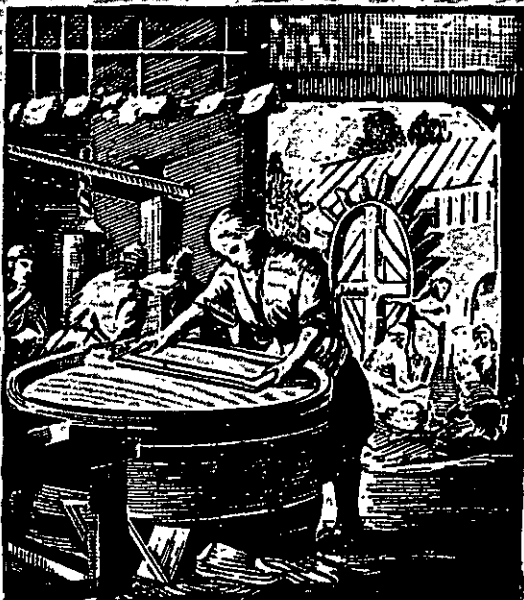


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CONTINUOUS BASELINE STUDY

✓
Project 1108-B

Progress Report 81

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

April 1, 1954

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

CONTINUOUS BASELINE STUDY

Project 1108-B

Progress Report 81

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FOURDRINIER KRAFT BOARD INSTITUTE, INC.

April 1, 1954

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

In conjunction with the F.K.I. Continuous Baseline Study, one hundred and three different sample lots of 42-lb. Fourdrinier kraft linerboard were submitted by fifteen 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, two samples of special drum stock and several samples of special linerboard 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	10
B	20
C	8
D	10
E	2
F	10
G	4
H	4
I	5
J	4
K	4
L	10
M	2
N	6
O	<u>4</u>
	103

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 42.9 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 99.5. 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, 1954.

A comparison of the results in Table II and Figure 1 shows that the average basis weight results for all mills except Mills E and O conform to the 42-lb. specification set forth in Rule 41. Mill D has the highest average basis weight, it being 44.1 lb. or approximately 5.0% higher than the 42-lb. specification. On the other hand, Mill O

has the lowest average basis weight, it being 41.8 lb., approximately 0.5⁵ 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	+1.2
C	+4.0
D	+5.0
E	-0.2
F	+3.6
G	+4.3
H	+3.6
I	+1.2
J	0.0
K	+0.5
L	+2.1
M	+4.3
N	+1.0
O	-0.5

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 decreased 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 12.2 for Mill O to a high of 14.4 for Mill C and the average being 13.0 which is somewhat lower than the cumulative average of 13.8.

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

from a low of 103 for Mill I to a high of 121 for Mill G. The current F.K.I. average bursting strength is 110, slightly higher than the cumulative average of 107.

The data of Table II and Figure 4 show that the average G. E. puncture result for all mills is 34 units. Mill F has the highest G. E. puncture average, 39 units; Mill B has the lowest average, 29 units. The current F.K.I. G. E. puncture average of 34 units is only slightly lower than the cumulative F.K.I. average of 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 M has the highest average machine direction tear value while Mill B has the lowest. Mill F has the highest average cross-machine direction tear value, and Mill B 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 indicate 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 XVII for Mills A to O, 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 XVIII.

It may be noted in Tables III through XVIII 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	10 ^a		
B	20 ^a		
C	8		
D	10		

(Continued on the next page.)

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

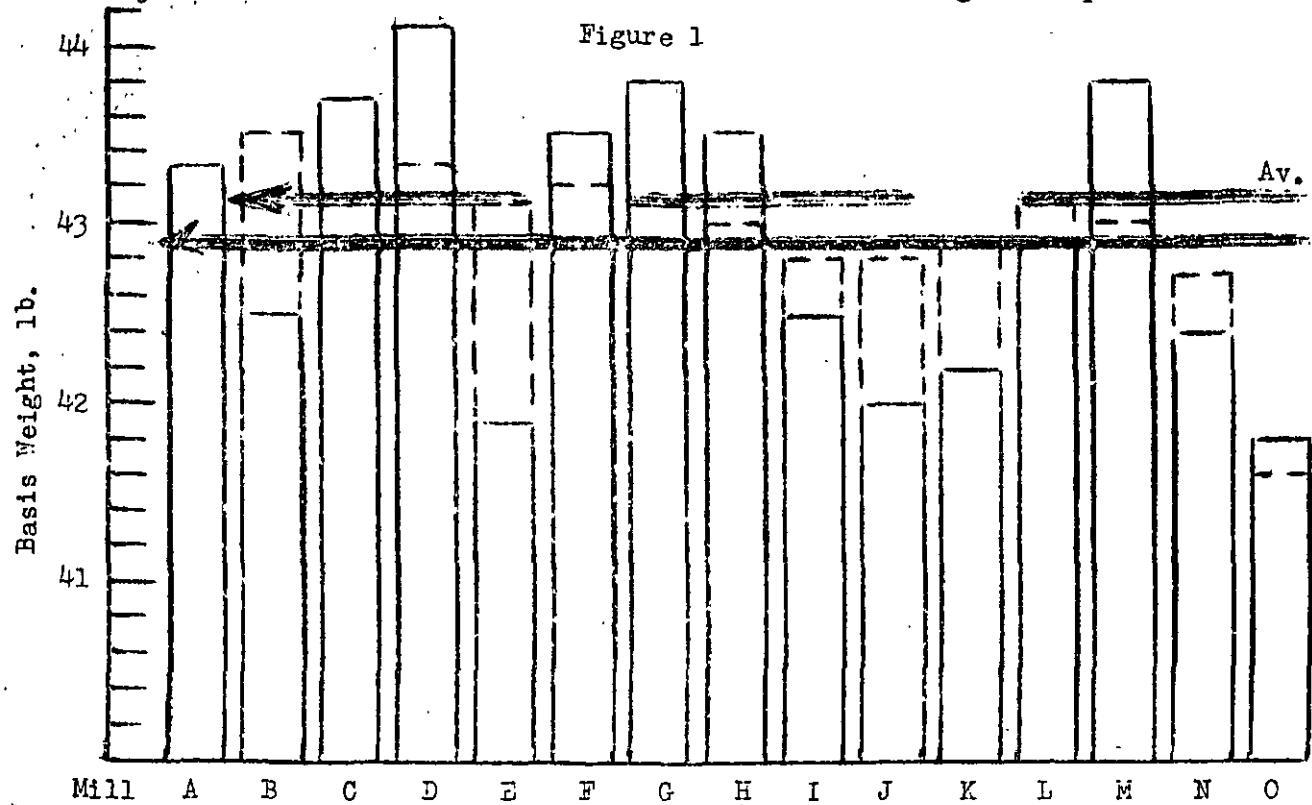
- ^a One side only.
- ^b Drum linerboard.
- ^c Sheet finish not reported.
- ^d Semi-water finish.

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

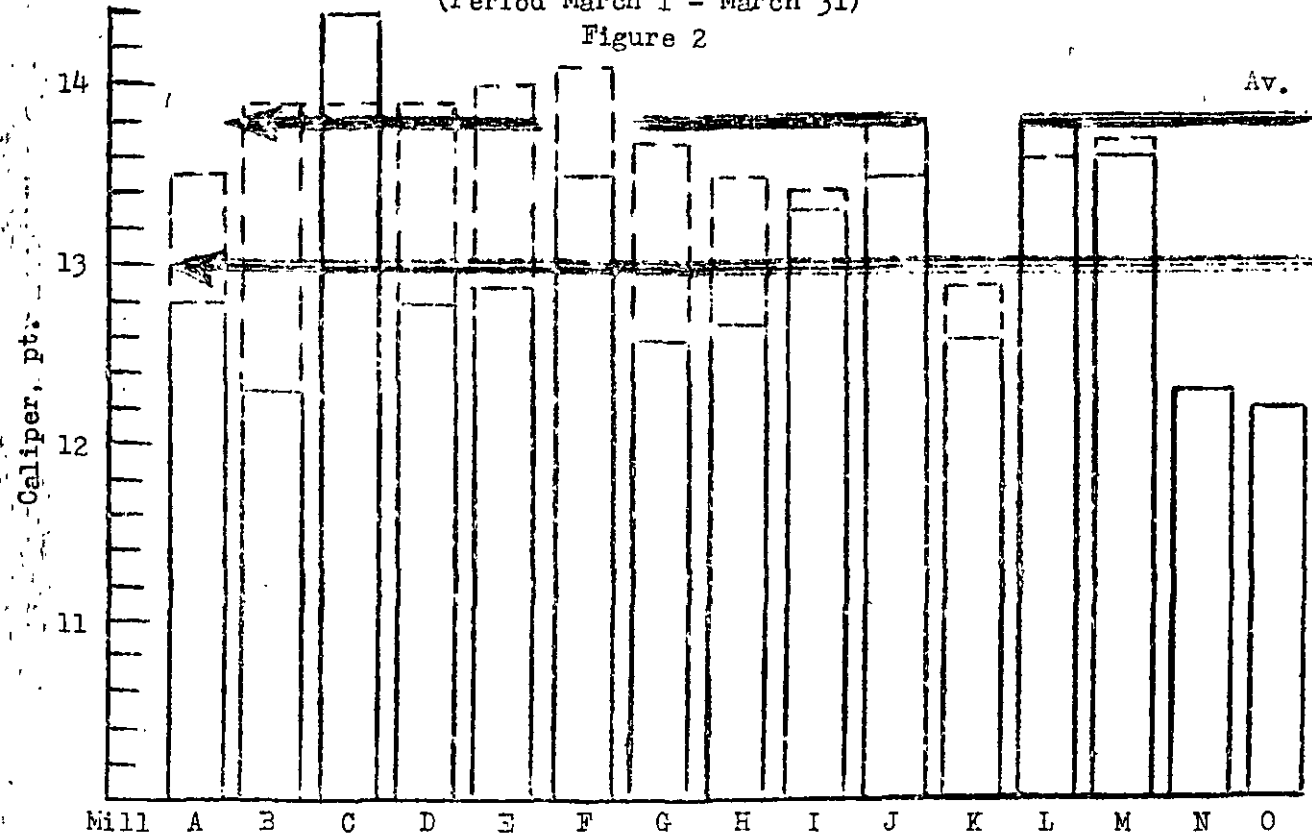
TABLE II

SUMMARY OF COMPOSITE MILL AVERAGES—MARCH 1 THROUGH MARCH 31, 1954

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	43.3	12.8	111	34	351	382
B	42.5	12.3	115	29	302	353
C	43.7	14.4	109	35	367	400
D	44.1	12.8	112	37	375	410
E	41.9	12.9	107	32	372	375
F	43.5	13.5	104	39	395	429
G	43.8	12.6	121	31	337	367
H	43.5	12.7	106	34	372	402
I	42.5	13.3	103	32	330	395
J	42.0	13.5	115	31	349	384
K	42.2	12.6	106	34	350	374
L	42.9	13.8	107	35	344	378
M	43.8	13.6	106	37	400	415
N	42.4	12.3	107	36	357	397
O	41.8	12.2	116	34	337	377
Current FKI Average:	42.9	13.0	110	34	356	389
Cumulative FKI Average:	43.1	13.8	107	36	369	402
FKI Index, %:	99.5	94.2	102.8	94.4	96.5	96.8

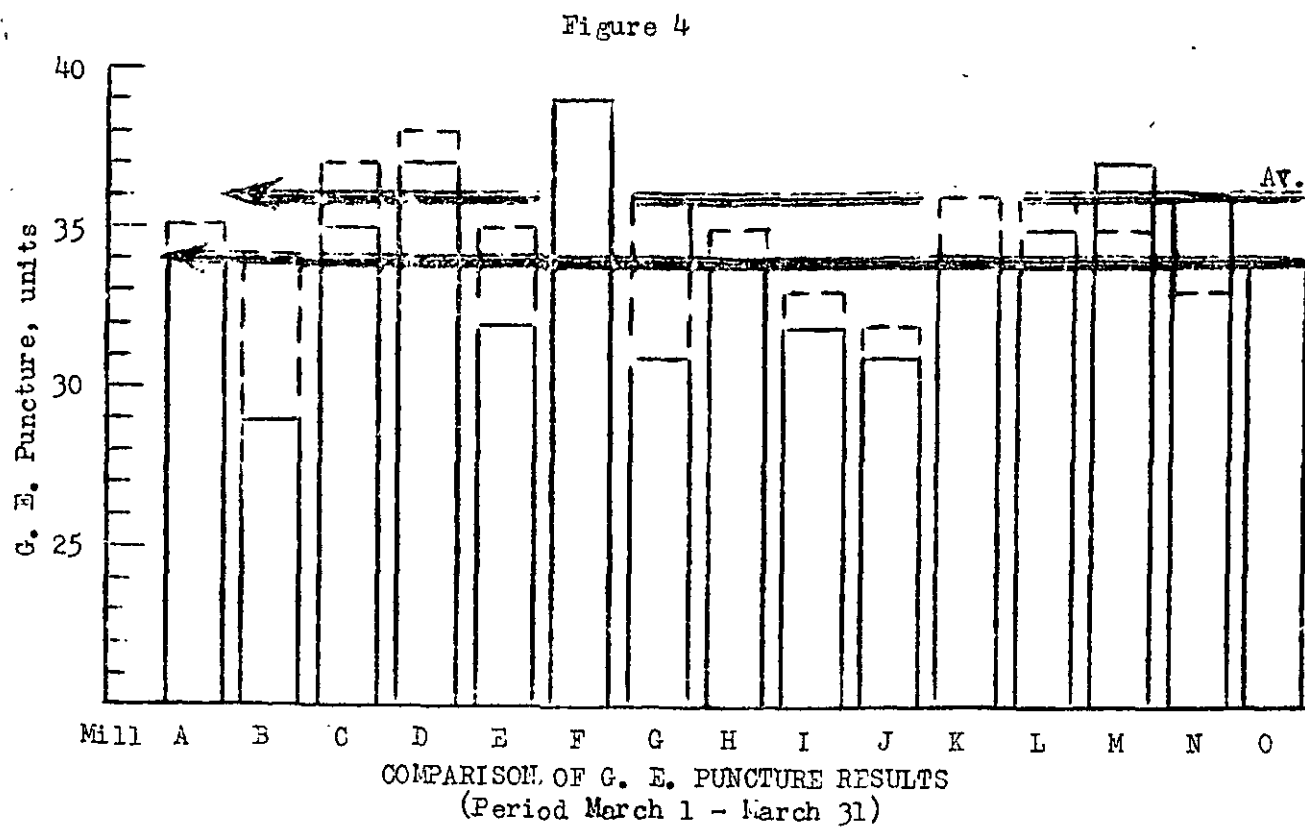
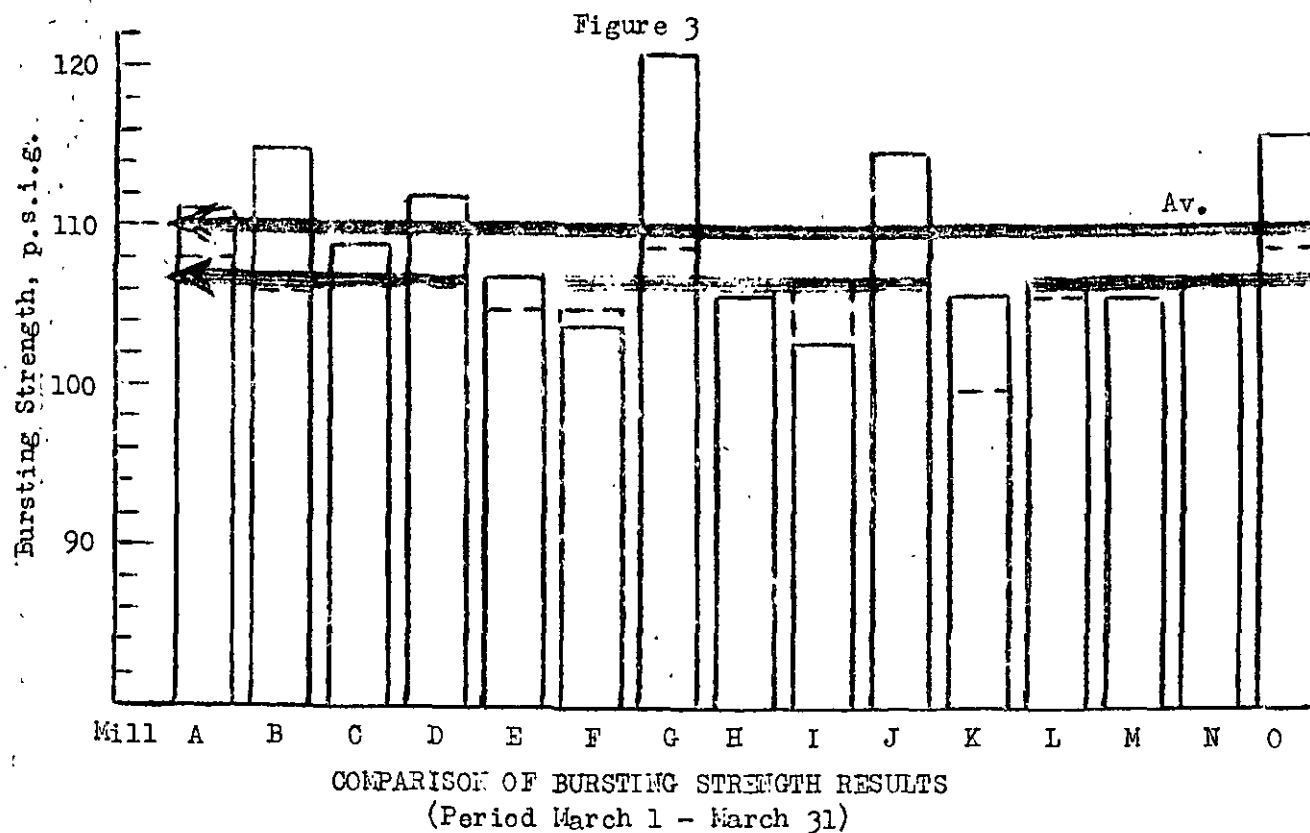


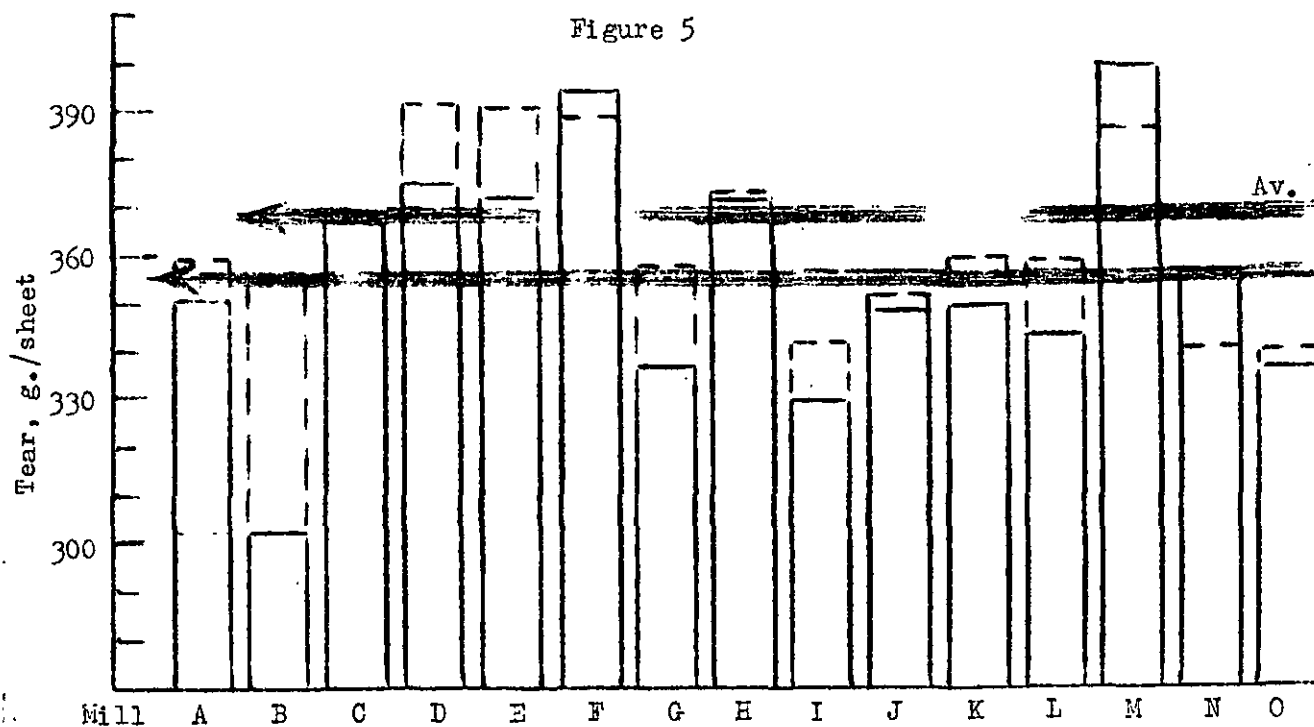
COMPARISON OF BASIS WEIGHT RESULTS
(Period March 1 - March 31)



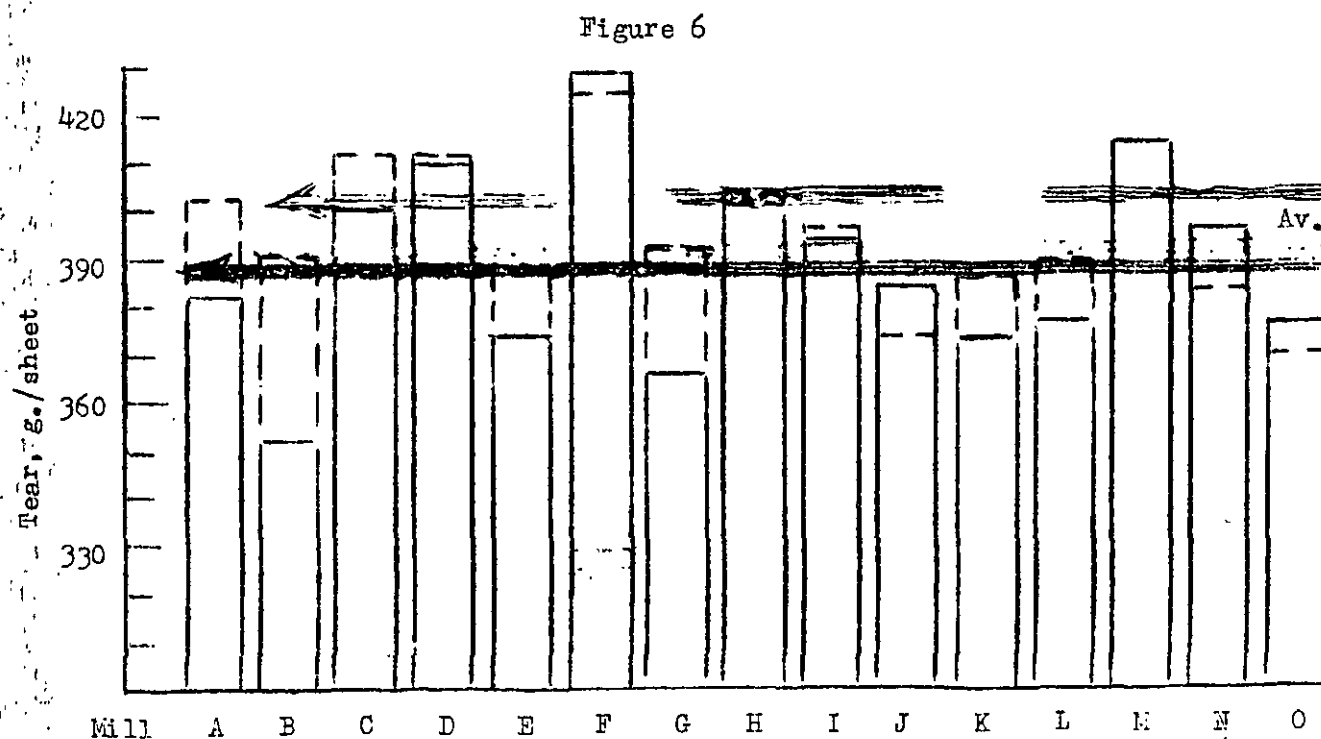
COMPARISON OF CALIPER RESULTS
(Period March 1 - March 31)

— Current mill average
- - - Cumulative mill average





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



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

TABLE III

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954

Date Made	Mch. No.	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.	Max.	Min.	Av.	Max.	Min.	Av.						
Mill A---42-lb. Linerboard																			
14/54	2	44.0	42.6	43.5	13.3	12.2	12.9	123	95	112	38	32	34	392	304	344 ^a	448	352	390 ^a
20/54	1	43.6	42.0	42.6	12.8	12.1	12.4	121	78	101	36	30	33	472	320	375 ^a	432	320	361 ^a
22/54	1	43.6	42.0	42.7	13.0	12.1	12.7	135	98	115	36	32	34	384	312	342 ^a	464	336	385 ^a
21/54	2	44.2	42.4	43.5	13.3	12.3	12.9	125	85	110	35	31	33	456	312	353 ^a	448	336	391 ^a
28/54	1	44.2	42.8	43.5	13.9	12.3	12.9	139	73	111	40	33	37	400	320	355 ^a	416	336	393 ^a
28/54	1	43.8	42.4	43.3	13.1	12.4	12.9	143	90	114	40	34	36	432	320	352 ^a	424	352	382 ^a
7/54	2	44.4	43.2	43.8	13.4	12.7	13.1	142	100	116	37	32	34	432	288	358 ^a	416	344	378 ^a
7/54	1	44.0	42.4	43.3	13.1	12.2	12.7	131	83	112	35	30	32	320	280	309 ^a	408	328	368 ^a
15/54	2	44.2	42.4	43.4	13.8	12.7	13.2	128	69	109	39	32	35	472	320	387 ^a	448	360	393 ^a
16/54	1	43.8	42.0	43.0	12.9	12.0	12.3	137	86	112	36	30	33	376	272	331 ^a	416	352	375 ^a
		43.3				12.8				111			34			351			382
		42.9				13.5				108			35			359			403
		100.9				94.8				102.8			97.1			97.8			94.8
		100.5				92.8				103.7			94.4			95.1			95.0

ings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE III

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954

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.	Max.	Min.	Max.	Min.	Max.	Min.			
<u>Mill A---42-lb. Linerboard</u>																
157047	A-525	WF1S	3/ 1/54	2/14/54	2	44.0	42.6	43.5	13.3	12.2	12.9	123	95	112	38	32
157048	A-526	WF1S	3/ 1/54	2/20/54	1	43.6	42.0	42.6	12.8	12.1	12.4	121	78	101	36	30
157082	A-527	WF1S	3/ 2/54	2/22/54	1	43.6	42.0	42.7	13.0	12.1	12.7	135	98	115	36	32
157083	A-528	WF1S	3/ 2/54	2/21/54	2	44.2	42.4	43.5	13.3	12.3	12.9	125	85	110	35	31
157134	A-529	WF1S	3/ 9/54	2/28/54	1	44.2	42.8	43.5	13.9	12.3	12.9	139	73	111	40	33
157135	A-530	WF1S	3/ 9/54	2/28/54	1	43.8	42.4	43.3	13.1	12.4	12.9	143	90	114	40	34
157219	A-531	WF1S	3/13/54	3/ 7/54	2	44.4	43.2	43.8	13.4	12.7	13.1	142	100	116	37	32
157220	A-532	WF1S	3/13/54	3/ 7/54	1	44.0	42.4	43.3	13.1	12.2	12.7	131	83	112	35	30
157444	A-533	WF1S	3/26/54	3/15/54	2	44.2	42.4	43.4	13.8	12.7	13.2	128	69	109	39	32
157445	A-534	WF1S	3/26/54	3/16/54	1	43.8	42.0	43.0	12.9	12.0	12.3	137	86	112	36	30
Current Mill Average:						43.3		12.8		111						
Cumulative Mill Average:						42.9		13.5		108						
Mill Factor, %						100.9		94.8		102.8						
Mill Index, %:						100.5		92.8		103.7						

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

TABLE IV

SUMMARY OF INDIVIDUAL TEST LOIS—MARCH 1 THROUGH MARCH 31, 1954 (continued)

e Mch. e No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet									
	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.						
Mill B--42-lb. Linerboard																		
54 1	44.2	42.2	43.2	13.2	12.0	12.7	130	85	114	32	29	31	360	272	310	400	336	369a
54 1	45.0	42.6	43.2	13.3	12.0	12.6	134	89	110	34	30	31	352	272	307a	416	336	367a
54 1	44.2	42.0	42.9	13.0	12.2	12.7	128	98	111	32	28	31	368	288	323a	400	304	355a
54 1	44.2	42.4	43.2	13.4	12.2	12.8	130	87	109	33	29	31	384	272	323a	400	336	368a
54 1	42.2	41.0	41.6	12.5	11.5	12.1	127	94	114	30	26	28	304	256	279	360	304	336a
54 1	42.0	40.6	41.4	12.8	11.9	12.2	130	72	109	30	26	27	288	240	269	352	288	323a
54 1	43.6	41.4	42.7	13.0	12.0	12.4	133	101	119	32	26	29	336	256	289	384	288	343a
54 1	42.2	41.2	41.8	12.6	11.9	12.2	130	88	115	30	26	28	352	256	292a	384	288	330a
54 1	42.6	40.6	41.6	12.8	11.9	12.2	132	102	113	30	26	28	384	216	285	400	304	335a
54 1	42.2	40.8	41.6	12.6	11.7	12.1	131	88	110	28	25	27	320	256	286	376	336	352a
54 1	43.0	41.8	42.2	13.0	11.9	12.3	124	101	114	30	26	28	368	272	314	392	320	357a
54 1	43.8	41.6	42.2	12.8	11.8	12.3	126	94	115	30	24	28	360	264	301	376	304	336a
54 1	44.0	42.0	42.9	13.0	12.2	12.6	129	85	110	31	27	29	376	240	301a	400	320	359a
54 1	44.2	42.2	43.3	13.0	12.1	12.6	128	100	113	32	26	29	312	256	286	368	296	341a
54 1	42.8	41.6	42.1	13.0	11.9	12.3	133	83	109	30	26	28	328	256	293a	368	304	334a
54 1	43.8	41.6	42.6	13.1	11.8	12.4	142	89	115	30	26	28	344	272	311	376	304	350a
54 1	43.8	42.2	43.2	12.2	11.6	11.9	142	110	129	34	29	30	384	272	314a	416	352	385a
54 1	44.0	41.8	43.0	12.1	11.5	11.8	147	106	129	32	26	29	352	256	308a	392	336	366a
54 1	44.0	42.0	43.0	12.7	11.2	11.8	142	92	122	32	28	31	376	272	325a	400	352	381a
54 1	43.6	41.4	42.2	11.9	11.3	11.7	144	103	119	32	28	30	360	280	319a	400	336	375a
			42.5			12.3			115		29			302				353
			43.5			13.9			106		34			355				391
			97.7			88.5			108.5		85.3			85.1				90.3
			98.6			89.1			107.5		80.6			81.8				87.8

is for one or more specimens which tore beyond the 3/8-inch limit.

TABLE IV

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1954 (cont)

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 B-42-lb. Linerboard																	
157050	B-951	WF1S	3/ 1/54	2/12/54	1	44.2	42.2	43.2	13.2	12.0	12.7	130	85	114	32	29	31
157051	B-952	WF1S	3/ 1/54	2/12/54	1	45.0	42.6	43.2	13.3	12.0	12.6	134	89	110	34	30	31
157052	B-953	WF1S	3/ 1/54	2/12/54	1	44.2	42.0	42.9	13.0	12.2	12.7	128	98	111	32	28	31
157053	B-954	WF1S	3/ 1/54	2/12/54	1	44.2	42.4	43.2	13.4	12.2	12.8	130	87	109	33	29	31
157340	B-955	WF1S	3/15/54	3/ 3/54	1	42.2	41.0	41.6	12.5	11.5	12.1	127	94	114	30	26	28
157341	B-956	WF1S	3/15/54	3/ 3/54	1	42.0	40.6	41.4	12.8	11.9	12.2	130	72	109	30	26	27
157342	B-957	WF1S	3/15/54	3/ 3/54	1	43.6	41.4	42.7	13.0	12.0	12.4	133	101	119	32	26	29
157343	B-958	WF1S	3/15/54	3/ 3/54	1	42.2	41.2	41.8	12.6	11.9	12.2	130	88	115	30	26	28
157344	B-959	WF1S	3/15/54	3/ 3/54	1	42.6	40.6	41.6	12.8	11.9	12.2	132	102	113	30	26	28
157345	B-960	WF1S	3/15/54	3/ 3/54	1	42.2	40.8	41.6	12.6	11.7	12.1	131	88	110	28	25	27
157346	B-961	WF1S	3/15/54	3/ 3/54	1	43.0	41.8	42.2	13.0	11.9	12.3	124	101	114	30	26	28
157347	B-962	WF1S	3/15/54	3/ 3/54	1	43.8	41.6	42.2	12.8	11.8	12.3	126	94	115	30	24	28
157403	B-963	WF1S	3/20/54	3/ 3/54	1	44.0	42.0	42.9	13.0	12.2	12.6	129	85	110	31	27	29
157374	B-964	WF1S	3/18/54	3/ 3/54	1	44.2	42.2	43.3	13.0	12.1	12.6	128	100	113	32	26	29
157375	B-965	WF1S	3/18/54	3/ 3/54	1	42.8	41.6	42.1	13.0	11.9	12.3	133	83	109	30	26	28
157376	B-966	WF1S	3/18/54	3/ 3/54	1	43.8	41.6	42.6	13.1	11.8	12.4	142	89	115	30	26	28
157441	B-967	WF1S	3/26/55	3/16/54	1	43.8	42.2	43.2	12.2	11.6	11.9	142	110	129	34	29	30
157462	B-968	WF1S	3/27/54	3/16/54	1	44.0	41.8	43.0	12.1	11.5	11.8	147	106	129	32	26	29
157442	B-969	WF1S	3/26/54	3/16/54	1	44.0	42.0	43.0	12.7	11.2	11.8	142	92	122	32	28	31
157443	B-970	WF1S	3/26/54	3/16/54	1	43.6	41.4	42.2	11.9	11.3	11.7	144	103	119	32	28	30
Current Mill Average:						42.5			12.3			115			29		
Cumulative Mill Average:						43.5			13.9			106			34		
Mill Factor, %:						97.7			88.5			108.5			85.3		
Mill Index, %:						98.6			89.1			107.5			80.6		

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

TABLE V
SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continued)

Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet										
	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Max.	Min.	Av.	Max.	Min.	Av.					
<u>Mill C--42-lb. Linerboard</u>																			
3/54	1	44.8	43.0	44.0	15.2	14.1	14.6	124	80	102	40	33	36	472	312	382a	440	352	398a
3/54	1	44.4	43.8	44.0	15.8	13.8	14.4	121	82	101	40	32	35	392	304	350	408	352	378a
6/54	1	44.4	43.0	43.5	15.0	14.0	14.6	132	88	115	38	31	34	432	288	355	416	344	377a
6/54	1	44.0	42.2	43.4	15.0	14.0	14.4	124	83	108	36	30	34	416	296	350	464	352	406a
7/54	1	45.0	43.8	44.2	15.2	13.6	14.6	132	79	107	40	34	37	480	336	392	464	392	424a
7/54	1	45.0	43.6	44.0	15.2	13.2	14.5	130	87	108	40	35	38	424	344	384a	448	384	412a
8/54	1	44.0	42.0	43.2	14.9	13.2	14.0	143	87	113	37	30	34	424	320	363	448	376	398a
8/54	1	44.4	42.2	43.3	14.5	13.1	14.0	134	88	116	38	32	34	416	280	357	464	360	410a
			43.7				14.4			109			35			367			400
			42.9				13.9			107			37			367			412
			101.9				103.6			101.9			94.6			100.0			97.1
			101.4				104.3			101.9			97.2			99.5			99.5

ags for one or more specimens which tore beyond the 3/8-inch limit.

TABLE V

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (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 C--42-lb. Linerboard																	
157197	C-547	W.F.	3/12/54	3/ 3/54	1	44.8	43.0	44.0	15.2	14.1	14.6	124	80	40	33	36	47
157198	C-548	W.F.	3/12/54	3/ 3/54	1	44.4	43.8	44.0	15.8	13.8	14.4	121	82	40	32	35	39
157221	C-549	W.F.	3/13/54	3/ 6/54	1	44.4	43.0	43.5	15.0	14.0	14.6	132	88	38	31	34	43
157222	C-550	W.F.	3/13/54	3/ 6/54	1	44.0	42.2	43.4	15.0	14.0	14.4	124	83	36	30	34	41
157223	C-551	W.F.	3/13/54	3/ 7/54	1	45.0	43.8	44.2	15.2	13.6	14.6	132	79	40	34	37	48
157224	C-552	W.F.	3/13/54	3/ 7/54	1	45.0	43.6	44.0	15.2	13.2	14.5	130	87	40	35	38	42
157225	C-553	W.F.	3/13/54	3/ 8/54	1	44.0	42.0	43.2	14.9	13.2	14.0	143	87	37	30	34	42
157226	C-554	W.F.	3/13/54	3/ 8/54	1	44.4	42.2	43.3	14.5	13.1	14.0	134	88	38	32	34	41
Current Mill Average:						43.7		14.4		109		35					
Cumulative Mill Average:						42.9		13.9		107		37					
Mill Factor, %:						101.9		103.6		101.9		94.6					
Mill Index, %:						101.4		104.3		101.9		97.2					

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

TABLE VI
SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continued)

Mch. No.	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.	Max.	Min.	Max.	Min.	Av.	Max.	Min.	Av.				
<u>Mill D--42-lb. Linerboard</u>																		
1/54	46.0	44.6	45.1	13.2	12.4	12.9	133	95	112	42	37	40	432	336	381a	464	368	423a
2/54	45.6	44.4	44.9	13.1	12.5	12.9	129	95	113	42	36	39	432	312	375a	464	368	423a
3/54	45.8	45.0	45.2	13.0	12.5	12.9	135	89	110	42	36	39	432	336	384a	512	384	426a
4/54	46.2	44.0	45.0	13.6	12.0	13.0	136	90	118	41	34	38	464	320	386a	480	368	431a
5/54	44.8	43.6	44.2	14.0	12.3	13.0	130	80	109	43	37	39	456	328	386a	504	360	416a
6/54	44.0	42.2	43.1	13.3	12.2	12.7	123	82	109	39	34	37	440	352	379a	456	368	418a
7/54	44.2	42.4	43.3	13.2	12.0	12.8	126	88	109	36	32	34	424	328	376a	440	360	391a
8/54	44.0	42.0	42.8	13.0	12.1	12.6	149	89	112	38	32	35	392	304	343a	440	320	381a
9/54	44.0	41.6	42.8	13.0	12.0	12.6	130	85	112	38	30	35	416	320	361a	432	360	391a
10/54	45.8	42.4	44.3	13.2	12.4	12.9	129	94	112	42	34	38	440	336	380a	432	368	401a
			44.1			12.8		112				37			375			410
			43.3			13.9		107				38			392			412
			101.8			92.1		104.7				97.4			95.7			99.5
			102.3			92.8		104.7				102.8			101.6			102.0
TABLE VII																		
<u>Mill E--42-lb. Linerboard</u>																		
1/54	42.4	40.2	41.7	14.0	12.2	12.9	124	86	106	34	30	32	464	320	370a	432	336	380a
2/54	43.2	41.6	42.1	13.6	11.8	13.0	125	81	107	35	29	32	416	352	375a	416	304	369a
			41.9			12.9			107			32			372			375
			43.1			14.0			105			35			391			388
			97.2			92.1			101.9			91.4			95.1			96.6
			97.2			93.5			100.0			88.9			100.8			93.3

ags for one or more specimens which tore beyond the 3/8-inch limit.

TABLE VI

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (cont'd)

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.
<u>Mill D--42-lb. Linerboard</u>																	
157054	D-739	W.F.	3/ 1/54	2/21/54	4	46.0	44.6	45.1	13.2	12.4	12.9	133	95	112	42	37	40
157055	D-740	W.F.	3/ 1/54	2/22/54	4	45.6	44.4	44.9	13.1	12.5	12.9	129	95	113	42	36	39
157059	D-741	W.F.	3/ 1/54	2/23/54	4	45.8	45.0	45.2	13.0	12.5	12.9	135	89	110	42	36	39
157122	D-742	W.F.	3/8/54	3/ 5/54	4	46.2	44.0	45.0	13.6	12.0	13.0	136	90	118	41	34	38
157154	D-743	W.F.	3/10/54	3/ 6/54	4	44.8	43.6	44.2	14.0	12.3	13.0	130	80	109	43	37	39
157155	D-744	W.F.	3/10/54	3/ 7/54	4	44.0	42.2	43.1	13.3	12.2	12.7	123	82	109	39	34	37
157364	D-745	W.F.	3/17/54	3/14/54	4	44.2	42.4	43.3	13.2	12.0	12.8	126	88	109	36	32	34
157365	D-746	W.F.	3/17/54	3/15/54	4	44.0	42.0	42.8	13.0	12.1	12.6	149	89	112	38	32	35
157366	D-747	W.F.	3/17/54	3/16/54	4	44.0	41.6	42.8	13.0	12.0	12.6	130	85	112	38	30	35
157388	D-748	W.F.	3/19/54	3/17/54	4	45.8	42.4	44.3	13.2	12.4	12.9	129	94	112	42	34	38
Current Mill Average:								44.1			12.8		112			37	
Cumulative Mill Average:								43.3			13.9		107			38	
Mill Factor, %:								101.8			92.1		104.7			97.4	
Mill Index, %:								102.3			92.8		104.7			102.8	

TABLE VII

Mill E--42-lb. Linerboard

157121	E-63	--	3/ 8/54	3/ 3/54	2	42.4	40.2	41.7	14.0	12.2	12.9	124	86	106	34	30	32
157448	E-66	--	3/26/54	3/22/54	2	43.2	41.6	42.1	13.6	11.8	13.0	125	81	107	35	29	32
Current Mill Average:								41.9			12.9			107			32
Cumulative Mill Average:								43.1			14.0			105			35
Mill Factor, %:								97.2			92.1			101.9			91.4
Mill Index, %:								97.2			93.5			100.0			88.9

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

TABLE VIII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continued)

Mch. No.	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.	Min.				
Mill F--42-lb. Linerboard																		
5/54	44.0	42.0	43.4	14.6	12.5	13.6	123	100	110	42	36	39	464	320	384a	464	384	419a
5/54	46.0	44.2	45.1	14.7	12.9	13.7	131	89	111	47	38	43	472	344	408a	544	392	455a
5/54	44.0	42.4	43.1	14.7	12.8	13.7	125	87	107	42	35	39	416	352	391a	512	384	434a
5/54	43.8	40.8	42.4	14.5	12.2	13.5	112	81	100	44	38	41	464	352	408a	504	352	422a
5/54	44.4	42.2	43.5	14.2	12.7	13.5	127	85	103	41	35	39	448	360	401a	464	368	415a
5/54	44.0	42.2	43.3	14.2	12.6	13.6	121	79	101	42	35	39	472	360	404a	512	416	455a
5/54	44.4	42.2	43.6	14.3	12.4	13.3	113	83	95	43	35	40	424	344	389a	480	392	429a
5/54	45.8	42.4	43.8	14.2	12.3	13.5	123	76	100	41	36	38	464	336	393a	448	368	420a
5/54	45.6	42.2	43.9	14.9	12.9	14.1	122	80	100	43	34	39	512	352	407a	488	376	424a
5/54	44.0	41.6	43.0	13.4	11.2	12.8	125	90	109	38	32	35	456	336	370a	456	368	417a
	43.5			13.5				104			39			395				429
	43.2			14.1				105			39			389				426
	100.7			95.7				99.0			100.0			101.5				100.7
	100.9			97.8				97.2			108.3			107.0				106.7

gs for one or more specimens which tore beyond the 3/8-inch limit.

TABLE VIII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (c)

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.					
<u>Mill F--42-lb. Linerboard</u>																	
157123	F-7	W.F.	3/ 8/54	2/15/54	—	44.0	42.0	43.4	14.6	12.5	13.6	123	100	110	42	36	3
157124	F-8	W.F.	3/ 8/54	2/16/54	—	46.0	44.2	45.1	14.7	12.9	13.7	131	89	111	47	38	4
157125	F-9	W.F.	3/ 8/54	2/16/54	—	44.0	42.4	43.1	14.7	12.8	13.7	125	87	107	42	35	3
157126	F-10	W.F.	3/8 /54	2/17/54	—	43.8	40.8	42.4	14.5	12.2	13.5	112	81	100	44	38	4
157413	F-11	W.F.	3/22/54	2/18/54	—	44.4	42.2	43.5	14.2	12.7	13.5	127	85	103	41	35	3
157414	F-12	W.F.	3/22/54	2/19/54	—	44.0	42.2	43.3	14.2	12.6	13.6	121	79	101	42	35	3
157415	F-13	W.F.	3/22/54	2/19/54	—	44.4	42.2	43.6	14.3	12.4	13.3	113	83	95	43	35	4
157416	F-14	W.F.	3/22/54	2/25/54	—	45.8	42.4	43.8	14.2	12.3	13.5	123	76	100	41	36	3
157417	F-15	W.F.	3/22/54	3/ 3/54	—	45.6	42.2	43.9	14.9	12.9	14.1	122	80	100	43	34	3
157418	F-16	W.F.	3/22/54	3/ 3/54	—	44.0	41.6	43.0	13.4	11.2	12.8	125	90	10.9	38	32	3
Current Mill Average:						43.5		13.5		104		3					
Cumulative Mill Average:						43.2		14.1		105		3					
Mill Factor, %:						100.7		95.7		99.0		10					
Mill Index, %:						100.9		97.8		97.2		10					

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

TABLE IX

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1954 (continued)

Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		In cross							
		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Av.	Max.	Min.	Av.						
<u>Mill G--42-lb. Linerboard</u>																			
/ 1/54	--	44.4	43.6	44.0	13.0	12.1	12.8	138	97	120	34	29	31	432	304	347a	448	320	361a
/ 1/54	--	44.8	43.6	44.0	13.1	12.0	12.5	133	100	116	32	28	30	360	304	325a	400	320	358a
/ 8/54	--	43.4	42.0	42.5	12.7	11.6	12.1	137	105	123	32	28	30	384	288	327a	400	320	363a
/ 8/54	--	45.4	44.0	44.6	13.8	12.7	13.1	144	100	124	37	31	33	400	320	349a	408	360	388a
				43.8			12.6		121			31				337			367
				43.1			13.7		109			36				358			392
				101.6			92.0		111.0			86.1				94.1			93.6
				101.6			91.3		113.1			86.1				91.3			91.3

TABLE X

<u>Mill H--42-lb. Linerboard</u>																			
1/8/54	2	44.2	43.6	43.9	13.1	12.2	12.8	124	85	108	42	32	36	400	320	360a	424	352	391a
1/9/54	2	44.0	42.4	43.5	13.2	12.0	12.8	123	80	100	37	31	35	408	296	363a	432	352	395a
1/15/54	2	44.0	42.6	43.4	13.0	12.0	12.6	134	80	107	36	31	34	416	336	383a	448	368	401a
1/16/54	2	43.8	42.6	43.2	13.1	12.1	12.7	135	80	110	35	32	33	416	352	379a	448	400	421a
				43.5			12.7		106				34			372			402
				43.0			13.5		106				35			373			404
				101.2			94.1		100.0				97.1			99.7			99.5
				100.9			92.0		99.1				94.4			100.8			100.0

ings. for one or more specimens which tore beyond the 3/8-inch limit.

TABLE IX

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1954 (c)

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.				
<u>Mill G--42-lb. Linerboard</u>																	
157118	G-568	W.F.	3/ 6/54	3/ 1/54	--	44.4	43.6	44.0	13.0	12.1	12.8	138	97	120	34	29	31
157119	G-569	W.F.	3/ 6/54	3/ 1/54	--	44.8	43.6	44.0	13.1	12.0	12.5	133	100	116	32	28	30
157227	G-570	W.F.	3/13/54	3/ 8/54	--	43.4	42.0	42.5	12.7	11.6	12.1	137	105	123	32	28	30
157228	G-571	W.F.	3/13/54	3/ 8/54	--	45.4	44.0	44.6	13.8	12.7	13.1	144	100	124	37	31	33
Current Mill Average:						43.8		12.6		121		31					
Cumulative Mill Average:						43.1		13.7		109		36					
Mill Factor, %:						101.6		92.0		111.0		86.1					
Mill Index, %:						101.6		91.3		113.1		86.1					

TABLE X

<u>Mill H--42-lb. Linerboard</u>													
157389	H-437	WFLS	3/19/54	3/ 8/54	2	44.2	43.6	43.9	13.1	12.2	12.8	124	85
157390	H-438	WFLS	3/19/54	3/ 9/54	2	44.0	42.4	43.5	13.2	12.0	12.8	123	80
157454	H-439	WFLS	3/27/54	3/15/54	2	44.0	42.6	43.4	13.0	12.0	12.6	134	80
157455	H-440	WFLS	3/27/54	3/16/54	2	43.8	42.6	43.2	13.1	12.1	12.7	135	80
Current Mill Average:						43.5		12.7		106		34	
Cumulative Mill Average:						43.0		13.5		106		35	
Mill Factor, %:						101.2		94.1		100.0		97.1	
Mill Index, %:						100.9		92.0		99.1		94.4	

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

TABLE XI
SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continued)

Mch. No.	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.	Max.	Min.	In	Av.	Max.	Min.	Av.						
<u>Mill I--42-lb. Linerboard</u>																			
54	1	44.0	42.2	43.1	13.8	11.9	13.3	116	83	103	38	34	36	368	328	342a	456	400	415a
54	1	43.0	42.0	42.3	13.8	12.8	13.2	115	90	104	34	30	32	408	280	323a	408	352	385a
54	1	43.0	42.0	42.2	14.0	13.0	13.3	113	80	100	34	30	32	336	272	315a	416	352	381a
54	1	42.6	41.8	42.2	14.0	13.0	13.4	115	72	101	34	30	31	408	272	327a	432	368	387a
54	1	43.6	42.2	42.8	14.0	13.0	13.4	123	94	110	34	29	31	424	296	341a	464	368	407a
				42.5			13.3			103			32			330			395
				42.8			13.4			107			33			342			397
				99.3			99.3			97.3			97.0			96.5			99.5
				98.6			96.4			96.3			88.4			89.4			98.3

TABLE XII

Mill J--42-lb. Linerboard

54 --	43.2	41.8	42.1	13.9	13.1	13.5	131	80	110	32	28	30	362a	440	344	381a
54 --	43.6	41.6	42.3	14.1	13.0	13.6	140	80	114	32	29	31	331a	384	336	358a
54 1	43.0	40.6	41.9	14.0	13.1	13.5	141	104	119	35	30	33	349a	424	360	385a
54 --	43.8	40.2	41.9	14.0	13.0	13.5	134	100	117	36	28	33	355a	464	360	410a
			42.0			13.5			115			31	349			384
			42.8			13.8			107			32	353			375
			98.1			97.8			107.5	96.9			98.9			102.4
			97.4			97.8			107.5	86.1			94.6			95.5

is for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XI

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1954 (contin

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. Structure, units		
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
<u>Mill I--42-lb. Linerboard</u>																	
157108	I-370	---	3/ 5/54	3/ 1/54	1	44.0	42.2	43.1	13.8	11.9	13.3	116	83	103	38	34	36
157138	I-371	WF1S	3/ 9/54	3/ 4/54	1	43.0	42.0	42.3	13.8	12.8	13.2	115	90	104	34	30	32
157377	I-372	WF1S	3/18/54	3/10/54	1	43.0	42.0	42.2	14.0	13.0	13.3	113	80	100	34	30	32
157378	I-373	WF1S	3/18/54	3/11/54	1	42.6	41.8	42.2	14.0	13.0	13.4	115	72	101	34	30	31
157461	I-374	WF1S	3/27/54	3/20/54	1	43.6	42.2	42.8	14.0	13.0	13.4	123	94	110	34	29	31
Current Mill Average:						42.5			13.3			103			32		
Cumulative Mill Average:						42.8			13.4			107			33		
Mill Factor, %:						99.3			99.3			97.3			97.0		
Mill Index, %:						98.6			96.4			96.3			88.4		

TABLE XII

<u>Mill J--42-lb. Linerboard</u>													
157057	J-475	B.F.	3/ 1/54	2/22/54	--	43.2	41.8	42.1	13.9	13.1	13.5	131	80
157058	J-476	B.F.	3/1/ 54	2/22/54	--	43.6	41.6	42.3	14.1	13.0	13.6	140	80
157199	J-477	B.F.	3/12/54	3/ 3/54	1	43.0	40.6	41.9	14.0	13.1	13.5	141	104
157200	J-478	B.F.	3/12/54	3/ 3/54	--	43.8	40.2	41.9	14.0	13.0	13.5	134	100
Current Mill Average:						42.0		13.5	115		115		31
Cumulative Mill Average:						42.8		13.8	107		107		32
Mill Factor, %:						98.1		97.8	107.5		107.5		96.9
Mill Index, %:						97.4		97.8	107.5		107.5		86.1

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

TABLE XIII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continued)

Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		Across							
		Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.		Min.	Av.					
<u>Mill K--42--lb. Linerboard</u>																			
2/27/54	7	43.0	41.6	42.2	13.0	12.0	12.6	124	84	103	36	31	34	400	328	360a	416	320	374a
3/ 6/54	7	41.4	38.4	39.9	12.3	11.1	11.7	137	90	111	34	28	31	368	264	319a	400	328	357a
3/15/54	7	43.8	42.0	42.8	13.9	13.0	13.3	144	77	108	38	30	34	368	272	333	400	320	360a
3/20/54	7	45.8	42.6	44.1	14.1	12.2	13.0	124	82	101	38	32	35	424	352	391a	424	376	404a
				42.2			12.6			106			34			350			374
				42.9			12.9			100			36			360			388
				98.4			97.7			106.0			94.4			97.2			96.4
				97.9			91.3			99.1			94.4			94.9			93.0

dings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XIII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (con

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 K--42-lb. Linerboard</u>																	
157103	K-21		3/ 4/54	2/27/54	7	43.0	41.6	42.2	13.0	12.0	12.6	124	84	103	36	31	31
157156	K-22		3/10/54	3/ 6/54	7	41.4	38.4	39.9	12.3	11.1	11.7	137	90	111	34	28	31
157367	K-23		3/17/54	3/15/54	7	43.8	42.0	42.8	13.9	13.0	13.3	144	77	108	38	30	31
157437	K-24		3/25/54	3/20/54	7	45.8	42.6	44.1	14.1	12.2	13.0	124	82	101	38	32	31
Current Mill Average:								42.2			12.6			106			31
Cumulative Mill Average:								42.9			12.9			100			31
Mill Factor, %:								98.4			97.7			106.0			91
Mill Index, %:								97.9			91.3			99.1			91

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

TABLE XIV

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1954 (continued)

Mch. No.	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.	Max.	Min.	In	Across	Max.	Min.	Av.					
Mill L--42-lb. Linerboard																		
8/54	44.4	42.0	43.3	14.7	13.8	14.1	121	86	105	40	33	36	384	304	341a	464	336	383a
11/54	44.0	42.0	42.9	15.0	13.8	14.2	127	85	106	40	32	36	384	304	343a	416	336	373a
8/54	43.4	41.8	42.5	14.6	13.6	13.9	119	90	107	37	32	35	384	304	358a	416	328	366a
3/54	43.8	41.8	42.5	14.0	12.3	13.3	126	80	103	39	33	35	384	312	352a	400	336	373a
7/54	44.4	42.0	43.2	14.8	12.8	14.2	123	88	103	38	32	36	424	272	335a	432	344	378a
3/54	43.8	41.6	42.4	13.9	13.0	13.4	129	100	110	36	32	35	384	296	319a	392	312	351a
2/54	43.4	41.8	42.8	13.7	12.1	13.0	140	100	118	32	28	30	352	272	310a	368	312	347a
5/54	44.4	42.4	43.7	14.3	13.1	13.8	128	87	109	36	30	32	368	272	317a	432	336	367a
3/54	44.2	42.8	43.6	15.0	12.3	14.0	124	94	109	40	34	38	416	320	375a	472	400	435a
3/54	43.4	41.6	42.5	15.5	13.8	14.5	125	69	103	40	35	38	408	336	387a	432	368	406a
			42.9			13.8			107			35			344			378
			43.1			13.6			106			36			359			390
			99.5			101.5			100.9			97.2			95.8			96.9
			99.5			100.0			100.0			97.2			93.2			94.0

TABLE XV

Mill M--42-lb. Linerboard

5/54	44.2	41.8	42.9	13.9	12.9	13.2	121	66	105	38	30	35	408	320	349a	464	360	397a
4/54	46.2	43.0	44.8	14.9	13.0	14.0	129	88	108	44	36	39	480	416	450a	480	384	434a
	43.8					13.6		106				37			400			515
	43.0					13.7		107				35			387			403
	101.9					99.3		99.1				105.7			103.4			103.0
	101.6					98.6		99.1				102.8			108.4			103.2

ugs for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XIV

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1954

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.	Max.	Min.	Max.	Min.	Max.	Min.			
Mill L-42-lb. Linerboard																
157060	L-249		3/ 1/54	2/ 8/54	1	44.4	42.0	43.3	14.7	13.8	14.1	121	86	105	40	33
157061	L-250		3/ 1/54	2/11/54	1	44.0	42.0	42.9	15.0	13.8	14.2	127	85	106	40	32
157136	L-251		3/ 9/54	2/18/54	1	43.4	41.8	42.5	14.6	13.6	13.9	119	90	107	37	32
157137	L-252		3/ 9/54	2/19/54	1	43.8	41.8	42.5	14.0	12.3	13.3	126	80	103	39	33
157348	L-253		3/15/54	2/27/54	1	44.4	42.0	43.2	14.8	12.8	14.2	123	88	103	38	32
157349	L-254		3/15/54	2/28/54	1	43.8	41.6	42.4	13.9	13.0	13.4	129	100	110	36	32
157404	L-255		3/20/54	3/ 2/54	1	43.4	41.8	42.8	13.7	12.1	13.0	140	100	118	32	28
157405	L-256		3/20/54	3/ 6/54	1	44.4	42.4	43.7	14.3	13.1	13.8	128	87	109	36	30
157446	L-257		3/26/54	3/ 8/54	1	44.2	42.8	43.6	15.0	12.3	14.0	124	94	109	40	34
157447	L-258		3/26/54	3/13/54	1	43.4	41.6	42.5	15.5	13.8	14.5	125	69	103	40	35
Current Mill Average:								42.9			13.8			107		
Cumulative Mill Average:								43.1			13.6			106		
Mill Factor, %:								99.5			101.5			100.9		
Mill Index, %:								99.5			100.0			100.0		

TABLE XV

Mill M-42-lb. Linerboard

157116	M-220	W.	3/ 6/54	2/15/54	2	44.2	41.8	42.9	13.9	12.9	13.2	121	66	105	38	30
157372	M-221	W.	3/18/54	3/ 4/54	4	46.2	43.0	44.8	14.9	13.0	14.0	129	88	108	44	36
Current Mill Average:						43.8		13.6		106						
Cumulative Mill Average:						43.0		13.7		107						
Mill Factor, %:						101.9		99.3		99.1						
Mill Index, %:						101.6		98.6		99.1						

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

TABLE XVI

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH 31, 1954—(continued)

ate ade	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		Av.							
		Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.		Min.	Av.					
<u>Mill N--42-lb. Linerboard</u>																			
17/54	1	43.4	42.0	42.5	13.0	12.0	12.7	122	83	105	40	34	37	416	272	355a	496	368	415a
25/54	1	44.2	40.8	42.2	12.7	11.0	11.8	127	84	105	41	33	36	432	320	368a	424	368	392a
26/54	1	42.4	40.8	41.9	12.2	11.6	12.0	131	83	105	40	34	38	424	304	353a	448	336	383a
2/54	1	42.0	40.8	41.8	13.0	12.0	12.5	128	90	107	40	32	36	400	312	347a	432	352	389a
4/54	1	43.8	42.2	43.0	13.1	11.9	12.5	125	84	110	38	32	35	416	296	353a	400	360	389a
14/54	1	44.0	42.0	42.8	12.9	11.8	12.2	130	83	110	37	30	34	432	304	368a	456	368	412a
				42.4			12.3		107				36			357			397
				42.7			12.3		107				33			341			384
				99.3			100.0		100.0				109.1			104.7			103.4
				98.4			89.1		100.0				100.0			96.7			98.8

TABLE XVII

<u>Mill O--42-lb. Linerboard</u>																			
24/54	3	41.0	39.6	40.2	13.0	11.8	12.2	112	80	102	35	30	32	408	288	337a	440	312	363a
26/54	3	43.6	42.0	42.6	12.9	12.0	12.3	128	100	119	38	32	35	400	304	353a	400	352	377a
26/54	3	43.6	42.0	42.5	13.0	11.8	12.2	136	80	121	37	32	35	392	296	332	400	368	391a
26/54	3	42.2	40.4	41.6	12.4	11.8	12.1	135	105	122	38	32	35	352	280	328a	400	352	376a
				41.8			12.2			116			34			337			377
				41.6			12.2			109			34			340			371
				100.5			100.0			106.4			100.0			99.1			101.6
				97.0			88.4			108.4			94.4			91.3			93.3

tings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XVI

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH 31, 1954 (continued)

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points	Bursting Strength, p.s.i.		G. E. Puncture, units						
						Max.	Min.		Max.	Min.	Max.	Min.					
Mill N--42-lb. Linerboard																	
157049	N-58		3/ 1/54	2/17/54	1	43.4	42.0	42.5	13.0	12.0	12.7	122	83	105	40	34	37
157117	N-59	WFLS	3/ 6/54	2/25/54	1	44.2	40.8	42.2	12.7	11.0	11.8	127	84	105	41	33	36
157187	N-60		3/11/54	2/26/54	1	42.4	40.8	41.9	12.2	11.6	12.0	131	83	105	40	34	38
157188	N-61		3/11/54	3/ 2/54	1	42.0	40.8	41.8	13.0	12.0	12.5	128	90	107	40	32	36
157189	N-62		3/11/54	3/ 4/54	1	43.8	42.2	43.0	13.1	11.9	12.5	125	84	110	38	32	35
157406	N-63	WFLS	3/22/54	3/14/54	1	44.0	42.0	42.8	12.9	11.8	12.2	130	83	110	37	30	34
Current Mill Average:								42.4			12.3			107			36
Cumulative Mill Average:								42.7			12.3			107			33
Mill Factor, %:								99.3			100.0			100.0			109
Mill Index, %:								98.4			89.1			100.0			100

TABLE XVII

Mill O--42-lb. Linerboard													
157104	O-31	W.F.	3/ 4/54	2/24/54	3	41.0	39.6	40.2	13.0	11.8	12.2	112	80
157105	O-32	W.F.	3/ 4/54	2/26/54	3	43.6	42.0	42.6	12.9	12.0	12.3	128	100
157106	O-33	W.F.	3/ 4/54	2/26/54	3	43.6	42.0	42.5	13.0	11.8	12.2	136	80
157107	O-34	W.F.	3/ 4/54	2/26/54	3	42.2	40.4	41.6	12.4	11.8	12.1	135	105
Current Mill Average:						41.8		41.2		12.2		116	
Cumulative Mill Average:						41.6		41.2		12.2		109	
Mill Factor, %:						100.5		100.0		100.0		106.4	
Mill Index, %:						97.0		88.4		108.4		108.4	

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

TABLE XVIII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continued)

Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage				G. E. Puncture, units		Elmendorf Tear, g./sheet			
	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Max.	Min.	Max.	Min.	Av.	Max.
<u>Mill E--44/46-lb. Drum Linerboard</u>														
54 2	49.6	46.8	47.9	14.1	13.0	13.6	124	95	107	38	34	36	464	400
54 2	47.0	44.4	46.2	14.4	12.9	13.6	116	80	98	42	36	38	448	352
													429a	448
													397a	456
													413	407
													435	417
													94.9	97.6
<u>Miscellaneous</u>														
<u>Mill E--28-lb. Linerboard</u>														
54 2	29.0	27.0	28.0	9.3	8.4	8.9	86	58	75	18	16	18	288	176
													226a	256
													192	219a
<u>Mill E--69-lb. Linerboard</u>														
54 2	71.4	68.0	69.1	20.4	19.2	19.3	177	119	147	70	62	66	752	600
													694a	744
													592	659a

s for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XVIII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continue)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight,		Caliper,		Bursting Strength,		G. E.	
						Max.	Min.	Max.	Min.	p.s.i. gage	Max.	Min.	Max.
						lb.	Av.	points	Av.	Min.	Av.	units	Max.
<u>Mill E--44/46-lb. Drum Linerboard</u>													
157056	E-62	--	3/ 1/54	2/24/54	2	49.6	46.8	47.9	14.1	13.0	13.6	124	95
157373	E-65	--	3/18/54	3/16/54	2	47.0	44.4	46.2	14.4	12.9	13.5	116	80
Current Mill Average:								47.0			13.7	103	37
Cumulative Mill Average:								47.2			14.4	101	39
Mill Factor, %:								99.6			95.1	102.0	94.9
<u>Miscellaneous</u>													
<u>Mill E--28-lb. Linerboard</u>													
157368	E-64		3/17/54	3/12/54	2	29.0	27.0	28.0	9.3	8.4	8.9	86	58
												75	18
												18	16
												18	288
<u>Mill E--69-lb. Linerboard</u>													
157229	E-63		3/13/54	3/ 9/54	2	71.4	68.0	69.1	20.4	19.2	19.3	177	119
												147	70
												62	66
												752	752

^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 XIX, the atmospheric conditions used prior to and during the testing period varied considerably.

TABLE XIX

Mill Code	Preconditioning			Conditioning		
	R.H., %	Temp., ° F.	Time, hr.	R.H., %	Temp., ° F.	Time, hr.
A		None		27-50	71-78	—
B	27-36	63-70	0.5	50	70	48-192
C	50	72	48-120	50	72	48-120
D	31-34	78	8	51-53	71-73	16
E		None		54-62	75-80	—
F		None		42-53	71-75	24-48
G		None		50	73	36
H		None		50	73	24
I		None		50	70-84	—
J		None		50	73	0.5
K	42-55	70-76	24	42-55	70-76	—
L		None		50-54	74-82	—
M		None		35-47	72-75	—
N	50	72-73	24	50	72	—
O		None		50	73	2
E*		None		51-53	76-78	—

* Drum Linerboard

A summary of the mill comparisons for the current period as compared with the previous period may be seen in Tables XX and XXI, respectively. The comparison for the various mills is given in Tables XXII to XXXVI, for the 42-lb. liner samples. A comparison of the

special drum stock is given in Table XXXVII. In all the comparisons given in Tables XX to XXXVII, the Institute's test values have been used as the reference line.

A comparison of the test data in Tables XX and XXI indicates that in the majority of cases there is good agreement between the mill and Institute data. Table XX 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 XXI, the average differences shown for each test in Table XX 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 XXI 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 maximum percentage variation agrees favorably with the corresponding variations for the previous periods. Further, it may be noted that the average basis weight results for Mills D, E, H, J, and C are higher than those for the Institute, whereas the result for Mill B is the same and the results for the other mills are lower. In general, the agreement between Institute and mill basis weight results is very good.

The maximum variation in caliper for the current period is eight per cent. Compared with the values for the Institute, the average result for Mill H is the same and the average results for the other

mills are lower. The accord between Institute and mill caliper values is good with the exception of Mills E, L, and M.

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

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

It may be seen in Tables XX and XXI that the average machine direction tear result for Mill D is higher than those for the Institute whereas the results for the other mills are lower. The maximum variation for the current period is seventeen per cent. The differences encountered for Mills G, E, K, L, and O appear to be excessive.

With regard to the cross-machine direction tear results, it may be noted that the average results for Mills B, C, D, J, M and N are higher than those for the Institute whereas the average results for Mills A, E, F, G, H, K, L, and O are lower and the result for Mill I

is the same. The maximum variation for the current period is sixteen per cent. Only the differences for Mills E and N appear to be excessive.

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

No. Samples Compared	Mills*														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	10	20	8	10	2	10	4	4	5	4	4	10	2	6	4
	<u>Basis Weight</u>														
Institute	43.3	42.5	43.7	44.1	41.9	43.5	43.8	43.5	42.5	42.0	42.2	42.9	43.8	42.4	41.8
Mill	42.8	42.5	43.6	44.7	42.3	43.0	43.4	43.8	42.4	42.6	41.9	42.4	42.9	42.1	42.0
Av. Diff.**	-0.5	0.0	-0.1	+0.6	+0.4	-0.5	-0.4	+0.3	-0.1	+0.6	-0.3	-0.5	-0.9	-0.3	+0.2
Max. Diff.***	-1.0	+0.9	-0.3	+1.5	+0.7	-1.1	-0.5	+0.6	-0.5	+0.9	-0.7	-1.2	-1.7	-0.8	+0.4
	<u>Caliper</u>														
Institute	12.8	12.3	14.4	12.8	12.9	13.5	12.6	12.7	13.3	13.5	12.6	13.8	13.6	12.3	12.2
Mill	12.7	12.2	14.0	12.6	11.9	13.0	12.5	12.7	13.0	13.4	12.2	13.0	12.7	11.8	11.8
Av. Diff.**	-0.1	-0.1	-0.4	-0.2	-1.0	-0.5	-0.1	0.0	-0.3	-0.1	-0.4	-0.8	-0.9	-0.5	-0.4
Max. Diff.***	-0.2	+0.2	-0.6	-0.5	-1.2	-0.8	-0.3	-0.1	-0.5	-0.2	-0.7	-1.4	-1.4	-0.7	-0.4
	<u>Bursting Strength</u>														
Institute	111	115	109	112	107	104	121	106	103	115	106	107	106	107	116
Mill	113	116	109	114	116	108	116	108	106	113	109	111	114	105	116
Av. Diff.**	+2	+1	0	+2	+9	+4	-5	+2	+3	-2	+3	+4	+8	-2	0
Max. Diff.***	+8	+7	-7	+8	+10	+11	-6	+5	+6	-6	+5	+6	+8	-4	+2

(Continued on next page.)

TABLE XX (Cont.)
SUMMARY OF TEST RESULT COMPARISONS
(Average Mill and Institute Results)

No. Samples Compared	A	B	C	D	E	F	Mills*								M	N	O
							G	H	I	J	K	L					
	10	20	8	10	2	10	4	4	5	4	4	10	2	6	4		
							G. E. Puncture										
Institute	34	29	35	37	32	39	31	34	32	31	34	35	37	36	34		
Mill	36	29	36	--	30	39	31	33	31	31	--	--	31	--	--		
Av. Diff.**	+2	0	+1	--	-2	0	0	-1	-1	0	--	--	-6	--	--		
Max. Diff.***	+4	-3	-7	--	-3	+4	-1	-3	-3	-2	--	--	-7	--	--		
							Tearing Strength, in										
Institute	351	302	367	375	372	395	337	372	330	349	350	344	400	357	337		
Mill	331	295	334	384	310	375	303	339	326	316	302	303	376	346	296		
Av. Diff.**	-20	-7	-33	+9	-62	-20	-34	-33	-4	-33	-48	-41	-24	-11	-41		
Max. Diff.***	-51	-46	-49	+38	-100	-48	-38	-44	-33	-43	-79	-104	-46	-39	-70		
							Tearing Strength, across										
Institute	382	353	400	410	375	429	367	402	395	384	374	378	415	397	377		
Mill	375	362	409	430	316	419	349	386	395	388	349	371	429	436	355		
Av. Diff.**	-7	+9	+9	+20	-59	-10	-18	-16	0	+4	-25	-7	+14	+39	-22		
Max. Diff.***	-28	+45	+25	+63	-88	-60	-28	-32	-26	+19	-58	-104	+40	+81	-32		

* 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 XXI

COMPARISON OF INSTITUTE-MILL DIFFERENCES BY PERIODS

	Basis Weight	Caliper	Average Differences, %			
			Bursting Strength	G. E. Puncture	Tearing in	Strength across
Mill A						
Current period	-1	-0.8	+2	+6	-6	-2
80th period	-2	0	+4	+3	-5	-3
79th period	-0.5	+0.8	+2	+9	-7	-2
Mill B						
Current period	0	-0.8	+0.9	0	-2	+3
80th period	+0.2	+0.8	-0.9	-3	+5	+3
79th period	0	-0.8	0	-7	-4	+2
Mill C						
Current period	-0.2	-3	0	+3	-9	+2
80th period	-0.7	-3	0	+3	+0.6	+2
79th period	-0.5	-3	0	-3	-14	-5
Mill D						
Current period	+1	-2	+2	--	+2	+5
80th period	-0.9	-2	0	--	-5	+0.8
79th period	+0.5	0	-5	--	+7	+7
Mill E						
Current period	+1	-8	+8	-6	-17	-16
80th period	0	-10	+3	-12	-18	-13
79th period	--	--	--	--	--	--
Mill F						
Current period	-1	-4	+4	0	-5	-2
80th period	-0.5	-4	+5	-2	-3	+3
79th period	-0.7	-4	+5	-3	-8	-5
Mill G						
Current period	-0.9	-0.8	-4	0	-10	-5
80th period	0	+0.8	0	--	-6	-5
79th period	0	-0.8	-0.8	-2	-	-

79th period	0	-0.5	0	-7	-4	+2
Mill C.						
Current period	-0.2	-3	0	+3	-9	+2
80th period	-0.7	-3	0	+3	+0.6	+2
79th period	-0.5	-3	0	-3	-14	-5
Mill D						
Current period	+1	-2	+2	--	+2	+5
80th period	-0.9	-2	0	--	-5	+0.6
79th period	+0.5	0	-5	--	+7	+7
Mill E						
Current period	+1	-8	+8	-6	-17	-16
80th period	0	-10	+3	-12	-18	-13
79th period	--	--	--	--	--	--
Mill F						
Current period	-1	-4	+4	0	-5	-2
80th period	-0.5	-4	+5	-2	-3	+3
79th period	-0.7	-4	+5	-3	-8	-5
Mill G						
Current period	-0.9	-0.8	-4	0	-10	-5
80th period	0	+0.8	0	--	-6	-5
79th period	0	-0.8	-0.8	-6	-7	-3
Mill H						
Current period	+0.7	0	+2	-3	-9	-4
80th period	+1	0	-1	-3	-7	-5
79th period	--	--	--	--	--	--
Mill I						
Current period	-0.2	-2	+3	-3	-1	0
80th period	-0.2	-2	0	-9	+8	+8
79th period	-0.2	0	+2	+3	+6	+7
Mill J						
Current period	+1	-0.7	-2	0	-9	+1
80th period	+1	-0.7	-2	0	-7	-1
79th period	+0.7	0	-3	+3	-8	+6
Mill K						
Current period	-0.7	-3	+3	--	-14	-7
80th period	0	-4	+3	--	-4	+3
79th period	-0.5	-2	+2	--	-13	-6
Mill L						
Current period	-1	-6	+4	--	-12	-2
80th period	-2	-5	+4	--	-10	-3
79th period	-2	-5	+3	--	-19	-6
Mill M						
Current period	-2	-7	+8	-16	-6	+3
80th period	-3	-7	+11	-23	-9	-5
79th period	-4	-7	+7	-19	-8	-9
Mill N						
Current period	-0.7	-4	-2	--	-3	+10
80th period	-0.7	-4	+0.3	--	+4	+13
79th period	-0.2	-5	+7	--	-2	+8
Mill O						
Current period	+0.5	-3	0	--	-12	-6
80th period	0	-4	-5	--	-5	+2
79th period	-0.2	-2	-3	--	-4	-0.3

TABLE XXII
SUMMARY OF INDIVIDUAL TEST LOIS--MARCH 1 THROUGH MARCH 31, 1954

Institute Data versus Mill Data

Basis Weight, lb.	Caliper, points	Bursting		G. E.		Elmendorf Tear,											
		Strength,	p.s.i. gage	Puncture, units	In	g./sheet	Across										
IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.										
<u>Mill A-42-lb. Linerboard</u>																	
43.5	43.3	-0.2	12.9	13.0	+0.1	112	114	+2	34	31	-3	344a	313	-31	390a	389	-1
42.6	42.5	-0.1	12.4	12.5	+0.1	101	109	+8	33	36	+3	375a	361	-14	361a	387	+26
42.7	42.2	-0.5	12.7	12.6	-0.1	115	114	-1	34	36	+2	342a	339	-3	385a	402	+17
43.5	43.1	-0.4	12.9	13.0	+0.1	110	112	+2	33	37	+4	353a	348	-5	391a	388	-3
43.5	43.1	-0.4	12.9	12.7	-0.2	111	115	+4	37	37	0	355a	315	-40	393a	365	-28
43.3	42.8	-0.5	12.9	12.7	-0.2	114	112	-2	36	37	+1	352a	301	-51	382a	354	-28
43.8	42.8	-1.0	13.1	12.9	-0.2	116	112	-4	34	35	+1	358a	329	-29	378a	366	-12
43.3	42.8	-0.5	12.7	12.7	0.0	112	110	-2	32	35	+3	309a	304	-5	368a	353	-15
43.4	42.9	-0.5	13.2	13.0	-0.2	109	114	+5	35	37	+2	387a	371	-16	393a	386	-7
43.0	42.7	-0.3	12.3	12.3	0.0	112	119	+7	33	36	+3	331a	330	-1	375a	362	-13
43.3	42.8	-0.5	12.8	12.7	-0.1	111	113	+2	34	36	+2	351	331	-20	382	375	-7

Mill A--42-lb. Linerboard

ings for one or more specimens which tore beyond the 3/8-inch limit.

data are calculated from the totals of the individual readings.

TABLE XXII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954

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 A-42-lb. Linerboard																		
157047	A-525	WFLS	2/14/54	2	43.5	43.3	-0.2	12.9	13.0	+0.1	112	114	+2	34	31	-3	344a	31
157048	A-526	WFLS	2/20/54	1	42.6	42.5	-0.1	12.4	12.5	+0.1	101	109	+8	33	36	+3	375a	36
157082	A-527	WFLS	2/22/54	1	42.7	42.2	-0.5	12.7	12.6	-0.1	115	114	-1	34	36	+2	342a	33
157083	A-528	WFLS	2/21/54	2	43.5	43.1	-0.4	12.9	13.0	+0.1	110	112	+2	33	37	+4	353a	34
157134	A-529	WFLS	2/28/54	1	43.5	43.1	-0.4	12.9	12.7	-0.2	111	115	+4	37	37	0	355a	31
157135	A-530	WFLS	2/28/54	1	43.3	42.9	-0.5	12.9	12.7	-0.2	114	112	-2	36	37	+1	352a	30
157219	A-531	WFLS	3/ 7/54	2	43.8	42.8	-1.0	13.1	12.9	-0.2	116	112	-4	34	35	+1	358a	32
157220	A-532	WFLS	3/ 7/54	1	43.3	42.8	-0.5	12.7	12.7	0.0	112	110	-2	32	35	+3	309a	30
157444	A-533	WFLS	3/15/54	2	43.4	42.9	-0.5	13.2	13.0	-0.2	109	114	+5	35	37	+2	387a	37
157445	A-534	WFLS	3/16/54	1	43.0	42.7	-0.3	12.3	12.3	0.0	112	119	+7	33	36	+3	331a	33
Current Mill Average:					43.3	42.8	-0.5	12.8	12.7	-0.1	111	113	+2	34	36	+2	351	33

^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, 1954 (continued)

Institute Data versus Mill Data																	
Basis Weight, lb.		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	Across	IPC	Mill	Diff.	
Mill B---42-lb. Linerboard																	
43.2	42.8	-0.4	12.7	12.6	-0.1	114	114	0	31	29	-2	310	293	-17	369a	355	-14
43.2	42.9	-0.3	12.6	12.6	0.0	110	111	+1	31	29	-2	307a	284	-23	367a	345	-22
42.9	42.4	-0.5	12.7	12.5	-0.2	111	109	-2	31	28	-3	323a	283	-40	355a	345	-10
43.2	42.8	-0.4	12.8	12.6	-0.2	109	111	+2	31	29	-2	323a	304	-19	368a	334	+16
41.6	41.5	-0.1	12.1	12.0	-0.1	114	114	0	28	28	0	279	295	+16	336a	349	+13
41.4	41.6	+0.2	12.2	12.0	-0.2	109	112	+3	27	28	+1	269	289	+20	323a	351	+28
42.7	42.8	+0.1	12.4	12.6	+0.2	119	114	-5	29	28	-1	289	303	+14	343a	388	+45
41.8	41.9	+0.1	12.2	12.3	+0.1	115	112	-3	28	28	0	292a	300	+8	330a	363	+33
41.6	42.5	+0.9	12.2	12.0	-0.2	113	114	+1	28	28	0	285	277	-8	335a	365	+30
41.6	42.4	+0.8	12.1	11.9	-0.2	110	114	+4	27	28	+1	286	278	-8	352a	348	-4
42.2	43.0	+0.8	12.3	12.1	-0.2	114	113	-1	28	28	0	314	268	-46	357a	339	-18
42.2	42.9	+0.7	12.3	12.1	-0.2	115	115	0	28	28	0	301	286	-15	336a	338	+2
42.9	43.1	+0.2	12.6	12.6	0.0	110	117	+7	29	28	-1	301a	283	-18	359a	363	+4
43.3	42.8	-0.5	12.6	12.6	0.0	113	116	+3	29	29	0	286	276	-10	341a	355	+14
42.1	42.0	-0.1	12.3	12.3	0.0	109	112	+3	28	28	0	293a	279	-14	334a	335	+1
42.6	42.7	+0.1	12.4	12.6	+0.2	115	114	-1	28	29	+1	311	297	-14	350a	363	+13
43.2	42.8	-0.4	11.9	11.7	-0.2	129	128	-1	30	30	0	314a	327	+13	385a	391	+6
43.0	42.7	-0.3	11.8	11.7	-0.1	129	127	-2	29	30	+1	308a	299	-9	366a	352	-14
43.0	42.9	-0.1	11.8	12.0	+0.2	122	124	+2	31	30	-1	325a	339	+14	381a	397	+16
42.2	42.4	+0.2	11.7	11.9	+0.2	119	122	+3	30	30	0	319a	331	+12	375a	403	+28
42.5	42.5	0.0	12.3	12.2	-0.1	115	116	+1	29	29	0	302	295	-7	353	362	+9

s for one or more specimens which tore beyond the $3/8$ -inch limit.

data are calculated from the totals of the individual readings.

TABLE XXIII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight,		Caliper,		Bursting Strength,		G. E. Puncture,		IPC Mill Diff.	IPC Mill Diff.	IPC Mill	E		
					lb.		points		p.s.i. gage		units							
					IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.						
Mill B---42-lb. Linerboard																		
157050	B-951	WFLS	2/12/54	1	43.2	42.8	-0.4	12.7	12.6	-0.1	114	114	0	31	29	-2	310	293
157051	B-952	WFLS	2/12/54	1	43.2	42.9	-0.3	12.6	12.6	0.0	110	111	+1	31	29	-2	307a	284
157052	B-953	WFLS	2/12/54	1	42.9	42.4	-0.5	12.7	12.5	-0.2	111	109	-2	31	28	-3	323a	283
157053	B-954	WFLS	2/12/54	1	43.2	42.8	-0.4	12.8	12.6	-0.2	109	111	+2	31	29	-2	323a	304
157340	B-955	WFLS	3/ 3/54	1	41.6	41.5	-0.1	12.1	12.0	-0.1	114	114	0	28	28	0	279	295
157341	B-956	WFLS	3/ 3/54	1	41.4	41.6	+0.2	12.2	12.0	-0.2	109	112	+3	27	28	+1	269	289
157342	B-957	WFLS	3/ 3/54	1	42.7	42.8	+0.1	12.4	12.6	+0.2	119	114	-5	29	28	-1	289	303
157343	B-958	WFLS	3/ 3/54	1	41.8	41.9	+0.1	12.2	12.3	+0.1	115	112	-3	28	28	0	292a	300
157344	B-959	WFLS	3/ 3/54	1	41.6	42.5	+0.9	12.2	12.0	-0.2	113	114	+1	28	28	0	285	277
157345	B-960	WFLS	3/ 3/54	1	41.6	42.4	+0.8	12.1	11.9	-0.2	110	114	+4	27	28	+1	286	278
157346	B-961	WFLS	3/ 3/54	1	42.2	43.0	+0.8	12.3	12.1	-0.2	114	113	-1	28	28	0	314	268
157347	B-962	WFLS	3/ 3/54	1	42.2	42.9	+0.7	12.3	12.1	-0.2	115	115	0	28	28	0	301	286
157403	B-963	WFLS	3/ 3/54	1	42.9	43.1	+0.2	12.6	12.6	0.0	110	117	+7	29	28	-1	301a	283
157374	B-964	WFLS	3/ 3/54	1	43.3	42.8	-0.5	12.6	12.6	0.0	113	116	+3	29	29	0	286	276
157375	B-965	WFLS	3/ 3/54	1	42.1	42.0	-0.1	12.3	12.3	0.0	109	112	+3	28	28	0	293a	279
157376	B-966	WFLS	3/ 3/54	1	42.6	42.7	+0.1	12.4	12.6	+0.2	115	114	-1	28	29	+1	311	297
157441	B-967	WFLS	3/16/54	1	43.2	42.8	-0.4	11.9	11.7	-0.2	129	128	-1	30	30	0	314a	327
157462	B-968	WFLS	3/16/54	1	43.0	42.7	-0.3	11.8	11.7	-0.1	129	127	-2	29	30	+1	308a	299
157442	B-969	WFLS	3/16/54	1	43.0	42.9	-0.1	11.8	12.0	+0.2	122	124	+2	31	30	-1	325a	339
157443	B-970	WFLS	3/16/54	1	42.2	42.4	+0.2	11.7	11.9	+0.2	119	122	+3	30	30	0	319a	331
Current Mill Average:					42.5	42.5	0.0	12.3	12.2	-0.1	115	116	+1	29	29	0	302	295

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 XXIV

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continued)

Institute Data versus Mill Data

Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i.	G. E. Puncture, units	Elmendorf Tear,												
				IPC Mill Diff.	IPC Mill Diff.	g./sheet										
						In	Across									
IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.									
<u>Mill C--42-lb. Linerboard</u>																
44.0	44.1	+0.1	14.6	14.0	-0.6	102	100	-2	36	37	382a	336	-46	398a	393	-5
44.0	43.8	-0.2	14.4	14.2	-0.2	101	100	-1	35	37	350	327	-23	378a	398	+20
43.5	43.4	-0.1	14.6	14.1	-0.5	115	108	-7	34	35	355	333	-22	377a	402	+25
43.4	43.2	-0.2	14.4	14.0	-0.4	108	113	+5	34	34	350	324	-26	406a	402	-4
44.2	43.9	-0.3	14.6	14.0	-0.6	107	113	+6	37	30	392	343	-49	424a	431	+7
44.0	43.8	-0.2	14.5	14.0	-0.5	108	108	0	38	38	384a	342	-42	412a	413	+1
43.2	43.2	0.0	14.0	13.7	-0.3	113	116	+3	34	36	363	334	-29	398a	403	+5
43.3	43.4	+0.1	14.0	13.7	-0.3	116	116	0	34	36	357	335	-22	410a	428	+18
43.7	43.6	-0.1	14.4	14.0	-0.4	109	109	0	35	36	367	334	-33	400	409	+9

TABLE XXV

Mill D--42-lb. Linerboard

45.1	45.4	+0.3	12.9	12.5	-0.4	112	116	+4	40	381a	389	+8	423a	433	+10
44.9	45.4	+0.5	12.9	12.5	-0.4	113	116	+3	39	375a	390	+15	423a	433	+10
45.2	45.1	-0.1	12.9	12.4	-0.5	110	116	+6	39	384a	388	+4	426a	430	+4
45.1	45.2	+0.1	13.0	13.0	0.0	118	118	0	38	386a	378	-8	431a	432	+1
44.2	45.0	+0.8	13.0	13.0	0.0	109	110	+1	39	386a	397	+11	416a	427	+11
43.1	44.0	+0.9	12.7	12.4	-0.3	109	117	+8	37	379a	372	-7	418a	398	-20
43.3	44.4	+1.1	12.8	12.8	0.0	109	110	+1	34	376a	389	+13	391a	454	+63
42.8	44.3	+1.5	12.6	12.4	-0.2	112	114	+2	35	343a	381	+38	381a	430	+49
42.8	44.3	+1.5	12.6	12.4	-0.2	112	116	+4	35	361a	383	+22	391a	429	+38
44.3	43.6	-0.7	12.9	12.6	-0.3	112	113	+1	38	380a	375	-5	401a	433	+32
44.1	44.7	+0.6	12.8	12.6	-0.2	112	114	+2	37	375	384	+9	410	430	+20

*a are calculated from the totals of the individual readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XXIV

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1954 (cont.)

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 C--42-lb. Linerboard												
157197	C-547	W.F.	3/ 3/54	1	44.0	44.1 +0.1	14.6	14.0 -0.6	102	100 -2	36	37 +1
157198	C-548	W.F.	3/ 3/54	1	44.0	43.8 -0.2	14.4	14.2 -0.2	101	100 -1	35	37 +2
157221	C-549	W.F.	3/ 6/54	1	43.5	43.4 -0.1	14.6	14.1 -0.5	115	108 -7	34	35 +1
157222	C-550	W.F.	3/ 6/54	1	43.4	43.2 -0.2	14.4	14.0 -0.4	108	113 +5	34	34 0
157223	C-551	W.F.	3/ 7/54	1	44.2	43.9 -0.3	14.6	14.0 -0.6	107	113 +6	37	30 -7
157224	C-552	W.F.	3/ 7/54	1	44.0	43.8 -0.2	14.5	14.0 -0.5	108	108 0	38	38 0
157225	C-553	W.F.	3/ 8/54	1	43.2	43.2 0.0	14.0	13.7 -0.3	113	116 +3	34	36 +2
157226	C-554	W.F.	3/ 8/54	1	43.3	43.4 +0.1	14.0	13.7 -0.3	116	116 0	34	36 +2
Current Mill Average:					43.7	43.6 -0.1	14.4	14.0 -0.4	109	109 0	35	36 +1
											382a	336
											350	327
											355	333
											350	324
											392	343
											384a	342
											363	334
											357	335
											367	334

TABLE XXV

Mill D--42-lb. Linerboard												
157054	D-739	W.F.	2/21/54	4	45.1	45.4 +0.3	12.9	12.5 -0.4	112	116 +4	40	381a
157055	D-740	W.F.	2/22/54	4	44.9	45.4 +0.5	12.9	12.5 -0.4	113	116 +3	39	375a
157059	D-741	W.F.	2/23/54	4	45.2	45.1 -0.1	12.9	12.4 -0.5	110	116 +6	39	384a
157122	D-742	W.F.	3/ 5/54	4	45.1	45.2 +0.1	13.0	13.0 0.0	118	118 0	38	386a
157154	D-743	W.F.	3/ 6/54	4	44.2	45.0 +0.8	13.0	13.0 0.0	109	110 +1	39	386a
157155	D-744	W.F.	3/ 7/54	4	43.1	44.0 +0.9	12.7	12.4 -0.3	109	117 +8	37	379a
157364	D-745	W.F.	3/14/54	4	43.3	44.4 +1.1	12.8	12.8 0.0	109	110 +1	34	376a
157365	D-746	W.F.	3/15/54	4	42.8	44.3 +1.5	12.6	12.4 -0.2	112	114 +2	35	343a
157366	D-747	W.F.	3/16/54	4	42.8	44.3 +1.5	12.6	12.4 -0.2	112	116 +4	35	361a
157388	D-748	W.F.	3/17/54	4	44.3	43.6 -0.7	12.9	12.6 -0.3	112	113 +1	38	380a
Current Mill Average:					44.1	44.7 +0.6	12.8	12.6 -0.2	112	114 +2	37	375

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

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continued)

Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i.	G. E. Puncture, units	Elmendorf Tear, g./sheet
IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.
			In	Across

<u>Mill E--42-lb. Linerboard</u>																	
41.7	42.4	+0.7	12.9	12	-0.9	106	116	+10	32	32	0	370a	346	-24	380a	350	-30
42.1	42.2	+0.1	13.0	11.8	-1.2	107	115	+ 8	32	29	-3	375a	275	-100	369a	281	-88
41.9	42.3	+0.4	12.9	11.9	-1.0	107	116	+ 9	32	30	-2	372	310	-62	375	316	-59

Mill F--42-1b. Linerboard

43.4	42.6	-0.8	13.6	13.0	-0.6	110	109	-1	39	37	-2	384a	380	-4	419a	423	+4
45.1	44.0	-1.1	13.7	13.0	-0.6	111	116	+5	43	40	-3	408a	383	-25	455a	449	-6
43.1	42.3	-0.8	13.7	13.0	-0.7	107	107	0	39	38	-1	391a	368	-23	434a	411	-23
42.4	42.0	-0.4	13.5	13.1	-0.4	100	109	+9	41	40	-1	408a	389	-19	422a	424	+2
43.5	43.0	-0.5	13.5	13.1	-0.4	103	105	+2	39	41	+2	401a	353	-48	415a	399	-16
43.3	42.4	-0.9	13.6	12.9	-0.7	101	103	+2	39	41	+2	404a	359	-45	455a	395	-60
43.6	43.4	-0.2	13.3	13.0	-0.3	95	102	+7	40	40	0	389a	380	-9	429a	421	-8
43.8	43.4	-0.4	13.5	12.7	-0.8	100	111	+11	38	38	0	393a	387	-6	420a	433	+13
43.9	44.0	+0.1	14.1	13.7	-0.4	100	103	+3	39	41	+2	407a	376	-31	424a	419	-5
43.0	42.9	-0.1	12.8	12.8	0.0	109	117	+8	35	39	+4	370a	373	+3	417a	419	+2
43.5	43.0	-0.5	13.5	13.0	-0.5	104	108	+4	39	39	0	395	375	-20	429	419	-10

ings for one or more specimens which tore beyond the 3/8-inch limit.

" data are calculated from the totals of the individual readings."

TABLE XXVI

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (contin

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.			
Mill E--42-lb. Linerboard																	
157121	E-63		3/ 3/54	2	41.7	42.4	+0.7	12.9	12	-0.9	106	116	+10	32	32	0	370a
157448	E-66		3/22/54	2	42.1	42.2	+0.1	13.0	11.8	-1.2	107	115	+ 8	32	29	-3	375a
Current Mill Average:					41.9	42.3	+0.4	12.9	11.9	-1.0	107	116	+ 9	32	30	-2	372

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continued)

TABLE XXIX

for one or more specimens which tore beyond the 3/8-inch limit.
Data are calculated from the totals of the individual readings.

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight,		Caliper, points	G. E.										
					lb.	IPC		Bursting Strwngth, p.s.i.	Puncture, gage units									
					IPC	Diff.	IPC	Mill Diff.	IPC	Mill Diff.								
<u>Mill G--42-lb. Linerboard</u>																		
157118	G-568	W.F.	3/ 1/54	--	44.0	43.7	-0.3	12.8	12.5	-0.3	120	114	-6	31	30	-1	347a	3C
157119	G-569	W.F.	3/ 1/54	--	44.0	43.5	-0.5	12.5	12.4	-0.1	116	111	-5	30	30	0	325a	2S
157227	G-570	W.F.	3/ 8/54	--	42.5	42.0	-0.5	12.1	12.0	-0.1	123	118	-5	30	30	0	327a	2S
157228	G-571	W.F.	3/ 8/54	--	44.6	44.2	-0.4	13.1	13.1	0.0	124	119	-5	33	33	0	349a	31
Current Mill Average:					43.8	43.4	-0.4	12.6	12.5	-0.1	121	116	-5	31	31	0	337	30

TABLE XXIX

<u>Mill H-42-lb. Linerboard</u>																			
157389	H-437	WFLS	3/ 8/54	2	43.9	43.8	-0.1	12.8	12.8	0.0	108	111	+3						
157390	H-438	WFLS	3/ 9/54	2	43.5	43.6	+0.1	12.8	12.8	0.0	100	105	+5						
157454	H-439	WFLS	3/15/54	2	43.4	43.9	+0.5	12.6	12.6	0.0	107	109	+2						
157455	H-440	WFLS	3/16/54	2	43.2	43.8	+0.6	12.7	12.6	-0.1	110	107	-3						
Current Mill Average:											43.5	43.8	+0.3	12.7	12.7	0.0	106	108	+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, 1954 (continued)

Institute Data versus Mill Data

Basis Weight, lb.	Caliper, points	Bursting Strength,		G. E. Puncture, units		Elmendorf Tear,											
		IPC	Mill	Diff.	IPC	Mill	Diff.	In	g./sheet	Across							
IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.						
<u>Mill I--42-lb. Linerboard</u>																	
43.1	42.6	-0.5	13.3	13.0	-0.3	103	107	+4	36	33	-3	342a	351	+9	415a	411	-4
42.3	42.4	+0.1	13.2	12.9	-0.3	104	106	+2	32	29	-3	323a	290	-33	385a	359	-26
42.2	42.1	-0.1	13.3	13.1	-0.2	100	106	+6	32	31	-1	315a	325	+10	381a	403	+22
42.2	42.2	0.0	13.4	13.2	-0.2	101	105	+4	31	31	0	327a	330	+3	387a	403	+16
42.8	42.7	-0.1	13.4	12.9	-0.5	110	107	-3	31	32	+1	341a	333	-8	407a	400	-7
42.5	42.4	-0.1	13.3	13.0	-0.3	103	106	+3	32	31	-1	330	326	-4	395	395	0

TABLE XXI

Mill J--42-lb. Linerboard

42.1	42.5	+0.4	13.5	13.3	-0.2	110	110	0	30	30	0	362a	319	-43	381a	389	+8
42.3	42.6	+0.3	13.6	13.5	-0.1	114	108	-6	31	31	0	331a	309	-22	358a	377	+19
41.9	42.5	+0.6	13.5	13.3	-0.2	119	117	-2	33	31	-2	349a	312	-37	385a	393	+8
41.9	42.8	+0.9	13.5	13.5	0.0	117	117	0	33	32	-1	355a	323	-32	410a	394	-16
42.0	42.6	+0.6	13.5	13.4	-0.1	115	113	-2	31	31	0	349	316	-33	384	388	+4

TABLE XXXII

Mill K--42-1b. Linerboard

[illegible]

ings for one or more specimens which tore beyond the 3/8-inch limit. Data are calculated from the totals of the individual readings.

TABLE XXX

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (cont)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		IPC Mill Diff.	Bursting Strength, p.s.i. gage		G. E. Puncture, units					
					IPC	Mill	IPC	Mill		IPC	Mill						
Mill I--42-lb. Linerboard																	
157108	I-370	—	3/ 1/54	1	43.1	42.6	-0.5	13.3	13.0	-0.3	103	107	+4	36	33	-3	342a
157138	I-371	WFLS	3/ 4/54	1	42.3	42.4	+0.1	13.2	12.9	-0.3	104	106	+2	32	29	-3	323a
157377	I-372	WFLS	3/10/54	1	42.2	42.1	-0.1	13.3	13.1	-0.2	100	106	+6	32	31	-1	315a
157378	I-373	WFLS	3/11/54	1	42.2	42.2	0.0	13.4	13.2	-0.2	101	105	+4	31	31	0	327a
157461	I-374	WFLS	3/20/54	1	42.8	42.7	-0.1	13.4	12.9	-0.5	110	107	-3	31	32	+1	341a
Current Mill Average:					42.5	42.4	-0.1	13.3	13.0	-0.3	103	106	+3	32	31	-1	330

TABLE XXXI

Mill J-42-lb. Linerboard															
157057	J-475	B.F.	2/22/54	--	42.1	42.5	+0.4	13.5	13.3	-0.2	110	110	0	30	
157058	J-476	B.F.	2/22/54	--	42.3	42.6	+0.3	13.6	13.5	-0.1	114	108	-6	31	
157199	J-477	B.F.	3/ 3/54	1	41.9	42.5	+0.6	13.5	13.3	-0.2	119	117	-2	33	
157200	J-478	B.F.	3/ 3/54	--	41.9	42.8	+0.9	13.5	13.5	0.0	117	117	0	33	
Current Mill Average:					42.0	42.6	+0.6	13.5	13.4	-0.1	115	113	-2	31	

TABLE XXXII

Mill K--42-lb. Linerboard																
157103	K-21	2/27/54	7	42.2	41.9	-0.3	12.6	12.4	-0.2	103	108	+5	34			
157156	K-22	3/ 6/54	7	39.9	39.7	-0.2	11.7	11.2	-0.5	111	115	+4	31			
157367	K-23	3/15/54	7	42.8	42.1	-0.7	13.3	12.6	-0.7	108	108	0	34			
157437	K-24	3/20/54	7	44.1	43.8	-0.3	13.0	12.7	-0.3	101	103	+2	35			
Current Mill Average:				42.2	41.9	-0.3	12.6	12.2	-0.4	106	109	+3	34			

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

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continued)

Institute Data versus Mill Data

Basis Weight, lb.	IPC Mill Diff.	Caliper, points	IPC Mill Diff.	Eursting Strength,		G. E. Puncture, units	IPC Mill Diff.	Elmendorf Tear, g./sheet		IPC Mill Diff.	Across IPC Mill Diff.
				p.s.i. gage	p.s.i. gage			In	g./sheet		
				IPC Mill Diff.	IPC Mill Diff.			IPC Mill Diff.			
<u>Mill L--42-lb. Linerboard</u>											
3.3	42.6	-0.7	14.1	13.1	-1.0	105	110	+5	36	341a	268
2.9	42.6	-0.3	14.2	13.2	-1.0	106	110	+4	36	343a	271
2.5	42.0	-0.5	13.9	13.1	-0.8	107	111	+4	35	358a	334
2.5	42.4	-0.1	13.3	12.8	-0.5	103	109	+6	35	352a	323
3.2	42.5	-0.7	14.2	13.1	-1.1	103	109	+6	36	335a	277
2.4	42.2	-0.2	13.4	13.0	-0.4	110	113	+3	35	319a	316
2.8	42.1	-0.7	13.0	12.3	-0.7	118	114	-4	30	310a	317
3.7	43.2	-0.5	13.8	13.0	-0.8	109	107	-2	32	317a	304
3.6	42.4	-1.2	14.0	13.0	-1.0	109	114	+5	38	375a	271
2.5	42.3	-0.2	14.5	13.1	-1.4	103	108	+5	38	387a	353
2.9	42.4	-0.5	13.8	13.0	-0.8	107	111	+4	35	344	303
										378	371
											-7

TABLE XXXIV

Mill M--42-lb. Linerboard

2.9	42.7	-0.2	13.2	12.8	-0.4	105	112	+7	35	30	349a	349	0	397a	437	+40
4.8	43.1	-1.7	14.0	12.6	-1.4	108	116	+8	39	32	450a	404	-46	434a	421	-13
3.8	42.9	-0.9	13.6	12.7	-0.9	106	114	+8	37	31	400	376	-24	415	429	+14

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

are calculated from the totals of the individual readings.

TABLE XXXIII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (contin.

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.		
<u>Mill L-42-lb. Linerboard</u>														
157060	L-249		2/ 8/54	1	43.3	42.6	-0.7	14.1	13.1	-1.0	105	110 +5	36	341a
157061	L-250		2/11/54	1	42.9	42.6	-0.3	14.2	13.2	-1.0	106	110 +4	36	343a
157136	L-251		2/18/54	1	42.5	42.0	-0.5	13.9	13.1	-0.8	107	111 +4	35	358a
157137	L-252		2/19/54	1	42.5	42.4	-0.1	13.3	12.8	-0.5	103	109 +6	35	352a
157348	L-253		2/27/54	1	43.2	42.5	-0.7	14.2	13.1	-1.1	103	109 +6	36	335a
157349	L-254		2/28/54	1	42.4	42.2	-0.2	13.4	13.0	-0.4	110	113 +3	35	319a
157404	L-255		3/ 2/54	1	42.8	42.1	-0.7	13.0	12.3	-0.7	118	114 -4	30	310a
157405	L-256		3/ 6/54	1	43.7	43.2	-0.5	13.8	13.0	-0.8	109	107 -2	32	317a
157446	L-257		3/ 8/54	1	43.6	42.4	-1.2	14.0	13.0	-1.0	109	114 +5	38	375a
157447	L-258		3/13/54	1	42.5	42.3	-0.2	14.5	13.1	-1.4	103	108 +5	38	387a
Current Mill Average:					42.9	42.4	-0.5	13.8	13.0	-0.8	107	111 +4	35	344

TABLE XXXIV

Mill M-42-lb. Linerboard

157116	M-220	W.	2/15/54	2	42.9	42.7	-0.2	13.2	12.8	-0.4	105	112 +7	35	30	-5	349a	34
157372	M-221	W.	3/ 4/54	4	44.8	43.1	-1.7	14.0	12.6	-1.4	108	116 +8	39	32	-7	450a	40
Current Mill Average:					43.8	42.9	-0.9	13.6	12.7	-0.9	106	114 +8	37	31	-6	400	37

^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 XXXV

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continued)

Institute Data versus Mill Data

basis Weight, lb.	Caliper, points	IPC	Diff.	IPC	Diff.	IPC	Diff.	IPC	Diff.	G. E.		IPC	Diff.	IPC	Diff.
										Puncture, units	Puncture, units				
<u>Mill N--42-lb. Linerboard</u>															
.5	42.2	-0.3	12.7	12.0	-0.7	105	101	-4	37	355a	371	+16	415a	439	+24
.2	42.0	-0.2	11.8	11.5	-0.3	105	104	-1	36	368a	348	-20	392a	417	+25
.9	42.0	+0.1	12.0	11.6	-0.4	105	104	-1	38	353a	370	+17	383a	464	+81
.8	41.7	-0.1	12.5	--	--	107	106	-1	36	347a	340	-7	389a	434	+45
.0	42.9	-0.1	12.5	12.0	-0.5	110	110	0	35	353a	314	-39	389a	415	+26
.8	42.0	-0.8	12.2	11.6	-0.6	110	107	-3	34	368a	333	-35	412a	446	+34
.4	42.1	-0.3	12.3	11.8	-0.5	107	105	-2	36	357	346	-11	397	436	+39

TABLE XXXVI

Mill O--42-lb. Linerboard

.2	40.6	+0.4	12.2	11.8	-0.4	102	102	0	32	337a	299	-38	363a	341	-22
.6	42.7	+0.1	12.3	11.9	-0.4	119	117	-2	35	353a	283	-70	377a	360	-17
.5	42.9	+0.4	12.2	11.9	-0.3	121	123	+2	35	332	307	-25	391a	359	-32
.6	41.9	+0.3	12.1	11.7	-0.4	122	123	+1	35	328a	295	-33	376a	359	-17
.8	42.0	+0.2	12.2	11.8	-0.4	116	116	0	34	337	296	-41	377	355	-22

one or more specimens which tore beyond the 3/8-inch limit.
are calculated from the totals of the individual readings.

TABLE XXXV

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continue)

Institute Data versus Mill Data

File No.	Mill Code	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 N--42-lb. Linerboard															
1157049	N-58	2/17/54	1	42.5	42.2	-0.3	12.7	12.0	-0.7	105	101	-4	37	355a	371
1157117	N-59	WFLS 2/25/54	1	42.2	42.0	-0.2	11.8	11.5	-0.3	105	104	-1	36	368a	348
1157187	N-60	2/26/54	1	41.9	42.0	+0.1	12.0	11.6	-0.4	105	104	-1	38	353a	370
1157188	N-61	3/ 2/54	1	41.8	41.7	-0.1	12.5	--		107	106	-1	36	347a	340
1157189	N-62	3/ 4/54	1	43.0	42.9	-0.1	12.5	12.0	-0.5	110	110	0	35	353a	314
1157406	N-63	WFLS 3/14/54	1	42.8	42.0	-0.8	12.2	11.6	-0.6	110	107	-3	34	368a	333
Current Mill Average:				42.4	42.1	-0.3	12.3	11.8	-0.5	107	105	-2	36	357	346

TABLE XXXVI

Mill O--42-lb. Linerboard

157104	O-31	W.F. 2/24/54	3	40.2	40.6	+0.4	12.2	11.8	-0.4	102	102	0	32	337a	299
157105	O-32	W.F. 2/26/54	3	42.6	42.7	+0.1	12.3	11.9	-0.4	119	117	-2	35	353a	283
157106	O-33	W.F. 2/26/54	3	42.5	42.9	+0.4	12.2	11.9	-0.3	121	123	+2	35	332	307
157107	O-34	W.F. 2/26/54	3	41.6	41.9	+0.3	12.1	11.7	-0.4	122	123	+1	35	328a	295
Current Mill Average:				41.8	42.0	+0.2	12.2	11.8	-0.4	116	116	0	34	337	296

^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 XXXVII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1954 (continued)

Basis Weight, lb.	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.	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 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 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 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 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 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 Diff.	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