	
43.0				13.7			106			36			361		391	
100.0				98.5			101.9			100.0			99.4		99.5	
99.8				97.1			101.9			100.0			96.5		96.0	

TABLE XV

Mill M—42-1b. Linerboard

4.4	43.2	14.2	13.4	13.9	133	106	119	38	34	36	456	384	417 ^a	424	384	405 ^a
4.4	43.4	14.6	13.2	14.0	146	88	113	40	33	36	480	320	382	512	368	417 ^a
4.2	43.9	14.1	13.2	13.8	135	75	116	38	33	36	416	352	377 ^a	456	400	437 ^a
4.2	43.1	13.8	13.0	13.4	144	90	122	35	30	33	440	312	366 ^a	480	384	415 ^a
43.4				13.7			118			35			386		418	
42.8				13.7			106			36			388		403	
101.4				100.0			111.3			97.2			99.5		103.7	
100.7				98.6			111.3			97.2			103.8		103.2	

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

TABLE XIV

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1953 (continue)

File No.	Mill Code	Finish	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.			
Mill L-42-lb. Linerboard																	
153435	L-155		3/ 3/53	1/11/53	1	44.4	43.0	43.9	15.0	13.9	14.3	135	95	116	40	34	37
153436	L-156		3/ 3/53	1/17/53	1	43.0	40.4	41.9	14.9	13.0	13.9	121	91	106	38	32	35
153437	L-157		3/3/ 53	2/ 4/53	1	44.2	42.0	43.0	13.9	12.1	12.9	128	78	101	40	32	36
153438	L-158		3/ 3/53	2/ 5/53	1	43.8	42.2	43.1	14.1	12.3	13.0	132	83	110	38	34	36
Current Mill Average:								43.0			13.5			108			36
Cumulative Mill Average:								43.0			13.7			106			36
Mill Factor, %:								100.0			98.5			101.9			100.0
Mill Index, %:								99.8			97.1			101.9			100.0

TABLE XV

Mill M-42-lb. Linerboard

153417	M-149	W.	3/ 2/53	2/17/53	4	44.0	42.4	43.2	14.2	13.4	13.9	133	106	119	38	34	36
153418	M-150	W.	3/ 2/53	2/17/53	2	45.0	42.4	43.4	14.6	13.2	14.0	146	88	113	40	33	36
153455	M-151	W.	3/ 4/53	2/24/53	4	45.0	42.2	43.9	14.1	13.2	13.8	135	75	116	38	33	36
153456	M-152	W.	3/ 4/53	2/25/53	2	44.8	42.2	43.1	13.8	13.0	13.4	144	90	122	35	30	33
Current Mill Average:						43.4		13.7		118		35					
Cumulative Mill Average:						42.8		13.7		106		36					
Mill Factor, %:						101.4		100.0		111.3		97.2					
Mill Index, %:						100.7		98.6		111.3		97.2					

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

TABLE XVI

INDIVIDUAL TLSF LOTS--MARCH 1 THROUGH MARCH 31, 1953 (continued)

Weight, lb. in.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		Av.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Mill E -- 44/46-lb. Drum Linerboard										
3.6	44.9	15.0	13.8	14.4	118	74	93	40	33	37
6.8	47.8	16.0	14.8	15.4	122	95	109	40	34	37
6.0	47.5	15.8	14.2	15.1	126	94	111	41	36	38
5.0	47.0	15.5	14.0	14.8	123	80	103	40	34	38
5.0	46.9	15.9	14.8	15.3	111	71	93	38	34	36
4.2	45.6	17.0	15.1	16.1	138	93	115	40	36	38
	46.6		15.2				104		37	
	47.2		14.3				101		40	
	98.7		106.3				103.0		92.5	
									100.9	
									444	
									440	
									405	
									418	
									96.9	

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

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TABLE XVI

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i.		G. E. Puncture, units					
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.			
Mill E -- 44/46-lb. Drum Linerboard																	
153403	E-344	W.F.	3/ 2/53	2/20/53	1	46.0	43.6	44.9	15.0	13.8	14.4	118	74	93	40	33	37
153514	E-347	---	3/ 9/53	3/ 4/53	1	49.6	46.8	47.8	16.0	14.8	15.4	122	95	109	40	34	37
153515	E-348 ^b	---	3/ 9/53	3/ 5/53	1	48.4	46.0	47.5	15.8	14.2	15.1	126	94	111	41	36	36
153606	E-349 ^b	---	3/14/53	3/11/53	1	48.0	46.0	47.0	15.5	14.0	14.8	123	80	103	40	34	38
153609	E-350 ^b	W.F.	3/16/53	3/12/53	1	48.0	46.0	46.9	15.9	14.8	15.3	111	71	93	38	34	36
153668	E-352	W.F.	3/20/53	3/18/53	1	46.4	44.2	45.6	17.0	15.1	16.1	138	93	115	40	36	38
Current Mill Average:						46.6		15.2		104		37					
Cumulative Mill Average:						47.2		14.3		101		40					
Mill Factor, ^a :						98.7		106.3		103.0		92.5					

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.^bThis sample was identified as 47-lb. Drum Linerboard

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		None		32-76	48-83	--
B	39-68	69-76	0.5	50	70	24-96
C	50	73	48-96	50	73	2-6
D	30-32	77-78	8	50-53	71-72	16
E		None		41-46	78-80	--
F		None		41-65	70-78	48
G		None		50	73	24-72
H		None		50	73	24
I		None		21-44	72-88	--
J		None		50	72	0.5
K	No samples submitted.					
L		None		47-61	80-84	--
M		None		27-62	76-80	--
E*		None		46-73	72-78	--

* 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 Table 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 three 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 E and H are higher than those for the Institute, whereas the results for Mills A, B, D, F, I, J, L, and M are lower, and the results for Mills C and G are 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 eight per cent. Compared with the values for the Institute, the average results for Mills A, B, C, D, E, F, I, J, L, and M are lower while the average results for Mills G and H are the same. The accord between Institute and mill caliper values is good with the exception of Mills E and M.

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

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

It may be seen in Table XIX that the average machine direction tear results for all mills are lower than those for the Institute. The maximum variation for the current period is twenty per cent. The differences encountered for Mills B, E, L, and M appear to be excessive.

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

higher than those for the Institute whereas the average results for the other mills are lower. The maximum variation for the current period is fifteen per cent. Only the difference for Mill E appears to be excessive.

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

No. Samples Compared	Mills*											
	A	B	C	D	E	F	G	H	I	J	L	M
	12	16	8	11	3	13	10	8	8	8	4	4
<u>Basis Weight</u>												
Institute	43.3	43.6	43.1	43.8	41.9	43.0	43.4	42.8	42.7	42.3	43.0	43.4
Mill	42.9	43.2	43.1	43.4	42.1	42.9	43.4	43.3	42.5	42.2	42.6	42.3
Av. Diff.**	-0.4	-0.4	0.0	-0.4	+0.2	-0.1	0.0	+0.5	-0.2	-0.1	-0.4	-1.1
Max. Diff.***	-1.3	-0.6	+0.3	-1.0	+0.8	-0.9	-0.4	+1.0	-0.7	-0.5	-0.6	-1.5
<u>Caliper</u>												
Institute	12.6	12.9	14.1	13.1	13.9	13.0	12.6	12.3	13.2	13.2	13.5	13.7
Mill	12.4	12.8	13.4	12.7	12.8	12.5	12.6	12.3	12.8	13.1	13.0	12.9
Av. Diff.**	-0.2	-0.1	-0.7	-0.4	-1.1	-0.5	0.0	0.0	-0.4	-0.1	-0.5	-0.8
Max. Diff.***	-0.5	-0.5	-0.9	-0.5	-1.5	-1.0	+0.5	-0.2	-0.6	+0.2	-0.8	-1.0
<u>Bursting Strength</u>												
Institute	111	115	112	109	110	105	109	107	110	109	108	118
Mill	113	113	113	108	101	111	113	107	109	108	109	121
Av. Diff.**	+2	-2	+1	-1	-9	+6	+4	0	-1	-1	+1	+3
Max. Diff.***	+6	-7	+4	-5	-12	+10	+14	-5	-7	-3	+5	+7
<u>G. E. Puncture</u>												
Institute	34	31	36	39	34	38	35	34	32	33	36	35
Mill	33	27	34	--	32	41	37	34	29	33	--	34
Av. Diff.**	-1	-4	-2	--	-2	+3	+2	0	-3	0	--	-1
Max. Diff.***	-5	-7	-4	--	-5	+5	-6	-4	-5	+2	--	-4
<u>Tearing Strength, in</u>												
Institute	343	323	367	386	402	398	348	346	339	363	359	386
Mill	333	276	356	382	322	382	327	325	324	356	307	347
Av. Diff.**	-10	-47	-11	-4	-80	-16	-21	-21	-15	-7	-52	-39
Max. Diff.***	-39	-95	-24	-38	-141	-62	-60	-37	-45	-27	-74	-89
<u>Tearing Strength, across</u>												
Institute	391	371	410	431	365	430	387	400	390	382	389	418
Mill	379	346	420	442	312	431	377	376	389	397	362	400
Av. Diff.**	-12	-25	+10	+11	-53	+1	-10	-24	-1	+15	-27	-18
Max. Diff.***	-28	-47	+22	+36	-83	+48	-38	-40	+27	+33	-39	-52

* 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

	Average Difference, per cent					
	Basis Weight	Caliper	Bursting Strength	G. E. Puncture	Tearing In	Strength Across
Mill A						
Current period	-0.9	-2	+2.	-3	-3	-3
68th period	-1	-2	+2	+3	+1	-0.3
67th period	-0.5	-2	+0.9	0	-3	-5
Mill B						
Current period	-0.9	-0.8	-2	-13	-15	-7
68th period	-0.7	-2	-0.9	-10	-6	-0.3
67th period	-0.7	0	-0.9	-14	-6	-6
Mill C						
Current period	0	-5	+0.9	-6	-3	+2
68th period	-0.5	-3	+2	-3	-2	+1
67th period	0	-3	+0.9	-3	+0.9	+5
Mill D						
Current period	-0.9	-3	-0.9	--	-1	+3
68th period	-1	-3	-2	--	-0.3	+3
67th period	-0.7	-2	0	--	-6	+2
Mill E						
Current period	+0.5	-8	-8	-6	-20	-15
68th period	+0.5	-7	-8	-3	-10	-6
67th period	-0.2	-9	-9	+15	-17	-17
Mill F						
Current period	-0.2	-4	+6	+8	-4	+0.2
68th period	-0.5	-3	+6	+5	-7	-4
67th period	-0.9	-4	-2	+11	-6	+0.5
Mill G						
Current period	0	0	+4	+6	-6	-3
68th period	+0.2	0	-2	+9	-5	-0.8
67th period	-0.5	-2	+1	+15	-8	-5
Mill H						
Current period	+1	0	0	0	-6	-6
68th period	+1	-0.8	0	-3	-4	-4
67th period	0	-3	+4	-3	-8	-5
Mill I						
Current period	-0.5	-3	-0.9	-9	-4	-0.3
68th period	-1	-4	0	-12	+2	+6
67th period	-2	-3	-0.9	-6	-2	+2
Mill J						
Current period	-0.2	-0.8	-0.9	0	-2	+4
68th period	0	-0.8	-3	-3	+0.3	+3
67th period	0	0	-6	+3	-1	+2
Mill L						
Current period	-0.9	-4	+0.9	--	-14	-7
68th period	-0.2	-5	+4	--	-7	-4
67th period	-2	+0.8	+0.9	--	-5	-0.8
Mill M						
Current period	-3	-6	+3	-3	-10	-4
68th period	-1	-4	+4	-9	-2	+5
67th period	-1	-4	+5	-11	+6	+8

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953

Institute Data <u>versus</u> Mill Data															
ht,	Caliper, points	IPC	Mill	Diff.	Bursting Strength,		IPC	Mill	Diff.	G. E. Puncture, units	Elmendorf Tear,				
					p.s.i. gage	IPC					IPC	IPC	g./sheet	In	Across
Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.			
<u>Mill A-42-lb. Linerboard</u>															
-0.6	12.8	12.3	-0.5	109	112	+ 3	36	31	- 5	335	306	-29	395 ^a	372	-23
-0.9	12.7	12.4	-0.3	106	109	+ 3	37	32	- 5	348 ^a	335	-13	403 ^a	377	-26
-0.3	12.2	12.0	-0.2	114	113	- 1	34	33	- 1	348 ^a	355	+ 7	387 ^a	395	+ 8
-0.4	12.5	12.2	-0.3	111	113	+ 2	33	32	- 1	331	362	+31	378 ^a	393	+15
-0.2	12.6	12.6	0.0	110	114	+ 4	33	32	- 1	339 ^a	330	- 9	399 ^a	371	-28
-0.2	12.8	12.7	-0.1	108	113	+ 5	36	34	- 2	339	308	-31	401 ^a	378	-23
-0.2	13.2	12.9	-0.3	112	114	+ 2	32	33	+ 1	331	333	+ 2	385 ^a	379	- 6
-0.1	12.9	12.7	-0.2	113	117	+ 4	33	32	- 1	340	346	+ 6	388 ^a	389	+ 1
-1.3	12.8	12.6	-0.2	115	114	- 1	33	34	+ 1	372 ^a	333	-39	409 ^a	381	-28
-1.2	12.8	12.6	-0.2	119	114	- 5	33	34	+ 1	370	336	-34	401 ^a	377	-24
+0.2	12.4	12.1	-0.3	112	114	+ 2	32	35	+ 3	345	330	-15	379 ^a	373	- 6
+0.1	12.2	12.0	-0.2	107	113	+ 6	30	34	+ 4	323 ^a	321	- 2	370 ^a	359	-11
-0.4	12.6	12.4	-0.2	111	113	+ 2	34	33	- 1	343	333	-10	391	379	-12

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

lated from the totals of the individual readings.

TABLE XX

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1953

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Diff.	Bursting Strength, p.s.i. gage		G. E. Puncture, units		
					IPC	Mill	IPC	Mill		IPC Mill Diff.	IPC Mill Diff.			
<u>Mill A-42-lb. Linerboard</u>														
153409	A-422	WF1S	2/ 8/53	2	43.5	42.9	12.8	12.3	-0.5	109	112	31	- 5	3
153410	A-423	WF1S	2/14/53	2	43.7	42.8	12.7	12.4	-0.3	106	109	32	- 5	3
153461	A-424	WF1S	2/18/53	1	43.7	43.4	12.2	12.0	-0.2	114	113	33	- 1	3
153462	A-425	WF1S	2/20/53	2	42.7	42.3	12.5	12.2	-0.3	111	113	32	- 1	3
153463	A-426	WF1S	2/23/53	2	42.6	42.4	12.6	12.6	0.0	110	114	33	- 1	3
153464	A-427	WF1S	2/23/53	2	43.6	43.4	12.8	12.7	-0.1	108	113	34	- 2	3
153574	A-428	WF1S	3/ 3/53	2	42.9	42.7	13.2	12.9	-0.3	112	114	33	+ 1	3
153575	A-429	WF1S	3/ 3/53	2	43.0	42.9	12.9	12.7	-0.2	113	117	32	- 1	3
153607	A-430	WF1S	3/ 9/53	2	44.2	42.9	12.8	12.6	-0.2	115	114	33	+ 1	3
153608	A-431	WF1S	3/ 9/53	2	44.1	42.9	12.8	12.6	-0.2	119	114	34	+ 1	3
153670	A-432	WF1S	3/15/53	2	43.0	43.2	12.4	12.1	-0.3	112	114	32	+ 3	3
153671	A-433	WF1S	3/15/53	1	42.7	42.8	12.2	12.0	-0.2	107	113	30	+ 4	3
Current Mill Average:					43.3	42.9	12.6	12.4	-0.2	111	113	33	- 1	3

^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 XXI

INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (continued)

Institute Data versus Mill Data

t, ff.	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.	
	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC
Mill B--42-1b. Linerboard																
.2	12.6	12.3	-0.3	113	107	-6	31	27	-4	305	289	-16	365 ^a	334	-31	
.0	12.6	12.4	-0.2	113	107	-6	30	27	-3	299	286	-13	361 ^a	351	-10	
.6	12.8	12.5	-0.3	114	107	-7	30	26	-4	311	279	-32	366 ^a	343	-23	
.3	12.5	12.4	-0.1	113	107	-6	31	27	-4	319	303	-16	359 ^a	357	-2	
.4	13.3	13.3	0.0	117	114	=3	33	30	-3	339 ^a	272	-67	379 ^a	349	-30	
.3	13.2	13.2	0.0	115	113	=2	32	28	-4	353	258	-95	367 ^a	327	-40	
.6	13.3	13.2	-0.1	118	114	-4	32	28	-4	347	267	-80	380 ^a	345	-35	
.6	13.2	13.2	0.0	115	113	=2	33	28	-5	346 ^a	283	-63	368 ^a	365	-3	
.5	13.2	13.4	+0.2	120	118	-2	33	28	-5	317 ^a	286	-31	360 ^a	349	-11	
.2	13.1	13.4	+0.3	117	117	0	34	27	-7	327 ^a	293	-34	375 ^a	363	-12	
.5	13.3	13.4	+0.1	114	116	+2	34	27	-7	353	296	-57	383 ^a	367	-16	
.6	13.3	13.4	+0.1	116	118	+2	34	27	-7	341	298	-43	393 ^a	366	-27	
.1	12.5	12.2	-0.3	114	113	-1	29	27	-2	299 ^a	257	-42	358 ^a	325	-33	
.4	12.6	12.2	-0.4	113	116	+3	28	26	-2	304	251	-53	364 ^a	333	-31	
.5	12.6	12.2	-0.4	110	114	+4	28	24	-4	317	255	-62	377 ^a	330	-47	
.6	12.6	12.1	-0.5	113	114	+1	28	24	-4	294 ^a	247	-47	379 ^a	335	-44	
.4	12.9	12.8	-0.1	115	113	-2	31	27	-4	323	276	-47	371	346	-25	

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

ated from the totals of the individual readings.

TABLE XXI

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1953 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fish	Date Made	Mch. Nq.	Basis Weight, lb.		Caliper, points	Bursting Strength, p.s.i. gage		G. E. Puncture, units						
					IPC	Mill		Diff.	IPC		Mill	Diff.				
153451	B-751	WF1S	2/16/53	1	43.3	43.1	-0.2	12.6	12.3	-0.3	113	107	31	27	-4	305
153452	B-752	WF1S	2/16/53	1	43.0	43.0	0.0	12.6	12.4	-0.2	113	107	30	27	-3	299
153453	B-753	WF1S	2/16/53	1	43.5	42.9	-0.6	12.8	12.5	-0.3	114	107	30	26	-4	311
153454	B-754	WF1S	2/16/53	1	43.4	43.1	-0.3	12.5	12.4	-0.1	113	107	31	27	-4	319
153501	B-755	WF1S	2/25/53	1	44.3	43.9	-0.4	13.3	13.3	0.0	117	114	33	30	-3	339 ^a
153502	B-756	WF1S	2/25/53	1	43.9	43.6	-0.3	13.2	13.2	0.0	115	113	32	28	-4	353
153503	B-757	WF1S	2/25/53	1	44.2	43.6	-0.6	13.3	13.2	-0.1	118	114	32	28	-4	347
153504	B-758	WF1S	2/25/53	1	44.0	43.4	-0.6	13.2	13.2	0.0	115	113	33	28	-5	346
153505	Bp759	WF1S	2/25/53	1	44.2	43.7	-0.5	13.2	13.4	+0.2	120	118	33	28	-5	317 ^a
153506	B-760	WF1S	2/25/53	1	43.9	43.7	-0.2	13.1	13.4	+0.3	117	117	34	27	-7	327 ^a
153507	B-761	WF1S	2/25/53	1	44.3	43.8	-0.5	13.3	13.4	+0.1	114	116	34	27	-7	353
153508	B-762	WF1S	2/25/53	1	44.2	43.6	-0.6	13.3	13.4	+0.1	116	118	34	27	-7	341
153601	B-763	WF1S	3/ 3/53	1	42.4	42.3	-0.1	12.5	12.2	-0.3	114	113	29	27	-2	299 ^a
153602	B-764	WF1S	3/ 3/53	1	42.8	42.4	-0.4	12.6	12.2	-0.4	113	116	28	26	-2	304
153603	B-765	WF1S	3/ 3/53	1	42.8	42.3	-0.5	12.6	12.2	-0.4	110	114	28	24	-4	317
153604	B-766	WF1S	3/ 3/53	1	43.2	42.6	-0.6	12.6	12.1	-0.5	113	114	28	24	-4	294 ^a
Current Mill Average:					43.6	43.2	-0.4	12.9	12.8	-0.1	115	113	31	27	-4	323

^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.

Institute Data versus Mill Data

Mill C-42-lb. Linerboard

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

ated from the totals of the individual readings.

SUMMARY OF INDIVIDUAL TEST LOTS- MARCH 1 THROUGH MARCH 31, 1953 (continued)

TABLE VIII

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Diff.	Bursting Strength, p.s.i. gage		G. E. Puncture, units		
					IPC	Mill	IPC	Mill		IPC	Mill	IPC	Mill	
Mill C-42-lb. Linerboard														
153623	C-451	W.F.	3/ 6/53	1	43.6	43.5	14.3	14.0	-0.3	107	111	+4	35	31
153624	C-452	W.F.	3/ 6/53	1	43.0	43.2	14.5	13.6	-0.9	108	112	+4	37	34
153625	C-453	W.F.	3/ 7/53	1	43.0	42.9	13.5	12.9	-0.6	115	116	+1	35	33
153626	C-454	W.F.	3/ 7/53	1	43.2	43.3	13.5	12.8	-0.7	119	118	-1	35	33
153627	C-455	W.F.	3/ 8/53	1	42.6	42.5	14.0	13.5	-0.5	114	117	+3	35	34
153628	C-456	W.F.	3/ 8/53	1	42.6	42.4	14.1	13.2	-0.9	113	115	+2	37	33
153629	C-457	W.F.	3/10/53	1	43.3	43.4	14.4	13.6	-0.8	111	109	-2	36	37
153630	C-458	W.F.	3/10/53	1	43.4	43.7	14.4	13.9	-0.5	110	110	0	36	37
Current Mill Average:					43.1	43.1	14.1	13.4	-0.7	112	113	+1	36	34
														-2

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.

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1953 (cont.)

TABLE XXIII

Institute Data versus Mill Data

File No.	Mill Code	Finish	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.		
Mill D—42-lb. Linerboard														
153401	D-628	S.F.	2/21/53	4	44.0	43.0	-1.0	12.9	12.4	-0.5	115	110	- 5	40
153402	D-629	S.F.	2/22/53	4	42.4	41.7	-0.7	12.4	12.1	-0.3	111	106	- 5	37
153406	D-630	S.F.	2/23/53	4	44.4	43.5	-0.9	13.4	12.9	-0.5	106	108	+ 2	38
153439	D-631	S.F.	3/ 1/53	4	43.6	43.2	-0.4	13.4	13.0	-0.4	107	104	- 3	41
153509	D-632	S.F.	3/ 5/53	4	44.5	44.2	-0.3	13.0	12.7	-0.3	105	108	+ 3	39
153558	D-633	S.F.	3/ 8/53	4	43.6	43.3	-0.3	12.6	12.3	-0.3	113	111	- 2	40
153579	D-634	S.F.	3/ 9/53	4	43.4	43.5	+0.1	13.1	12.7	-0.4	109	111	+ 2	39
153589	D-635	D.F.	3/10/53	4	44.8	44.7	-0.1	12.5	12.4	-0.1	116	113	- 3	39
153647	D-636	S.F.	3/14/53	4	43.4	43.5	+0.1	13.4	13.0	-0.4	112	109	- 3	38
153648	D-637	S.F.	3/15/53	4	43.8	43.2	-0.6	13.9	13.5	-0.4	101	101	0	40
153714	D-638	S.F.	3/23/53	4	44.0	43.7	-0.3	13.2	13.0	-0.2	107	107	0	39
Current Mill Average:					43.8	43.4	-0.4	13.1	12.7	-0.4	109	108	- 1	39

TABLE XXIV

Mill E—42-lb. Linerboard

153413	E-345	W.F.	2/24/53	1	41.0	41.8	+0.8	12.8	12.0	-0.8	111	106	32	34	+2	3'
153414	E-346	—	2/25/53	1	42.0	41.2	-0.8	14.2	12.7	-1.5	107	95	35	30	-5	4
153667	E-351	W.F.	3/17/53	1	42.7	43.2	+0.5	14.6	13.6	-1.0	114	102	34	32	-2	4'
Current Mill Average:					41.9	42.1	+0.2	13.9	12.8	-1.1	110	101	34	32	-2	4'

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 XXV

F INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1953 (continued)

Institute Data versus Mill Data

Lot	Caliper, points		Diff.	Bursting Strength, p.s.i. gage		IPC Mill Diff.	G.E. Puncture, units		IPC Mill Diff.	Elmendorf Tear, g./sheet		IPC Mill Diff.			
	IPC	Mill		IPC	Mill		In	Across							
<u>Mill F--42-lb. Linerboard</u>															
18	13.7	13.1	-0.6	103	109	+ 6	41	40	-1	411a	431	+20	435 ^a	483	+48
14	13.5	12.9	-0.6	103	110	+ 7	39	41	+2	398a	388	-10	421a	449	+28
15	13.1	12.9	-0.2	101	106	+ 5	39	42	+3	387 ^a	400	+13	437 ^a	451	+14
14	13.2	12.8	-0.4	104	107	+ 3	39	41	+2	387 ^a	376	-11	440 ^a	425	-15
14	12.4	12.0	-0.4	110	115	+ 5	38	43	+5	383a	384	+ 1	429a	433	+ 4
15	13.5	13.0	-0.5	103	107	+ 4	39	44	+5	396a	388	- 8	462 ^a	436	-26
14	12.2	11.5	-0.7	111	119	+ 8	37	39	+2	358a	360	+ 2	413a	419	+ 6
16	12.8	12.1	-0.7	113	117	+ 4	36	39	+3	373	345	-28	434 ^a	412	-22
19	13.1	12.7	-0.4	105	106	+ 1	40	40	0	430a	368	-62	418 ^a	411	- 7
13	13.1	12.1	-1.0	101	111	+10	38	42	+4	421a	397	-24	437 ^a	440	+ 3
15	12.8	12.6	-0.2	103	111	+ 8	37	40	+3	410a	407	= 3	419a	453	+34
13	13.1	12.2	-0.9	102	111	+ 9	37	39	+2	425a	368	-57	426a	399	-27
13	12.5	12.0	-0.5	113	112	- 1	37	39	+2	398a	356	-42	417 ^a	391	-26
11	13.0	12.5	-0.5	105	111	+ 6	38	41	+3	398	382	-16	430	431	+ 1

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

ed from the totals of the individual readings.

Fourdrinier Kraft Board Institute, Inc.
Project 1108-BPage 31
Progress Report 69

TABE XXV

Mill F-42-1b. Linerboard

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

TABLE X-71

DIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (continued)

Fourdrinier Kraft Board Institute, Inc.
Project 1108-BPage 32
Progress Report 69

Caliper, points	Firsting Strength		G. E. Puncture units		IPC		Diff.		IPC		Diff.		IPC		Diff.	
	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill
Mill G -- 42-lb. Linerboard																
11.9	+0.2	112	122	122	+10	35	37	+2	346 ^a	339	-7	373 ^a	401	+28	373 ^a	401
12.6	-0.1	101	115	115	+14	35	37	+2	359	340	-19	383 ^a	365	-18	383 ^a	365
12.3	-0.1	105	116	116	+11	37	39	+2	364	345	-19	409 ^a	385	-24	409 ^a	385
12.5	-0.1	99	113	113	-14	38	38	0	365	315	-50	401 ^a	371	-30	401 ^a	371
12.3	-0.2	110	115	115	+5	35	37	+2	329 ^a	315	-14	379 ^a	389	+10	379 ^a	389
12.4	0.0	108	112	112	+4	34	37	+3	328	319	-9	374 ^a	357	-17	374 ^a	357
13.2	+0.5	109	106	106	-3	33	38	+5	338	340	+2	375 ^a	375	0	375 ^a	375
13.0	+0.4	114	108	108	-6	32	37	+5	325 ^a	335	+10	365 ^a	383	+18	365 ^a	383
13.2	0.0	117	111	111	-6	36	33	-3	352	315	-37	405 ^a	367	-38	405 ^a	367
12.9	-0.1	119	113	113	-6	39	33	-6	371 ^a	311	-60	405 ^a	373	-32	405 ^a	373
12.6	0.0	107	113	113	+4	35	37	+2	348	327	-21	387	377	-10	387	377

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

the total of the individual readings

TABLE IV

SUMMARY OF INDIVIDUAL TEST LOGS - MARCH 1 THROUGH MARCH 31, 1953 (cont)

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Ersting Strength		G. E. Puncture units						
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.				
Mill G --- 42-lb. Linerboard																	
153407	G-474	WFL	2/21/53	1	43.6	43.6	-0.2	11.7	11.9	+0.2	112	122	+10	35	37	+2	346 ^a
153408	G-475	WFL	2/21/53	1	42.9	43.2	+0.3	12.7	12.6	-0.1	101	115	+14	35	37	+2	359
153415	G-476	WFL	2/25/53	1	44.2	44.0	-0.2	12.4	12.3	-0.1	105	116	+11	37	39	+2	364
153416	G-477	WFL	2/25/53	1	43.4	43.0	-0.4	12.6	12.5	-0.1	99	113	+14	38	38	0	365
153541	G-478	WFL	3/ 5/53	1	42.4	42.4	0.0	12.5	12.3	-0.2	110	115	+5	35	37	+2	329 ^a
153542	G-479	WFL	3/ 5/53	1	42.2	42.3	+0.1	12.4	12.4	0.0	108	112	+4	34	37	+3	328
153610	G-480	WFL	3/10/53	1	43.7	43.8	+0.1	12.7	13.2	+0.5	109	106	-3	33	38	+5	338
153611	G-481	WFL	3/10/53	1	44.0	44.1	+0.1	12.6	13.0	+0.4	114	108	-6	32	37	+5	325 ^a
153708	G-482	WFL	3/20/53	1	43.1	43.2	+0.1	13.2	13.2	0.0	117	111	-6	36	33	-3	352
153709	G-483	WFL	3/20/53	1	44.4	44.0	-0.4	13.0	12.9	-0.1	119	113	-6	39	33	-6	371 ^c
Current Mill Average:					43.4	43.4	0.0	12.6	12.6	0.0	109	113	+4	35	37	+2	348

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.^cNote: All "current mill average" data are calculated from the totals of the individual readings

TABLE XXVII

DIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1953 (continued)

Institute Data versus Mill Data

Caliper, points	IPC	Mill	Diff.	Bursting Strength,		IPC	Mill	Diff.	G. E. Puncture, units		IPC	Mill	Diff.	Elmendorf Tear, g./sheet		IPC	Mill	Diff.
				IPC	p.s.i. gage				In	Across								
Mill H-42-lb. Linerboard																		
12.2	12.2	12.3	+0.1	111	106	-5	35	32	-3	356	326	-30	403 ^a	372	-31			
12.8	12.9	+0.1		103	106	+3	37	33	-4	339	335	-4	404 ^a	377	-27			
12.2	12.2	0.0		110	113	+3	35	36	+1	360	353	-7	413 ^a	389	-24			
12.3	12.2	-0.1		106	105	-1	35	34	-1	343	325	-18	381 ^a	382	+1			
12.2	12.2	0.0		108	104	-4	34	32	-2	349	312	-37	409 ^a	369	-40			
12.2	12.1	-0.1		106	107	+1	33	33	0	343	317	-26	405 ^a	381	-24			
12.3	12.1	-0.2		106	107	+1	33	34	+1	341	316	-25	390 ^a	367	-23			
12.1	12.1	0.0		109	106	-3	33	33	0	341	316	-25	391 ^a	372	-19			
12.3	12.3	0.0		107	107	0	34	34	0	346	325	-21	400	376	-24			

TABLE XXVIII

Mill I-42-lb. Linerboard																	
13.8	13.2	-0.6	112	105	-7	33	28	-5	-5	347 ^a	316	-31	393 ^a	379	-14		
13.8	13.4	-0.4	114	108	-6	31	28	-3	-3	329 ^a	297	-32	387 ^a	362	-25		
13.0	12.5	-0.5	110	108	-2	31	27	-4	-4	340	295	-45	378 ^a	365	-13		
13.0	12.6	-0.4	114	110	-4	31	28	-3	-3	341 ^a	323	-18	381 ^a	393	+12		
13.1	12.7	-0.4	106	108	+2	32	31	-1	-1	337 ^a	334	-3	385 ^a	412	+27		
13.0	12.9	-0.1	110	108	-2	33	31	-2	-2	337	342	+5	391 ^a	402	+11		
13.1	12.8	-0.3	110	110	0	33	31	-2	-2	344 ^a	341	-3	419 ^a	407	-19		
13.1	12.7	-0.4	108	109	+1	33	31	-2	-2	335 ^a	343	+8	383 ^a	400	+17		
13.2	12.8	-0.4	110	109	-1	32	29	-3	-3	339	324	-15	390	389	-1		

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

rom the totals of the individual readings.

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1953 (continued)

TABLE XXVII

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.				
Mill H-42-lb. Linerboard																
153404	H-383	WF1S	2/17/53	2	43.2	43.5	+0.3	12.2	12.3	+0.1	111	106	35	32	-3	356
153405	H-384	WF1S	2/18/53	2	43.9	43.8	-0.1	12.8	12.9	+0.1	103	106	37	33	-4	339
153510	H-385	WF1S	3/ 1/53	2	43.4	44.0	+0.6	12.2	12.2	0.0	110	113	35	36	+1	360
153511	H-386	WF1S	3/ 2/53	2	42.6	43.0	+0.4	12.3	12.2	-0.1	106	105	35	34	-1	343
153649	H-387	WF1S	3/ 9/53	2	42.1	43.1	+1.0	12.2	12.2	0.0	108	104	34	32	-2	349
153650	H-388	WF1S	3/10/53	2	42.3	42.8	+0.5	12.2	12.1	-0.1	106	107	33	33	0	343
153679	H-389	WF1S	3/16/53	2	42.5	43.0	+0.5	12.3	12.1	-0.2	106	107	33	34	+1	341
153680	H0390	WF1S	3/17/53	2	42.5	43.1	+0.6	12.1	12.1	0.0	109	106	33	33	0	341
Current Mill Average:					42.8	43.3	+0.5	12.3	12.3	0.0	107	107	34	34	0	346

TABLE XXVIII

Mill I-42-lb. Linerboard

153543	I-276	WF1S	3/3/ 53	1	42.8	42.3	-0.5	13.8	13.2	-0.6	112	105	33	28	-5	347 ^a
153612	I-277	WF1S	3/10/53	1	43.2	42.5	-0.7	13.8	13.4	-0.4	114	108	31	28	-3	329
153613	I-278	WF1S	3/10/53	1	43.1	42.6	-0.5	13.0	12.5	-0.5	110	108	31	27	-4	340
153614	I-279	WF1S	3/11/53	1	43.1	42.7	-0.4	13.0	12.6	-0.4	114	110	31	28	-3	341 ^a
153615	I-280	WF1S	3/11/53	1	42.3	42.4	+0.1	13.1	12.7	-0.4	106	108	32	31	-1	337 ^a
153672	I-281	WF1S	3/14/53	1	42.4	42.6	+0.2	13.0	12.9	-0.1	110	108	33	31	-2	337
153673	I-282	WF1S	3/16/53	1	42.6	42.6	0.0	13.1	12.8	-0.3	110	110	33	31	-2	344 ^a
153674	I-283	WF1S	3/16/53	1	42.4	42.5	+0.1	13.1	12.7	-0.4	108	109	33	31	-2	335
Current Mill Average:					42.7	42.5	-0.2	13.2	12.8	-0.4	110	109	32	29	-3	339

^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.

INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1953 (continued)

Institute Data versus Mill Data

Caliper, points	IPC Mill	Diff.	Bursting Strength,		p.s.i. gage	G. E. Puncture, units		IPC Mill	Diff.	IPC	In	g./sheet	Across	IPC Mill	Diff.	Elmendorf Tear,
			IPC	Mill		IPC	Mill									
<u>Mill J-42-lb. Linerboard</u>																
13.1	13.0	-0.1	116	114	-2	34	32	-2	361 ^a	356	+ 5	383 ^a	390	+ 7		
13.1	13.1	0.0	116	114	-2	34	33	-1	372 ^a	345	-27	376 ^a	397	+21		
13.0	12.9	-0.1	107	106	-1	32	32	0	372 ^a	360	-12	381 ^a	393	+12		
12.9	12.9	0.0	106	104	-2	32	34	+2	361 ^a	368	+ 7	383 ^a	400	+17		
13.3	13.3	0.0	105	102	-3	34	34	0	377 ^a	357	-20	391 ^a	411	+20		
13.1	13.3	+0.2	105	103	-2	33	34	+1	368 ^a	367	- 1	403 ^a	409	+ 6		
13.3	13.2	-0.1	108	110	+2	32	34	+2	339 ^a	344	+ 5	355 ^a	388	+33		
13.2	13.2	0.0	111	110	-1	33	33	0	352 ^a	351	- 1	386 ^a	391	+ 5		
13.2	13.1	-0.1	109	108	-1	33	33	0	363	356	- 7	382	397	+15		

TABLE XXX

Mill K-42-1b. Linerboard

No samples submitted.

TABLE XXXI

<u>Mill L-42-lb. Linerboard</u>												
14.3	13.9	-0.4	116	116	0	37	379	357	-22	411a	396	-15
13.7	13.1	-0.8	106	106	0	35	353a	312	-41	380a	360	-20
12.9	12.4	-0.5	101	106	+5	36	357	283	-74	379a	347	-32
13.0	12.6	-0.4	110	109	-1	36	345a	277	-68	385a	346	-39
13.5	13.0	-0.5	108	109	+1	36	359	307	-52	389	362	-27

on the totals of the individual readings.

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

TABLE XXX

SUMMARY OF INDIVIDUAL TEST LOGS—MARCH 1 THROUGH MARCH 31, 1953 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Diff.	Bursting Strength, p.s.i. gage		G. E. Puncture, units						
					IPC	Mill	IPC	Mill		IPC	Mill	IPC	Mill					
Mill J-42-lb. Linerboard																		
153411	J-409	B.F.	2/16/53	—	43.0	42.5	-0.5	13.1	13.0	-0.1	116	114	-2	34	32	-2	361 ^a	35 ^a
153412	J-410	B.F.	2/16/53	—	42.6	42.5	-0.1	13.1	13.1	0.0	116	114	-2	34	33	-1	372 ^a	34 ^a
153512	J-411	B.F.	2/24/53	—	41.3	41.1	-0.2	13.0	12.9	-0.1	107	106	-1	32	32	0	372 ^a	36 ^a
153513	J-412	B.F.	1/24/53	—	41.0	41.2	+0.2	12.9	12.9	0.0	106	104	-2	32	34	+2	361 ^a	36 ^a
153644	J-413	B.F.	3/ 2/53	—	42.8	42.7	-0.1	13.3	13.3	0.0	105	102	-3	34	34	0	377 ^a	35 ^a
153645	J-414	B.F.	3/ 2/53	—	42.8	42.8	0.0	13.1	13.3	+0.2	105	103	-2	33	34	+1	368 ^a	36 ^a
153720	J-415	B.F.	3/11/53	1	42.4	42.5	+0.1	13.3	13.2	-0.1	108	110	+2	32	34	+2	339 ^a	34 ^a
153721	J-416	B.F.	3/11/53	1	42.2	42.3	+0.1	13.2	13.2	0.0	111	110	-1	33	33	0	352 ^a	35 ^a
Current Mill Average:					42.3	42.2	-0.1	13.2	13.1	-0.1	109	108	-1	33	33	0	363	35 ^a

TABLE XXX

Mill K-42-lb. Linerboard

No samples submitted.

TABLE XXXI

Mill L-42-lb. Linerboard

153435	L-155		1/11/53	1	42.9	43.5	-0.4	14.3	13.9	-0.4	116	116	0	37
153436	L-156		1/17/53	1	41.9	42.1	+0.2	13.9	13.1	-0.8	106	106	0	35
153437	L-157		2/ 4/53	1	43.0	42.4	-0.6	12.9	12.4	-0.5	101	106	+5	36
153438	L-158		2/ 5/53	1	43.1	42.5	-0.6	13.0	12.6	-0.4	110	109	-1	36
Current Mill Average:					43.0	42.6	-0.4	13.5	13.0	-0.5	108	109	+1	36

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

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

TABLE XXXII
OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1953 (continued)
Institute Data versus Mill Data

ht, Diff.	IPC	Caliper, points Mill	Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		In Across		IPC	Mill	Diff.
			IPC	Mill	IPC	Mill	IPC	Mill	IPC	Mill			
Mill M-42-lb. Linerboard													
0.4	13.9	13.0	-0.9	119	122	+3	36	36	0	417 ^a	413	-4	405 ^a 436 +31
1.5	14.0	13.0	-1.0	113	111	-2	36	32	-4	382	293	-89	417 ^a 379 -38
1.5	13.8	12.8	-1.0	116	123	+7	36	34	-2	377 ^a	346	-31	437 ^a 385 -52
0.9	13.4	12.6	-0.8	122	126	+4	33	32	-1	366 ^a	336	-30	415 ^a 402 -13
1.1	13.7	12.9	-0.8	118	121	+3	35	34	-1	386	347	-39	418 400 -18

TABLE XXXIII

Mill E-44/46-lb. Linerboard

0.6	14.4	13.2	-1.2	93	87	-6	37	39	+2	399 ^a	384	-15	384 ^a 378 -6
0.0	15.4	14.3	-1.1	109	96	-13	37	42	+5	453 ^a	426	-27	410 ^a 405 -5
0.3	15.1	13.5	-1.6	111	108	-3	38	40	+2	437 ^a	387	-50	405 ^a 371 -34
0.1	14.8	13.4	-1.4	103	98	-5	38	38	0	467 ^a	395	-72	413 ^a 375 -38
0.7	15.3	14	-1.3	93	90	-3	36	38	+2	419 ^a	420	+1	386 ^a 384 -2
1.1	16.1	15.0	-1.1	115	109	-6	38	42	+4	486 ^a	459	-27	431 ^a 435 +4
0.4	15.2	13.9	-1.3	104	98	-6	37	40	+3	444	412	-32	405 391 -14

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

TABLE XXXII

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1953 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Firm	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.
153417	M-149	W.	2/17/53	4	43.2	42.8	-0.4	13.9	13.0	-0.9	119	122
153418	M-150	W.	2/17/53	2	43.4	41.9	-1.5	14.0	13.0	-1.0	113	111
153455	M-151	W.	2/24/53	4	43.9	42.4	-1.5	13.8	12.8	-1.0	116	123
153456	M-152	W.	2/25/53	2	43.1	42.2	-0.9	13.4	12.6	-0.8	122	126
Current Mill Average:					43.4	42.3	-1.1	13.7	12.9	-0.8	118	121
											35	34
											36	36
											36	32
											34	34
											32	32
											0	417 ^a
											-4	382
											-2	377 ^a
											-1	366 ^a

Mill M-42-lb. Linerboard

TABLE XXXIII

Mill E-44/46-lb. Linerboard

153403	E-344	W.F.	2/20/53	1	44.9	45.5	+0.6	14.4	13.2	-1.2	93	87	-6	37	39	+2	399 ^a
153414	E-347	—	3/4/53	1	47.8	47.8	0.0	15.4	14.3	-1.1	109	96	-13	37	42	+5	453 ^a
153515	E-348	—	3/5/53	1	47.5	47.2	-0.3	15.1	13.5	-1.6	111	108	-3	38	40	+2	437 ^a
153606	E-349	—	3/11/53	1	47.0	46.9	-0.1	14.8	13.4	-1.4	103	98	-5	38	38	0	467 ^a
153609	E-350	W.F.	3/12/53	1	46.9	47.6	+0.7	15.3	14	-1.3	93	90	-3	36	38	+2	419 ^a
153668	E-352	W.F.	3/18/53	1	45.6	46.7	+1.1	16.1	15.0	-1.1	115	109	-6	38	42	+4	486 ^a
Current Mill Average:					46.6	47.0	+0.4	15.2	13.9	-1.3	104	98	-6	37	40	+3	444

^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.

