

INSTITUTE OF
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Appleton, Wisconsin

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CONTINUOUS BASELINE STUDY

Project 1108-B

Progress Report 77

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

December 1, 1953

THE INSTITUTE OF PAPER CHEMISTRY
Appleton, Wisconsin

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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 fourteen different F.K.I. mills to The Institute of Paper Chemistry for testing during the period November 1 through November 30. In addition to the 42-lb. kraft linerboard, two samples of special drum stock, one sample of 90-lb. linerboard, and one sample of 72-lb. 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	8
B	8
C	8
D	10
E	3
F	8
G	6
H	4
I	12
J	6
K	0
L	6
M	6
N	10
O	8

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 November 1 through November 30. 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 October 31, 1953.

A comparison of the results in Table II and Figure 1 shows that the average basis weight results for all mills except 0 conform to the 42-lb. specification set forth in Rule 41. Mill B 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 0 has

the lowest average basis weight, it being 41.1 lb., approximately 2.1% 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	+4.3
C	+2.4
D	+2.6
E	+2.4
F	+1.2
G	+3.8
H	+1.0
I	+1.2
J	+2.4
K	--
L	+1.7
M	+2.9
N	+1.7
O	-2.1

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

A comparison of the average caliper values for the various mills (see Figure 2) shows that the mill averages vary from a low of 12.0 for Mill G to a high of 14.2 for Mill M, the average being 13.0 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 in Table II that the average bursting strength values for the various mills range

from a low of 97 for Mill E to a high of 121 for Mill G. The current F.K.I. average bursting strength is 109, slightly higher than the cumulative average of 106.

The data of Table II and Figure 4 show that the average G. E. puncture result for all mills is 33 units. Mill F has the highest G. E. puncture average, 37 units; Mill J has the lowest average, 29 units. The current F.K.I. G. E. puncture average of 33 units is 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 F has the highest average machine direction tear value while Mill B has the lowest. Mill F also 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 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 XVII that the data have been separated on the basis of the sheet finish. The summarized results for the mills which submitted sample lots during the current period are as follows:

Mill Code	No. of Sample Lots		
	W.F.	D.F.	Misc.
A	8 ^a		
B	8 ^a		
C	8		
D	10		

(Continued on the next page.)

Mill Code	No. of Sample Lots		
	W.F.	D.F.	Misc.
E	3, 2 ^b		
F	8		
G	6		
H	4 ^a		
I	9 ^a , 3		
J		6 ^d	
L		6 ^c	
M	5	1	
N	5 ^a , 1		4 ^c
O	8		

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--NOVEMBER 1 THROUGH NOVEMBER 30, 1953

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	12.6	113	32	367	
B	43.8	12.5	112	30	344	
C	43.0	14.1	107	33	329	
D	43.1	12.7	106	36	373	
E	43.0	13.3	97	31	357	
F	42.5	13.3	109	37	379	418
G	43.6	12.0	121	33	359	382
H	42.4	12.3	107	33	346	396
I	42.5	13.2	108	31	328	381
J	43.0	13.5	109	29	344	368
K	No samples submitted.					
L	42.7	13.2	108	36	356	391
M	43.2	14.2	108	36	376	412
N	42.7	12.5	104	32	339	380
O	41.1	12.2	112	34	346	376
Current FKI Average:	42.9	13.0	109	33	347	380
Cumulative FKI Average:	43.1	13.9	106	36	370	403
FKI Index, %:	99.5	93.5	102.8	91.7	93.8	94.3

Figure 1

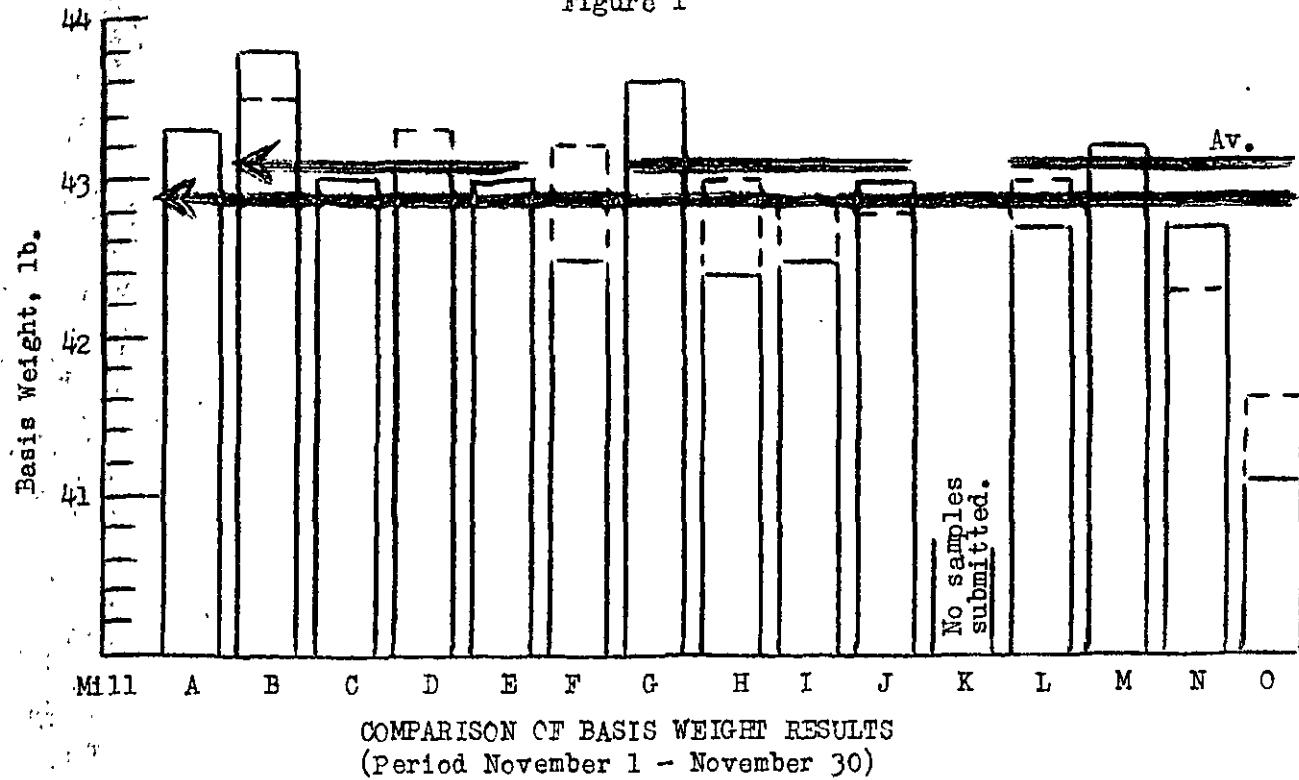
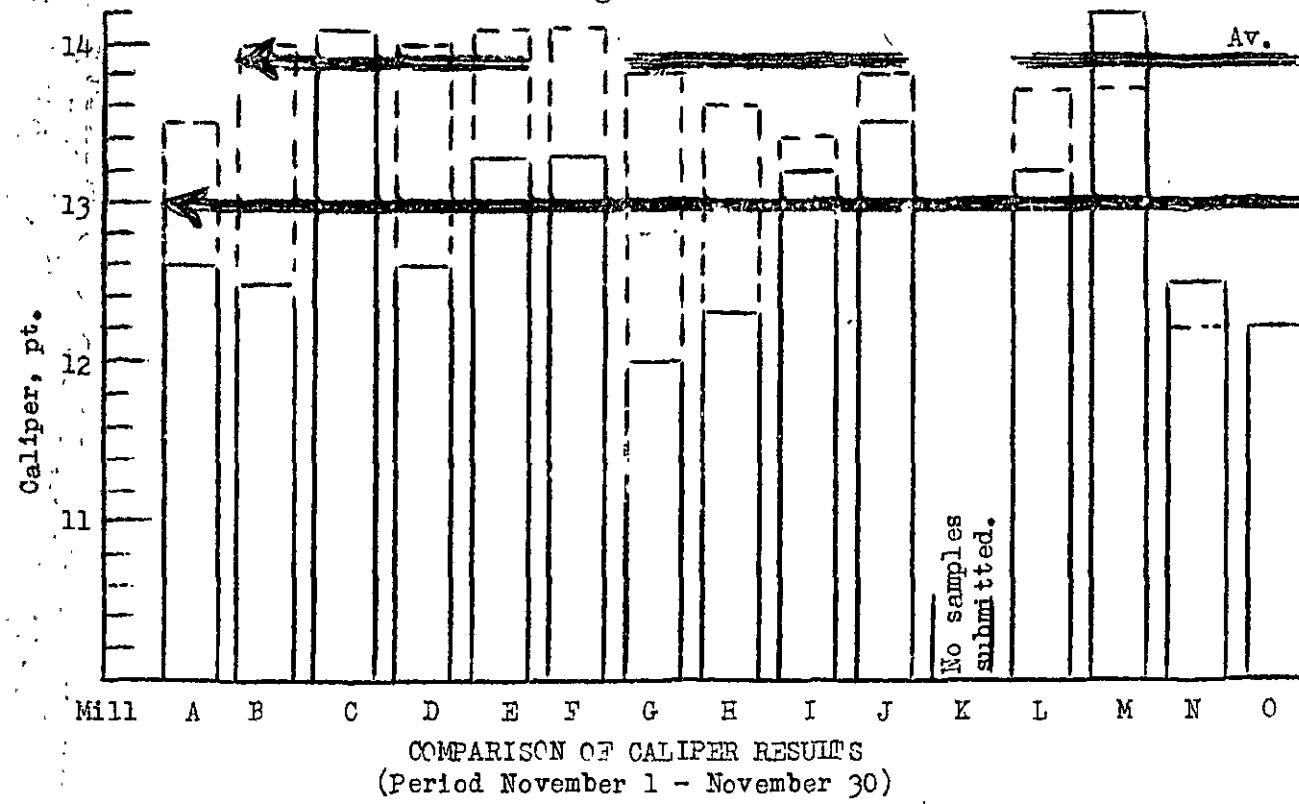
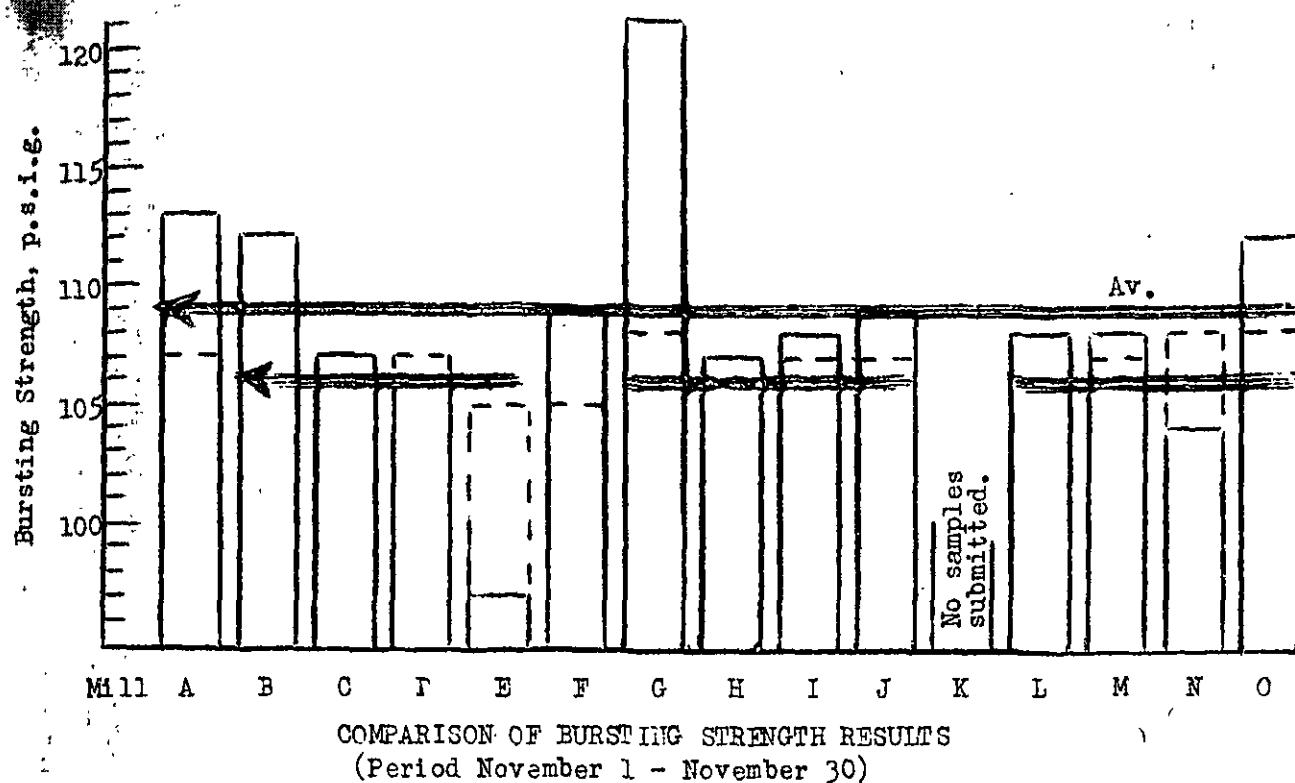


Figure 2



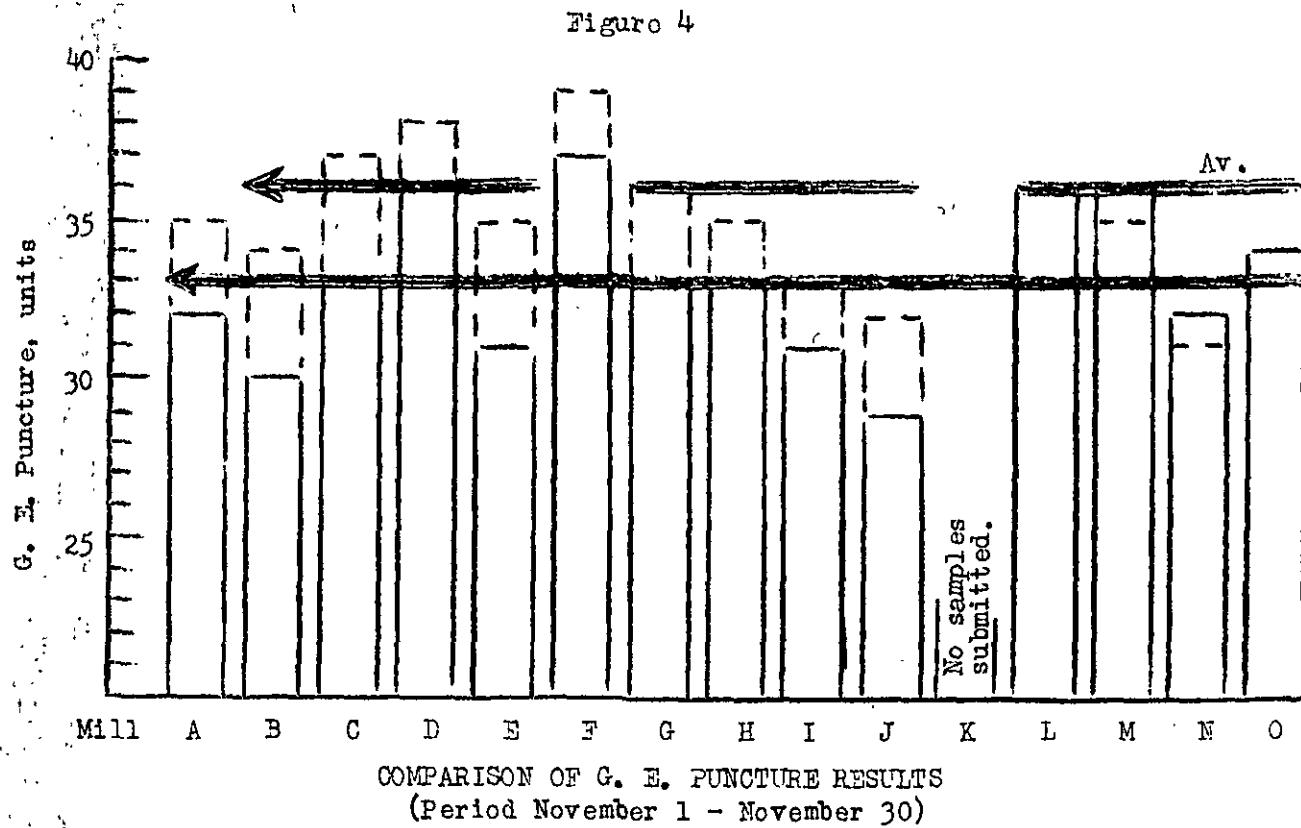
— Current mill average.
- - - Cumulative mill average.

Figure 3



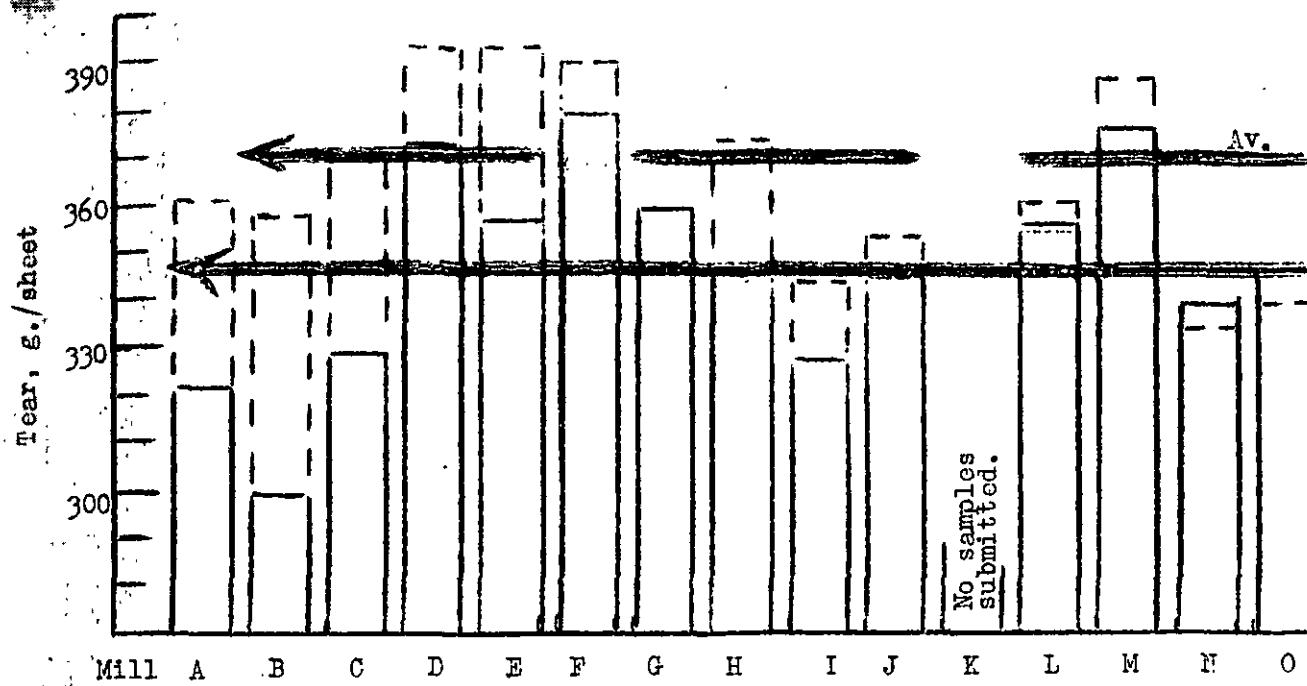
COMPARISON OF BURSTING STRENGTH RESULTS
(Period November 1 - November 30)

Figure 4



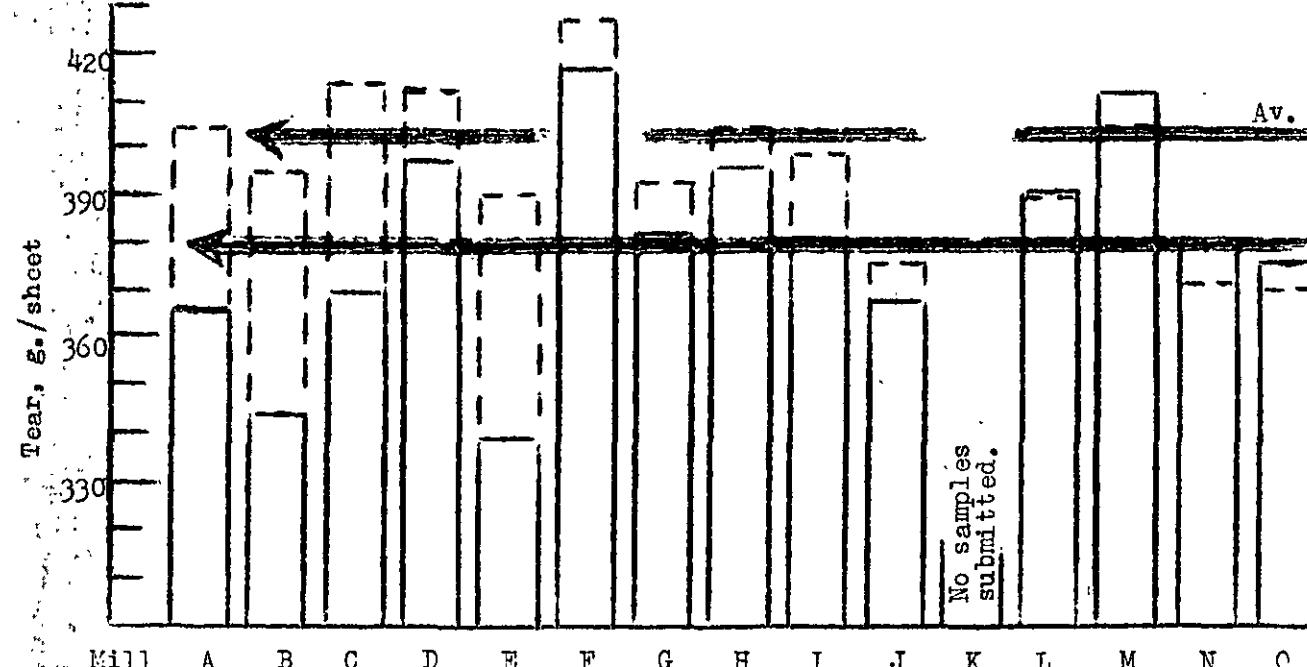
COMPARISON OF G. E. PUNCTURE RESULTS
(Period November 1 - November 30)

Figure 5



COMPARISON OF TEAR RESULTS, Machine Direction
(Period November 1 - November 30)

Figure 6



COMPARISON OF TEAR RESULTS, Across-machine Direction
(Period November 1 - November 30)

TABLE III
SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 1953

Date Made	Mch. No.	Basis Weight, 1lb.			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.	In Across	Max.	Min.	Av.	
<u>Mill A—42-lb. Linerboard</u>																		
3 10/25/53	1	43.6	42.0	42.7	12.8	11.8	12.3	129	92	110	32	27	32	344	264	316 ^a	384	
3 10/25/53	2	43.6	42.4	42.9	13.1	12.0	12.7	124	88	106	31	28	20	352	272	322 ^a	304	
3 11/ 2/53	2	44.0	42.6	43.3	13.6	12.8	13.2	132	79	109	34	30	32	344	272	315	345 ^a	
3 11/ 2/53	2	44.0	42.6	43.3	13.6	12.8	13.2	137	75	111	34	29	32	344	280	312	353 ^a	
3 11/ 9/53	1	44.6	43.4	43.8	13.9	13.1	13.3	137	75	103	120	34	30	32	384	240	311	328
3 11/ 9/53	1	44.2	43.8	44.1	12.8	11.8	12.2	143	109	116	34	30	32	400	248	317 ^a	352	
3 11/15/53	1	44.7	42.2	43.3	13.0	11.4	12.2	145	87	118	38	30	35	368	256	324 ^a	336	
3 11/17/53	2	44.9	42.2	42.9	13.3	12.5	12.9	135	89	114	38	32	35	400	296	357 ^a	424	
		43.3			12.5				113			32			367			
		42.9			13.5				107			35			404			
		100.9			33.3				195.6			91.4			90.8			
		100.5			22.6				106.6			88.9			91.1			

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

TABLE III

SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 1953

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, 1lb.	Caliper, points	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Bursting Strength, P.s.i. gage	G. E. Puncture, units	
														Mill A—42-lb. Linerboard		
156048	A-494	WFIS	10/31/53	10/25/53	1	43.6	42.0	42.7	12.8	11.8	12.3	129	92	110	32	344
156049	A-495	WFIS	10/31/53	10/25/53	2	43.6	42.4	42.9	13.1	12.0	12.7	124	88	106	31	352
156142	A-496	WFIS	11/11/53	11/2/53	2	44.0	42.6	42.6	13.6	12.8	13.2	132	79	109	34	344
156143	A-497	WFIS	11/11/53	11/2/53	2	44.0	42.2	43.2	13.9	13.1	13.3	137	75	111	34	344
156218	A-498	WFIS	11/19/53	11/9/53	1	44.6	43.4	43.8	12.8	11.8	12.2	132	103	120	34	384
156219	A-499	WFIS	11/19/53	11/9/53	1	44.2	43.8	44.1	12.8	11.8	12.2	143	100	116	34	32
156238	A-500	WFIS	11/23/53	11/15/53	1	44.7	42.2	43.3	13.0	11.4	12.2	145	87	118	38	368
156239	A-501	WFIS	11/23/53	11/17/53	2	44.9	42.2	42.9	13.3	12.5	12.9	135	89	114	38	35
Current Mill Average:						43.3		12.6		11.3					32	
Cumulative Mill Average:						42.9		13.5		13.7					35	
Mill Factor, %:						100.9		73.3		195.6					91.4	
Mill Index, %:						100.5		90.6		106.6					88.9	

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

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TABLE IV
SUMMARY OF INDIVIDUAL TEST LOADS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Puncture, units			G. E.			Elmendorf Tear, g./sheet			
		Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Across	Min.	Max.	Av.
<u>MILL B-42-1b. Linerboard</u>																				
3	11/ 5/53	1	44.2	42.6	43.6	13.0	12.1	12.5	125	92	110	32	27	30	352	264	305	400	312	352 ^a
3	11/ 5/53	1	44.6	42.8	43.7	13.1	12.0	12.6	124	84	112	31	27	29	328	272	295	368	320	341a
3	11/ 5/53	1	44.4	43.0	43.8	13.0	12.1	12.5	126	96	112	32	28	30	336	280	303	368	304	334a
3	11/ 5/53	1	44.2	42.2	43.7	13.0	12.3	12.5	128	88	111	32	28	30	328	256	297a	384	312	345a
3	11/ 5/53	1	44.4	43.2	43.8	13.0	12.0	12.4	132	94	113	32	28	31	344	248	302a	376	320	341a
3	11/ 5/53	1	44.4	43.0	43.8	12.9	12.9	12.5	124	91	110	34	30	32	360	264	305a	384	312	351a
3	11/ 5/53	1	44.8	43.0	43.9	13.1	12.1	12.5	127	82	113	33	29	31	328	248	291	376	312	338a
3	11/ 5/53	1	45.2	43.0	44.0	13.0	12.0	12.4	124	98	112	34	29	31	328	256	299a	432	296	350a
			43.8			12.5				112			30		300			344		
			43.5			14.0				106			34		358			394		
			100.7			89.3				105.7			88.2		83.8			87.3		
			101.6			89.9				105.7			83.3		81.1			85.4		

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

TABLE IV

SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1923 (continued)

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

SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

TABLE V.

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.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	In Across	Max.	Min.	Av.
<u>Mill C-42-1b. Linerboard</u>																	
11/ 2/53	1	46.0	42.8	44.0	15.2	13.8	14.5	123	87	103	41	32	35	464	295	334a	400
11/ 2/53	1	45.8	42.6	44.0	14.9	14.0	14.4	124	89	106	37	31	34	415	264	333a	400
11/ 3/53	1	43.4	41.0	42.6	14.8	13.3	14.0	123	87	106	36	30	33	400	280	327a	408
11/ 3/53	1	44.0	41.0	42.8	14.3	12.9	13.9	124	81	107	36	28	32	368	272	305	384
11/ 5/53	1	43.2	41.4	42.5	14.3	13.4	13.9	127	85	107	37	30	33	408	288	346	416
11/ 5/53	1	43.8	42.4	43.2	14.7	13.2	14.0	125	88	110	35	30	33	400	304	350	416
11/ 6/53	1	43.6	41.4	42.4	14.9	13.8	14.2	135	87	107	36	30	33	352	280	321	384
11/ 6/53	1	43.4	41.4	42.4	14.6	13.3	14.0	146	88	107	33	29	32	360	281	315a	416
		43.0		14.1				107			33			329		370	
		42.9		13.9				107			37			359		414	
		100.2		101.4				100.0			89.2			89.2		89.4	
		99.8		101.4				100.9			91.7			88.9		91.8	

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

TABLE V

SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 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.	
<u>Mill C--42-1b, Linerboard</u>															
156173	C-515	W.F.	11/13/53	11/13/53	1	46.0	42.8	44.0	15.2	13.8	14.5	123	87	103	41
156174	C-516	W.F.	11/13/53	11/13/53	1	45.8	42.6	44.0	14.9	14.0	14.4	124	89	106	37
156175	C-517	W.F.	11/13/53	11/13/53	1	43.4	41.0	42.6	14.8	13.3	14.0	123	87	106	31
156186	C-518	W.F.	11/14/53	11/14/53	1	44.0	41.0	42.8	14.3	12.9	13.9	124	81	107	36
156197	C-519	W.F.	11/16/53	11/16/53	1	43.2	41.4	42.5	14.3	13.4	13.9	127	85	107	36
156198	C-520	W.F.	11/16/53	11/16/53	1	43.8	42.4	43.2	14.7	13.2	14.0	125	88	110	37
156199	C-521	W.F.	11/16/53	11/16/53	1	43.6	41.4	42.4	14.9	13.8	14.2	135	87	107	30
156200	C-522	W.F.	11/16/53	11/16/53	1	43.4	41.4	42.4	14.6	13.3	14.0	146	88	107	33
Current Mill Average:						43.0			14.1			107			33
Cumulative Mill Average:						42.9			13.9			107			37
Mill Factor, %:						100.2			101.4			100.0			89.2
Mill Index, %:						99.8			101.4			100.9			91.7

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—NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

Date Made	Mch. No.	Basis Weight, 1b.			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.	In Max.	Min.	Av.	Across Max. Min. Av.
<u>Mill D—42-lb. Linerboard</u>																	
53	11/4/53	4	44.0	41.2	42.3	13.3	12.4	12.8	125	73	.01	37	31	34	432	336	385a
53	11/5/53	4	43.4	41.4	42.2	13.3	12.1	12.6	137	79	.01	37	31	34	400	344	352
53	11/6/53	4	44.2	42.6	43.6	13.9	13.0	13.4	130	68	.98	40	34	36	320	374a	408a
53	11/7/53	4	43.8	42.0	42.8	13.8	12.0	12.7	125	85	.08	38	31	35	416	344	385a
53	11/8/53	4	43.8	42.0	42.8	13.1	12.2	12.6	142	77	.08	40	33	36	416	320	411a
53	11/9/53	4	43.8	42.8	43.3	12.9	12.1	12.5	130	83	.07	41	33	36	440	304	368
53	11/10/53	4	44.0	42.4	43.3	13.1	12.1	12.7	123	88	.08	37	33	35	480	312	399a
53	11/12/53	4	43.4	41.6	42.5	12.7	11.7	12.2	131	82	.10	35	29	33	384	298	320
53	11/13/53	4	46.2	44.0	45.4	13.8	12.7	13.1	129	82	.05	42	36	39	432	352	359a
53	11/14/53	4	44.2	42.0	43.0	12.8	11.8	12.1	143	88	.10	41	34	38	464	320	428a
			43.1					12.6		106			36		373		352
			43.3		14.0				107			38		393		409a	
			99.5		90.7					99.1			94.7		94.9		96.1
			100.0		91.4					100.0			100.0		100.8		98.5

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

TABLE VI

SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 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. units					
<u>Mill D—42-lb. Linerboard</u>														
156099	D-708	W.F.	11/ 6/53	11/ 4/53	4	44.0	41.2	12.4	125	73	.01	37	31	432
156112	D-709	W.F.	11/ 9/53	11/ 5/53	4	43.4	41.4	12.2	12.6	137	.07	37	31	400
156129	D-710	W.F.	11/11/53	11/ 6/53	4	44.2	42.6	13.6	13.0	13.4	130	68	40	408
156140	D-711	W.F.	11/11/53	11/ 7/53	4	43.8	42.0	12.8	12.0	12.7	125	85	.08	416
156141	D-712	W.F.	11/11/53	11/ 8/53	4	43.8	42.0	12.8	13.1	12.2	12.6	142	77	36
156145	D-713	W.F.	11/12/53	11/ 9/53	4	43.8	42.4	13.3	12.9	12.1	12.5	130	83	36
156165	D-714	W.F.	11/13/53	11/10/53	4	44.0	42.4	13.3	13.1	12.1	12.7	123	88	480
156194	D-715	W.F.	11/16/53	11/12/53	4	43.4	41.6	12.5	11.7	11.7	12.2	131	82	33
156215	D-716	W.F.	11/18/53	11/13/53	4	46.2	44.0	13.8	12.7	13.1	12.9	105	42	39
156216	D-717	W.F.	11/18/53	11/14/53	4	44.2	42.0	12.8	11.8	12.1	143	88	10	432
Current Mill Average:						43.1		12.6		106		36		
Cumulative Mill Average:						43.3		14.0		107		38		
Mill Factor, %:						99.5		90.7		99.1		94.7		
Mill Index, %:						100.0		91.4		100.0		100.0		

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

TABLE VII
SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

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

TABLE VII

SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.	Caliper, points	Bursting Strength,			G. E. units	
								Max.	Min.	Av.		
<u>Mill E--42-lb. Linerboard</u>												
156052	E-40	W.F.	11/2/53	10/29/53	2	44.4	42.0	15.1	13.1	14.1	34	38
156192	E-43	W.F.	11/16/53	11/13/53	2	44.0	40.6	13.8	11.8	12.8	34	38
156224	E-44	W.F.	11/20/53	11/16/53	2	44.2	43.2	13.8	12.3	12.9	71	100
Current Mill Average:						43.0		13.3		97		31
Cumulative Mill Average:						43.0		14.1		105		35
Mill Factor, %:						100.0		94.3		92.4		88.6
Mill Index, %:						99.8		95.7		91.5		86.1

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

TABLE VIII
SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

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.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	
<u>MILL F--42-lb. Linerboard</u>																	
0/20/53	--	43.0	41.8	42.3	13.5	12.1	12.9	95	112	100	34	36	440	320	370a	480	
0/22/53	--	43.6	41.6	42.4	13.9	12.4	13.3	128	80	108	38	34	440	360	391a	472	
0/25/53	--	44.2	41.2	42.4	13.8	12.1	13.2	122	66	102	44	34	432	336	381a	464	
0/26/53	--	44.0	41.6	43.0	14.1	12.2	13.1	146	102	116	41	34	37	432	352	387a	464
0/27/53	--	44.0	42.0	42.8	14.1	12.2	13.5	132	90	110	41	34	37	424	344	375a	480
0/27/53	--	43.0	41.8	42.3	14.0	13.0	13.5	124	86	109	40	35	37	400	336	368a	448
0/28/53	--	43.6	41.8	42.5	13.9	13.0	13.4	135	88	112	42	36	38	464	328	387	464
0/28/53	--	43.4	41.0	42.2	14.3	11.9	13.4	125	89	105	42	32	38	424	336	369a	456
		42.5			13.3			109			37		379		379		418
		43.2			14.1			105			39		389		389		427
		98.4			94.3			103.8			94.9		97.4		97.4		97.9
		98.6			95.7			102.8			102.8		102.4		102.4		103.7

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

TABLE VIII

SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

File No.	Mill Code	Fin. fish.	Date Recd.	Date Made	Mch. No.	Basis Weight, 1b.	Caliper, points	Bursting Strength, p.s.i. gage	G. E. Puncture, units
<u>Mill F--42-1b. Linerboard</u>									
156066	F-64	W.F.	11/ 3/53	10/20/53	--	43.0	41.8	42.3	13.5 12.1 12.9 126 95 112 40 34 36 440 320
156067	F-65	W.F.	11/ 3/53	10/22/53	--	43.6	41.6	42.4	13.9 12.4 13.3 128 80 108 38 34 36 440 360
156068	F-66	W.F.	11/ 3/53	10/26/53	--	44.2	41.2	42.4	13.8 12.1 13.2 122 66 102 44 34 38 432 336
156069	F-67	W.F.	11/ 3/53	10/26/53	--	44.0	41.6	43.0	14.1 12.2 13.1 146 102 116 41 34 37 432 352
156070	F-68	W.F.	11/ 3/53	10/27/53	--	44.0	42.0	42.8	14.1 12.2 13.5 132 90 110 41 34 37 424 344
156244	F-69	W.F.	11/23/53	10/27/53	--	43.0	41.8	42.3	14.0 13.0 13.5 124 86 109 40 35 37 400 336
156245	F-70	W.F.	11/23/53	10/28/53	--	43.6	41.8	42.5	13.9 13.0 13.4 135 88 112 42 36 38 464 328
156246	F-71	W.F.	11/23/53	10/28/53	--	43.4	41.0	42.2	14.3 11.9 13.4 125 89 105 42 32 38 424 336
Current Mill Average:									
Cumulative Mill Average:									
						42.5	13.3	109	37
						43.2	14.1	105	39
						98.4	94.3	103.8	94.9
						98.6	95.7	102.8	102.8

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

SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

TABLE IX

Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, P.s.i. gage units			G. E. Puncture, units			Ellendorf Tear, g./sheet	
		Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	In Across Mill G—42-lb. Linerboard	In Across Mill G—42-lb. Linerboard
11/25/53	—	43.6	41.6	42.2	11.3	10.6	11.1	146	100	123	35	30	31	368	280
11/25/53	—	46.0	44.0	44.6	12.6	11.9	12.2	150	106	119	37	31	33	432	344
11/5/53	—	45.0	43.0	44.2	13.0	12.1	12.4	129	94	116	37	32	34	424	320
11/5/53	—	44.0	42.0	42.8	12.3	11.4	12.0	139	89	119	33	30	32	392	296
11/12/53	—	44.6	43.0	43.8	12.5	11.5	12.1	138	103	124	37	32	34	400	336
11/12/53	—	46.0	42.8	44.1	12.9	12.0	12.4	148	105	127	40	33	36	416	312
					43.6		12.0			121			33	359	362
					43.1		13.8			108			36	359	393
					101.2		87.0			112.0			91.7	100.0	97.2
					101.2		86.3			114.2			91.7	97.0	94.8

TABLE X

Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, P.s.i. gage units			G. E. Puncture, units			Ellendorf Tear, g./sheet	
		Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	In Across Mill H—42-lb. Linerboard	In Across Mill H—42-lb. Linerboard
11/19/53	2	42.4	41.6	42.1	12.9	12.1	12.4	137	77	107	34	30	32	392	280
11/20/53	2	43.0	42.0	42.5	12.7	11.9	12.3	144	77	109	34	30	32	368	264
11/16/53	2	43.6	41.4	42.5	12.8	11.5	12.2	131	83	108	37	32	34	432	304
11/17/53	2	43.6	42.0	42.7	12.9	12.0	12.4	131	69	104	38	31	34	400	256
					42.4		12.3			107			33	346	396
					43.0		13.6			106			35	374	404
					98.6		90.4			100.9			94.3	92.5	98.0
					98.4		88.5			100.9			91.7	93.5	98.3

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

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TABLE IX

SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued):

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, 1b.			Caliper, points			Bursting Strength, P.s.i. gage			G. E. Puncture, units		
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	
<u>Mill G—42-lb. Linerboard</u>																	
156060	G-536	W.F.	11/ 2/53	10/25/53	—	43.6	41.6	42.2	11.3	10.6	11.1	146	100	123	35	30	368
156061	G-537	W.F.	11/ 2/53	10/25/53	—	46.0	44.0	44.6	12.6	11.9	12.2	150	106	119	37	31	33
156189	G-538	W.F.	11/14/53	11/ 5/53	—	45.0	43.0	44.2	13.0	12.1	12.4	129	94	116	37	32	34
156190	G-539	W.F.	11/14/53	11/ 5/53	—	44.0	42.0	42.8	12.3	11.6	12.0	139	89	119	33	30	32
156263	G-540	W.F.	11/25/53	11/12/53	—	44.6	43.0	43.8	12.5	11.5	12.1	138	103	124	37	32	34
156264	G-541	W.F.	11/25/53	11/12/53	—	46.0	42.8	44.1	12.9	12.0	12.4	148	105	127	40	33	36
Current Mill Average:						43.6	—	43.6	—	—	—	12.0	—	121	—	33	—
Cumulative Mill Average:						43.1	—	43.1	—	—	—	13.8	—	108	—	36	—
Mill Factor, %:						101.2	—	101.2	—	—	—	87.0	—	112.0	—	91.7	—
Mill Index, %:						101.2	—	101.2	—	—	—	86.3	—	114.2	—	91.7	—

TABLE X

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, 1b.			Caliper, points			Bursting Strength, P.s.i. gage			G. E. Puncture, units		
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	
<u>Mill H—42-lb. Linerboard</u>																	
156041	H-425	WFIS	10/31/53	10/19/53	2	42.4	41.6	42.1	12.9	12.1	12.4	137	77	107	34	30	32
156042	H-426	WFIS	10/31/53	10/20/53	2	43.0	42.0	42.5	12.7	11.9	12.3	144	77	109	34	30	32
156269	H-427	WFIS	11/27/53	11/16/53	2	43.6	41.4	42.5	12.8	11.5	12.2	131	83	108	37	32	34
156270	H-428	WFIS	11/27/53	11/17/53	2	43.6	42.0	42.7	12.9	12.0	12.4	131	69	104	38	31	34
Current Mill Average:						42.4	—	42.4	—	—	—	12.3	—	107	—	33	—
Cumulative Mill Average:						43.0	—	43.0	—	—	—	13.6	—	106	—	35	—
Mill Factor, %:						98.6	—	98.6	—	—	—	90.4	—	100.9	—	94.3	—
Mill Index, %:						98.4	—	98.4	—	—	—	88.5	—	100.9	—	91.7	—

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

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TABLE XI
SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

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.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	In Across	Max.	Min.	Av.
Mill I--42-lb. Linerboard																	
1/24/53	1	43.6	41.8	42.4	13.3	12.7	13.1	93	113	30	27	29	408	280	327	448	304
1/23/53	1	43.2	41.8	42.5	13.7	12.4	13.1	82	107	32	27	29	336	272	301	400	344
1/27/53	1	44.0	42.2	42.1	14.0	13.2	13.6	127	79	32	28	30	352	264	315a	416	360
1/29/53	1	43.8	42.2	43.2	13.9	13.0	13.5	122	80	104	34	27	31	384	256	313	416
1/2/53	1	43.2	42.0	42.5	13.5	12.9	13.1	125	90	106	34	30	31	384	304	343a	416
1/2/53	1	43.6	42.2	42.6	13.5	12.7	13.1	125	97	110	32	28	31	432	288	366	432
1/5/53	1	43.8	41.2	42.6	13.7	11.8	13.0	128	87	113	33	28	31	400	256	323a	416
1/6/53	1	43.2	41.6	42.4	13.8	13.0	13.3	121	85	107	34	29	32	376	288	328a	416
1/11/53	1	43.0	41.6	42.4	13.6	12.6	13.1	133	92	109	34	30	32	400	280	332a	432
1/12/53	1	43.4	40.8	42.2	13.8	12.8	13.3	126	92	109	36	31	32	400	296	333a	424
1/16/53	1	43.6	42.0	42.4	13.8	12.7	13.2	123	94	110	37	32	34	360	304	333	424
1/17/53	1	43.6	41.8	42.3	13.8	12.7	13.2	120	89	105	38	32	35	360	280	322a	432
		42.5			13.2			108			31			328			381
		42.9			13.4			107			33			343			398
		99.1			98.5			100.9			93.9			95.6			95.7
		98.6			95.0			101.9			86.1			88.6			94.5

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

TABLE XI

SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 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.										
						Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.				
156038	I-337	WFIS	10/31/53	10/24/53	1	43.6	41.8	42.4	13.3	12.7	13.1	93	113	29	408	280			
156039	I-338	WFIS	10/31/53	10/23/53	1	43.2	41.8	42.5	13.7	12.4	13.1	134	82	32	27	336	272		
156058	I-339	WFIS	11/2/53	10/27/53	1	44.0	42.2	43.1	14.0	13.2	13.6	127	79	107	32	352	264		
156103	I-340	WFIS	11/7/53	10/29/53	1	43.8	42.2	43.2	13.9	13.0	13.5	122	80	104	34	27	384	256	
156104	I-341	WFIS	11/7/53	11/2/53	1	43.2	42.0	42.5	13.5	12.9	13.1	125	90	106	30	31	384	304	
156105	I-342	WFIS	11/7/53	11/2/53	1	43.6	42.6	42.2	13.5	12.7	13.1	125	97	110	32	28	31	432	288
156115	I-343	W.F.	11/9/53	11/5/53	1	43.8	41.2	42.6	13.7	11.8	13.0	128	87	113	33	28	31	400	256
156195	I-344	WFIS	11/16/53	11/6/53	1	43.2	41.6	42.4	13.8	13.0	13.3	121	85	107	34	29	32	376	288
156211	I-345	WFIS	11/18/53	11/11/53	1	43.0	41.6	42.4	13.6	12.6	13.1	133	92	109	34	30	32	400	280
156212	I-346	WFIS	11/18/53	11/12/53	1	43.4	40.8	42.2	13.8	12.8	13.3	126	92	109	36	31	32	400	296
156254	I-347	W.F.	11/24/53	11/16/53	1	43.6	42.0	42.4	13.8	12.7	13.2	123	94	110	37	32	34	360	304
156255	I-348	W.F.	11/24/53	11/17/53	1	43.6	41.8	42.3	13.8	12.7	13.2	120	89	105	38	32	35	360	280
Current Mill Average:						42.5		13.2		108		31							
Cumulative Mill Average:						42.9		13.4		107		33							
Mill Factor, %:						99.1		98.5		100.9		93.9							
Mill Index, %:						98.6		95.0		101.9		86.1							

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

TABLE XII
SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1, THROUGH NOVEMBER 30, 1953 (continued)

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.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	In Across	Max.	Min.	Av.
<u>Mill J--42-lb. Linerboard</u>																	
10/12/53	--	45.0	42.2	43.1	14.1	12.9	13.4	139	83	110	33	27	30	400	280	348 ^a	408
10/12/53	--	44.8	42.2	43.0	14.3	13.1	13.7	128	90	111	32	28	30	392	344	372 ^a	464
10/21/53	--	44.0	43.0	43.5	14.2	12.8	13.7	140	87	111	32	28	29	456	288	372 ^a	408
10/21/53	--	44.2	42.2	43.2	14.2	13.0	13.6	124	100	110	31	26	29	416	280	341 ^a	440
10/31/53	--	44.0	40.8	42.4	13.7	12.5	13.1	122	87	107	30	27	29	336	272	313 ^a	408
10/31/53	--	43.8	40.8	42.5	13.9	12.6	13.2	129	73	105	31	27	29	368	272	318 ^a	424
		43.0			13.5			109			29			344			368
		42.8			13.8			107			32			353			375
		100.5			97.8			101.9			90.6			97.5			98.1
		99.8			97.1			102.8			80.6			93.0			91.3

TABLE XIII

Mill K--42-lb. Linerboard

No samples submitted.

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

TABLE XII

SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 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			Elmen- In Max. Min.
								Max.	Min.	Av.	Max.	Min.	Av.	
<u>Mill J--42-lb. Linerboard</u>														
156036	J-453	B.F.	10/31/53	10/12/53	--	45.0	42.2	43.1	14.1	12.9	13.4	83	110	33
156037	J-454	B.F.	10/31/53	10/12/53	--	44.8	42.2	43.0	14.3	13.1	13.7	128	90	32
156056	J-455	B.F.	11/2/53	10/21/53	--	44.0	43.0	43.5	14.2	12.8	13.7	140	87	32
156057	J-456	B.F.	11/2/53	10/21/53	--	44.2	42.2	43.2	14.2	13.0	13.6	124	100	31
156187	J-457	B.F.	11/14/53	10/31/53	--	44.0	40.8	42.4	13.7	12.5	13.1	122	87	30
156188	J-458	B.F.	11/14/53	10/31/53	--	43.8	40.8	42.5	13.9	12.6	13.2	129	73	27
Current Mill Average:						43.0		43.0	13.5		13.5	109		29
Cumulative Mill Average:						42.8		42.8	13.8		13.8	107		32
Mill Factor, %:						100.5			97.8		97.8	101.9		90.6
Mill Index, %:						99.8			97.1		97.1	102.8		80.6

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
SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

Date Mch. No.	Basis Weight, lb.	Caliper, points	Mill L -- 42-lb. Linerboard			G. E. Bursting Strength, P.s.i. gage units			Elmendorf Tear, g./sheet Across				
			Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.		
0/21/53 1													
45.6	42.6	43.8	14.9	13.5	14.1	129	90	112	40	36	416	352	
0/22/53 1	43.0	42.0	42.4	14.8	13.0	13.9	120	78	101	39	32	357 ^a	384
0/27/53 1	42.8	41.0	42.0	12.9	11.2	12.0	123	94	110	36	32	304	432
0/28/53 1	43.0	41.6	42.2	13.8	12.1	13.1	129	83	106	39	32	384	464
1/ 5/53 1	44.0	42.0	42.7	13.8	11.7	12.8	125	83	108	39	32	312	336 ^a
1/ 8/53 1	44.0	42.0	43.0	13.8	12.4	13.2	133	94	113	38	33	408	328
42-lb.													
	42.7		13.2		108			108		36		356	
	43.0		13.7		106			106		36		360	
	99.3		96.4		101.9			101.9		100.0		98.9	
	99.1		95.0		101.9			101.9		100.0		96.2	
												97.0	

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

TABLE XIV

SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 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. Functure, units	Element g./
						Max.	Min.	Max.	Max.	Max.
						Avg.	Avg.	Min.	Min.	Av.
Mill I -- 42-lb. Linerboard										
156073	L-221	11/	3/53	10/21/53	1	45.6	42.6	43.8	14.9	13.5
156074	L-222	11/	3/53	10/22/53	1	43.0	42.0	42.4	14.8	13.0
156116	L-223	11/	9/53	10/27/53	1	42.8	41.0	42.0	12.9	12.0
156117	L-224	11/	9/53	10/28/53	1	43.0	41.6	42.2	12.9	12.0
156213	L-225	11/	18/53	11/	5/53	44.0	42.0	42.7	13.8	12.1
156214	L-226	11/	18/53	11/	8/53	44.0	42.0	43.0	13.8	12.4
Current Mill Average:						42.7		13.2	108	36
Cumulative Mill Average:						43.0		13.7	106	36
Mill Factor, %:						99.3		96.4	101.9	100.0
Mill Index, %:						99.1		95.0	101.9	100.0

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

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TABLE XV
SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

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.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
<u>Mill M-42-1b. Linerboard</u>												
0/22/53	2	43.6	41.6	42.4	13.9	13.0	13.5	139	85	111	40	34
0/25/53	4	44.6	42.0	43.6	14.8	13.4	13.9	119	92	107	39	33
0/27/53	2	44.6	42.0	43.1	16.2	14.4	15.2	138	96	116	38	30
1/5/53	2	46.2	41.6	43.7	14.3	13.0	13.9	133	84	108	40	33
1/6/53	2	44.4	41.0	43.0	14.5	13.9	14.1	133	81	108	38	32
1/14/53	2	46.0	42.2	43.6	14.9	13.6	14.2	120	79	100	40	36
		43.2		44.2			108			36		376
		42.9		43.7			107			35		404
		100.7		103.6			100.9			102.9		97.4
		100.2		102.2			101.9			100.0		101.6
												102.2

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

TAKE XU

SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

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

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TABLE XVI
SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

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

TABLE XVI

SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 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.	In
<u>MILL N--42-1b. Linerboard</u>									
156045	N-35	WFLS	10/31/53	10/23/53	1	44.0	42.4	43.1	13.3
156046	N-36	--	10/31/53	10/25/53	1	42.4	40.8	41.8	12.8
156047	N-37	--	10/31/53	10/26/53	1	44.2	42.6	43.6	13.6
156083	N-38	--	11/ 5/53	10/30/53	1	43.6	42.2	42.7	12.8
156084	N-39	WFLS	11/ 5/53	11/ 5/53	1	43.6	42.2	42.7	13.9
156196	N-40	WFLS	11/16/53	11/10/53	1	42.6	41.4	41.9	13.2
156226	N-41	WFLS	11/20/53	11/15/53	1	43.6	41.6	42.4	12.9
156227	N-42	--	11/20/53	11/14/53	1	44.0	42.4	43.5	13.1
156228	N-43	WFLS	11/20/53	11/13/53	1	43.4	41.6	42.6	13.2
156229	N-44	W.F.	11/20/53	11/12/53	1	43.4	42.0	42.7	12.8
Current Mill Average:									
						42.7	42.5	42.5	12.1
Cumulative Mill Average:									
						42.3	42.2	42.2	12.1
Mill Factor, %:									
						100.9	102.5	96.3	103.2
Mill Index, %:									
						99.1	89.9	98.1	88.9

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

TABLE XVII
SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

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.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	In	Across	
<u>Mill 0-42-lb. Linerboard</u>																
24/53	3	40.0	38.8	39.3	12.4	11.7	12.0	131	97	111	34	30	33	384	296	346a
24/53	3	42.4	40.4	41.7	12.8	12.0	12.3	138	92	115	35	30	32	408	304	350a
28/53	3	41.6	39.6	40.6	13.1	11.8	12.4	130	89	113	34	31	33	392	312	349a
28/53	3	43.6	41.4	42.2	13.0	11.5	12.5	137	100	116	38	32	35	472	304	369a
5/53	3	41.8	40.0	40.7	12.8	11.7	12.2	120	88	102	38	32	35	360	280	327
6/53	3	42.0	40.0	40.7	12.3	11.9	12.4	122	85	105	39	34	37	408	312	350a
19/53	3	43.2	40.2	41.5	12.2	11.5	11.9	129	103	117	39	33	36	408	288	342a
19/53	3	44.4	41.0	42.2	12.1	11.2	11.9	127	101	113	35	30	33	368	280	335a
		41.1						12.2		112				34	346	376
		41.6						12.2		108				34	339	370
		98.8						100.0		103.7				100.0	102.1	101.6
		95.4						87.8		105.7				94.4	93.5	93.3

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

TABLE XVII
SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

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

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TABLE XVIII
SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

TABLE XVIII

SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Date Mch. No.	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	G. E. Puncture, units
						Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.
<u>Mill E--44/46-lb. Drum Linerboard</u>									
156059	E-39	W.F.	11/ 2/53	10/26/53	2	48.2	46.2	47.5	16.0
156191	E-42	W.F.	11/16/53	11/10/53	2	49.6	48.2	48.8	15.8
Current Mill Average:									
						48.2	48.2	48.2	14.8
Cumulative Mill Average:									
						47.1	47.1	47.4	14.4
Mill Factor, %L									
						102.3	102.8	102.8	92.0
<u>Mill E--72-lb. Linerboard</u>									
156114	E-41	W.F.	11/ 9/53	11/ 2/53	2	73.8	69.4	72.2	22.2
								20.7	21.2
<u>Mill E--90-lb. Linerboard</u>									
156225	E-45	W.F.	11/20/53	11/17/53	2	92.8	90.0	91.3	28.4
								26.6	27.5
								18.7	18.7
								13.8	16.0
								10.2	10.2
								9.0	9.0
								9.6	9.6
								9.2	9.2
								7.0	7.0

^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		31-62	73-81	—
B	28	68	0.5	50	70	24-190
C	50-70	73	48-120		None	
D	30-32	77-78	8	50-53	71-73	16
E		None		46-65	74-78	—
F		None		46-51	72-73	48
G		None		50	73	24-36
H		None		50	73	24
I		None		47-51	72-80	—
J		None		50	72-73	0.5
K		No samples submitted.				
L		None		49-74	68-78	—
M		None		36-51	74-76	—
N	50	71-73	24	50	72-74	24
O		None		50	73	2
E*		None		60-74	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 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 C, D, E, H, J, and O are higher than those for the Institute, whereas the results for Mills A, F, G, I, L, M, and N are lower and the result for Mill B is the same. In general, the agreement in basis weight 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 while the average results for the other mills are lower.

The accord between Institute and mill caliper values is good with the exception of Mills L and M.

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

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

It may be seen in Tables XX and XXI that the average machine direction tear results for Mills C, E, F, G, H, J, L, M, N, and O are lower than those for the Institute whereas the results for Mills A, B, D, and I are higher. The maximum variation for the current period is twelve per cent. The differences encountered for Mills F and L 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, E, I, N and O are higher than those for the Institute whereas the average results for

for Mills A, F, G, H, J, L, and M are lower. The maximum variation for the current period is eleven per cent. The differences for Mills D and I appear to be excessive.

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

No. Samples Compared	A	B	C	D	E	F	G	H	I	J	L	M	N	O	<u>Mills*</u>		<u>Basis Weight</u>		<u>Caliper</u>		<u>Bursting Strength</u>	
															43.0	43.6	42.4	42.5	43.0	42.7	43.2	42.7
Institute	43.3	43.8	43.0	43.1	43.0	42.5	43.6	42.4	42.5	43.0	42.7	43.2	42.7	41.1								
Mill	43.0	43.8	43.1	43.7	43.2	41.9	43.5	42.9	42.3	43.8	42.1	41.8	42.5	41.4								
Av. Diff. **	-0.3	0.0	+0.1	+0.6	+0.2	-0.6	-0.1	+0.5	-0.2	+0.8	-0.6	-1.4	-0.2	+0.3								
Max. Diff. ***	-0.8	-0.3	+0.6	+1.4	+1.2	-1.1	-1.0	+0.8	-0.6	+1.1	-1.2	-2.1	-0.9	+0.8								
Institute	12.6	12.5	14.1	12.7	13.3	13.0	12.0	12.3	13.2	13.5	13.2	14.2	12.5	12.2								
Mill	12.5	12.2	13.7	12.5	12.7	12.6	11.7	12.3	12.9	13.4	12.3	13.0	12.1	11.9								
Av. Diff. **	-0.1	-0.3	-0.4	-0.2	-0.6	-0.7	-0.3	0.0	-0.3	-0.1	-0.9	-1.2	-0.4	-0.3								
Max. Diff. ***	-0.4	-0.4	-0.8	-0.6	-0.7	-0.9	-0.5	-0.5	-0.1	-0.6	-0.3	-1.4	-0.6	-0.4								
Institute	113	112	107	106	97	109	121	107	108	109	108	108	104	112								
Mill	113	111	107	104	94	114	122	105	108	109	106	109	104	107								
Av. Diff. **	0	-1	0	-2	-3	+5	+1	-2	0	-3	+1	+10	0	-5								
Max. Diff. ***	-6	+2	+6	-8	-10	+14	+3	-3	+6	-4	+8	+12	+3	-9								

(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	Mills*				G	H	I	J	L	M	N	O
						F	G	H	I								
<u>G. E. Puncture</u>																	
Institute	32	30	33	36	31	37	33	33	31	29	36	36	32	34			
Mill	33	29	35	—	33	34	30	33	31	30	—	—	31	—	—	—	—
Av. Diff. **	+1	-1	+2	—	+2	-3	-3	0	0	+1	—	-5	—	—	—	—	—
Max. Diff. ***	+3	-3	+3	—	+3	-5	-5	+3	-4	+1	—	-9	—	—	—	—	—
<u>Tearing Strength, in</u>																	
Institute	322	300	329	373	357	379	359	346	328	344	356	376	339	346			
Mill	310	304	315	383	329	342	344	328	350	329	315	368	329	322			
Av. Diff. **	+12	+4	-14	+10	-28	-37	-15	-18	+22	-15	-41	-8	-10	-24			
Max. Diff. ***	-32	+18	+29	+36	-57	-54	-39	-31	+54	-32	-95	-56	-35	-39			
<u>Tearing Strength, across</u>																	
Institute	367	344	370	397	339	418	382	396	381	368	391	412	380	376			
Mill	361	356	380	439	340	391	364	370	418	364	369	411	410	384			
Av. Diff. **	-6	+12	+10	+42	+1	-27	-18	-26	+37	-4	-22	-1	+30	+8			
Max. Diff. ***	-30	+29	+33	+105	+8	-42	-38	-48	+58	-44	-76	+57	+54	+24			

* 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	Bursting Strength	G. E. Puncture	Tearing in	Average Difference, per cent across
Mill A						
Current period	-0.7	-0.8	0	+3	+4	-2
76th period	-0.2	+0.8	0	+3	0	+0.8
75th period	-0.5	0	+2	+6	-0.6	+0.8
Mill B						
Current period	0	-2	-0.9	-3	+1	+3
76th period	-0.9	-0.8	+0.9	-3	-5	-1
75th period	-0.9	-0.8	+0.8	-3	-6	+1
Mill C						
Current period	+0.2	-3	0	+6	-4	+3
76th period	-0.5	-1	-0.9	+3	-5	+2
75th period	+1	-0.8	-4	0	-1	+7
Mill D						
Current period	+1	-2	-2	--	+3	+11
76th period	+0.2	-2	0	--	+1	+8
75th period	0	0	-5	--	+5	+11
Mill E						
Current period	+0.5	-5	-3	+6	-8	+0.3
76th period	+0.5	-7	-1	0	-3	+3
75th period	+1	-5	-5	0	-10	-8
Mill F						
Current period	-1	-5	+5	-8	-10	-6
76th period	-0.5	-4	+5	0	-0.3	+1
75th period	+0.2	-2	-5	+6	+5	+7
Mill G						
Current period	-0.2	-2	+0.8	-9	-4	-5
76th period	+0.4	-2	-0.8	-6	-3	-2
75th period	+0.2	-0.8	-4	-6	-0.9	-4
Mill H						
Current period	+1	0	-2	0	-5	-7
76th period	+0.9	-2	+1	+3	0	+2
75th period	+0.7	0	-2	0	-2	+1
Mill I						
Current period	-0.5	-2	0	0	+7	+10
76th period	-1	-2	+0.9	+6	+9	+11
75th period	-0.2	0	+3	+3	+11	+15
Mill J						
Current period	+2	-0.7	-3	+3	-4	-1
76th period	+1	-0.7	+2	+3	0	+4
75th period	+2	+2	0	+13	-2	+14
Mill L						
Current period	-1	-7	+0.9	--	-12	-6
76th period	-0.2	-2	+1	--	-1	+5
75th period	0	-2	-1	--	+4	+7
Mill M						
Current period	-3	-8	+9	-14	-2	-0.2
76th period	-1	-7	+8	-6	+10	+10
75th period	0	-5	+4	0	+12	+11

Mill B						
Current period	0	-2	-0.9	-3	+1	+3
76th period	-0.9	-0.8	+0.9	-3	-5	-1
75th period	-0.9	-0.8	+0.8	-3	-6	+1
Mill C						
Current period	+0.2	-3	0	+6	-4	+3
76th period	-0.5	-1	-0.9	+3	-5	+2
75th period	+1	-0.8	-4	0	-1	+7
Mill D						
Current period	+1	-2	-2	--	+3	+11
76th period	+0.2	-2	0	--	+1	+8
75th period	0	0	-5	--	+5	+11
Mill E						
Current period	+0.5	-5	-3	+6	-8	+0.3
76th period	+0.5	-7	-1	0	-3	+3
75th period	+1	-5	-5	0	-10	-8
Mill F						
Current period	-1	-5	+5	-8	-10	-6
76th period	-0.5	-4	+5	0	-0.3	+1
75th period	+0.2	-2	-5	+6	+5	+7
Mill G						
Current period	-0.2	-2	+0.8	-9	-4	-5
76th period	+0.4	-2	-0.8	-6	-3	-2
75th period	+0.2	-0.8	-4	-6	-0.9	-4
Mill H						
Current period	+1	0	-2	0	-5	-7
76th period	+0.9	-2	+1	+3	0	+2
75th period	+0.7	0	-2	0	-2	+1
Mill I						
Current period	-0.5	-2	0	0	+7	+10
76th period	-1	-2	+0.9	+6	+9	+11
75th period	-0.2	0	+3	+3	+11	+15
Mill J						
Current period	+2	-0.7	-3	+3	-4	-1
76th period	+1	-0.7	+2	+3	0	+4
75th period	+2	+2	0	+13	-2	+14
Mill L						
Current period	-1	-7	+0.9	--	-12	-6
76th period	-0.2	-2	+1	--	-1	+5
75th period	0	-2	-1	--	+4	+7
Mill M						
Current period	-3	-8	+9	-14	-2	-0.2
76th period	-1	-7	+8	-6	+10	+10
75th period	0	-5	+4	0	+12	+11
Mill N						
Current period	-0.5	-3	0	--	-3	+8
76th period	-0.5	-2	-2	--	-0.3	+10
75th period	-0.2	+2	-6	--	+0.9	+12
Mill O						
Current period	+0.7	-2	-4	--	-7	+2
76th period	+0.7	0	-3	--	-5	+4
75th period	+2	+2	-6	--	-6	+3

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TABLE XXII
SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 1953
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.
<u>Mill A—42-lb. Linerboard</u>										
42.7	42.7	0.0	12.3	12.1	-0.2	110	115	+ 5	30	-2
42.9	42.9	0.0	12.7	12.5	-0.2	106	110	+ 4	30	-1
43.3	43.1	-0.2	13.2	12.9	-0.3	109	113	+ 4	32	+ 1
43.2	43.4	+0.2	13.3	12.9	-0.4	111	112	+ 1	32	-2
43.8	43.3	-0.5	12.2	12.1	-0.1	120	114	- 6	32	+ 3
44.1	43.3	-0.8	12.2	12.2	0.0	116	115	- 1	32	+ 2
43.3	42.9	-0.4	12.2	12.2	0.0	118	114	- 4	35	- 5
42.9	42.5	-0.4	12.9	13.0	+0.1	114	111	- 3	35	- 1
43.3	43.0	-0.3	12.6	12.5	-0.1	113	113	0	32	33
								+ 1	322	+12
									310	-6

TABLE XXIII

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.
<u>Mill B—42-lb. Linerboard</u>										
43.6	43.5	-0.1	12.5	12.2	-0.3	110	112	+ 2	30	-2
43.7	43.4	-0.3	12.6	12.2	-0.4	112	110	- 2	29	- 1
43.8	43.8	0.0	12.5	12.2	-0.3	112	111	- 1	30	- 2
43.7	43.7	0.0	12.5	12.2	-0.3	111	110	- 1	30	- 2
43.8	44.0	+0.2	12.4	12.2	-0.2	113	111	- 2	31	- 1
43.9	44.0	+0.1	12.5	12.2	-0.3	110	111	+ 1	32	- 3
44.0	43.9	-0.1	12.5	12.2	-0.3	113	111	- 2	31	- 2
43.8	44.0	+0.2	12.4	12.2	-0.2	112	110	- 2	31	- 2
43.8	43.8	0.0	12.5	12.2	-0.3	112	111	- 1	30	- 1
									300	-6
									304	+ 4

ngs 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—NOVEMBER 1 THROUGH NOVEMBER 30, 1953

Institute Data versus Mill Data

File No.	Mill Code	Fin-fish	Date Made	Mch. No.	Basis Weight,			Caliper, points			Bursting Strength, p.s.i. gage units			G. E. Puncture, units			Elmer G
					lb.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	
MILL A—42-lb. Linerboard																	
156048	A-494	WF1S	10/25/53	1	42.7	42.7	0.0	12.3	12.1	-0.2	110	115	+ 5	30	28	- 2	316a
156049	A-495	WF1S	10/25/53	2	42.9	42.9	0.0	12.7	12.5	-0.2	106	110	+ 4	30	29	- 1	322a
156142	A-496	WF1S	11/ 2/53	2	43.3	43.1	-0.2	13.2	12.9	-0.3	109	113	+ 4	32	33	+ 1	315
156143	A-497	WF1S	11/ 2/53	2	43.2	43.4	+0.2	13.3	12.9	-0.4	111	112	+ 1	32	33	+ 1	312
156218	A-498	WF1S	11/ 9/53	1	43.8	43.3	-0.5	12.2	12.1	-0.1	120	114	- 6	32	35	+ 3	311
156219	A-499	WF1S	11/ 9/53	1	44.1	43.3	-0.8	12.2	12.2	0.0	116	115	- 1	32	34	+ 2	317a
156238	A-500	WF1S	11/15/53	1	43.3	42.9	-0.4	12.2	12.2	0.0	118	114	- 4	35	35	0	324a
156239	A-501	WF1S	11/17/53	2	42.9	42.5	-0.4	12.9	13.0	+0.1	114	111	- 3	35	34	- 1	357a
Current Mill Average:					43.3	43.0	-0.3	12.6	12.5	-0.1	113	113	0	32	33	+ 1	322
MILL B—42-lb. Linerboard																	
156182	B-895	WF1S	11/ 5/53	1	43.6	43.5	-0.1	12.5	12.2	-0.3	110	112	+ 2	30	28	- 2	305
156183	B-896	WF1S	11/ 5/53	1	43.7	43.4	-0.3	12.6	12.2	-0.4	112	110	- 2	29	28	- 1	295
156184	B-897	WF1S	11/ 5/53	1	43.8	43.8	0.0	12.5	12.2	-0.3	112	111	- 1	30	28	- 2	303
156185	B-898	WF1S	11/ 5/53	1	43.7	43.7	0.0	12.5	12.2	-0.3	111	110	- 1	30	28	- 2	297a
156240	B-899	WF1S	11/ 5/53	1	43.8	44.0	+0.2	12.4	12.2	-0.2	113	111	- 2	31	30	- 1	302a
156241	B-900	WF1S	11/ 5/53	1	43.9	44.0	+0.1	12.5	12.2	-0.3	110	111	+ 1	32	29	- 3	305a
156242	B-901	WF1S	11/ 5/53	1	44.0	43.9	-0.1	12.5	12.2	-0.3	113	111	- 2	31	29	- 2	291
156243	B-902	WF1S	11/ 5/53	1	43.8	44.0	+0.2	12.4	12.2	-0.2	112	110	- 2	31	29	- 2	299a
Current Mill Average:					43.8	43.8	0.0	12.5	12.2	-0.3	112	111	- 1	30	29	- 1	300
MILL C																	
Mill C—42-lb. Linerboard																	
Elmer G																	

TABLE XXII

File No.	Mill Code	Fin-fish	Date Made	Mch. No.	Basis Weight,			Caliper, points			Bursting Strength, p.s.i. gage units			G. E. Puncture, units			Elmer G
					lb.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	
MILL A—42-lb. Linerboard																	
156048	A-494	WF1S	10/25/53	1	42.7	42.7	0.0	12.3	12.1	-0.2	110	115	+ 5	30	28	- 2	316a
156049	A-495	WF1S	10/25/53	2	42.9	42.9	0.0	12.7	12.5	-0.2	106	110	+ 4	30	29	- 1	322a
156142	A-496	WF1S	11/ 2/53	2	43.3	43.1	-0.2	13.2	12.9	-0.3	109	113	+ 4	32	33	+ 1	315
156143	A-497	WF1S	11/ 2/53	2	43.2	43.4	+0.2	13.3	12.9	-0.4	111	112	+ 1	32	33	+ 1	312
156218	A-498	WF1S	11/ 9/53	1	43.8	43.3	-0.5	12.2	12.1	-0.1	120	114	- 6	32	35	+ 3	311
156219	A-499	WF1S	11/ 9/53	1	44.1	43.3	-0.8	12.2	12.2	0.0	116	115	- 1	32	34	+ 2	301
156238	A-500	WF1S	11/15/53	1	43.3	42.9	-0.4	12.2	12.2	0.0	118	114	- 4	35	35	0	324a
156239	A-501	WF1S	11/17/53	2	42.9	42.5	-0.4	12.9	13.0	+0.1	114	111	- 3	35	34	- 1	357a
Current Mill Average:					43.3	43.0	-0.3	12.6	12.5	-0.1	113	113	0	32	33	+ 1	322
MILL B—42-lb. Linerboard																	
156182	B-895	WF1S	11/ 5/53	1	43.6	43.5	-0.1	12.5	12.2	-0.3	110	112	+ 2	30	28	- 2	305
156183	B-896	WF1S	11/ 5/53	1	43.7	43.4	-0.3	12.6	12.2	-0.4	112	110	- 2	29	28	- 1	295
156184	B-897	WF1S	11/ 5/53	1	43.8	43.8	0.0	12.5	12.2	-0.3	112	111	- 1	30	28	- 2	303
156185	B-898	WF1S	11/ 5/53	1	43.7	43.7	0.0	12.5	12.2	-0.3	111	110	- 1	30	28	- 2	296
156240	B-899	WF1S	11/ 5/53	1	43.8	44.0	+0.2	12.4	12.2	-0.2	113	111	- 2	31	30	- 1	303
156241	B-900	WF1S	11/ 5/53	1	43.9	44.0	+0.1	12.5	12.2	-0.3	110	111	+ 1	32	29	- 3	306
156242	B-901	WF1S	11/ 5/53	1	44.0	43.9	-0.1	12.5	12.2	-0.3	113	111	- 2	31	29	- 2	302a
156243	B-902	WF1S	11/ 5/53	1	43.8	44.0	+0.2	12.4	12.2	-0.2	112	110	- 2	31	29	- 2	301
Current Mill Average:					43.8	43.8	0.0	12.5	12.2	-0.3	112	111	- 1	30	29	- 1	300
MILL C																	
Elmer G																	

^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 XIV
SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (Continued)
Institute Data versus Mill Data

Mch. No.	Basis Weight, lb.	Caliner, points	G. E.	Elmendorf Tear, g./sheet			Across Mill Diff.	
				Basis Weight, lb.	Diff.	IPC		
Mill C--42-lb. Linerboard								
1	44.0	43.7	-0.3	14.5	13.7	-0.8	103	109 + 6
1	44.0	43.7	-0.3	14.4	13.9	-0.5	106	105 - 1
1	42.6	42.9	+0.3	14.0	13.7	-0.3	106	106 0
1	42.8	43.1	+0.3	13.9	13.8	-0.1	107	108 + 1
1	42.5	43.1	+0.6	13.9	13.8	-0.1	107	107 0
1	43.2	43.1	-0.1	14.0	13.6	-0.4	110	108 - 2
1	42.4	42.8	+0.4	14.2	13.7	-0.5	107	106 - 1
1	42.4	42.7	+0.3	14.0	13.6	-0.4	107	107 0
1	43.0	43.1	+0.1	14.1	13.7	-0.4	107	107 0

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

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

TABLE XXIV

SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (Continued)

Institute Data Versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb. IPC	Caliper, points Mill Diff.	G. E. Strength, Puncture, D. S. I. gage Mill Diff.	IPC Mill Diff.	In Mill Diff.	Elmendo: E./S.
Mill C--42-1b. Linerboard										
156173	C-515	W.F.	11/ 2/53	1	44.0	43.7	-0.3	14.5	13.7	-0.8
156174	C-516	W.F.	11/ 2/53	1	44.0	43.7	-0.3	14.4	13.9	-0.5
156175	C-517	W.F.	11/ 3/53	1	42.6	42.9	+0.3	14.0	13.7	-0.3
156186	C-518	W.F.	11/ 3/53	1	42.8	43.1	+0.3	13.9	13.8	-0.1
156197	C-519	W.F.	11/ 5/53	1	42.5	43.1	+0.6	13.9	13.8	-0.1
156198	C-520	W.F.	11/ 5/53	1	43.2	43.1	-0.1	14.0	13.6	-0.4
156199	C-521	W.F.	11/ 6/53	1	42.4	42.8	+0.4	14.2	13.7	-0.5
156200	C-522	W.F.	11/ 6/53	1	42.4	42.7	+0.3	14.0	13.6	-0.4
Current Mill Average:				43.0	43.1	+0.1	14.1	13.7	-0.4	
								107	107	0
									33	35
									+	2

^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 XXV
SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (Continued)

Institute Data versus Mill Data

Basis Weight, lb.	Caliper, points	Mill D -- 42-lb. Linerboard						In Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Elmendorf Tear, g./sheet
		G.E.	Puncture, units	IPC	Mill Diff.	IPC	Mill Diff.				
42.3	42.3	0.0	12.8	12.5	-0.3	101	102	+ 1	34	385 ^a	389 + 4
42.2	42.9	+0.7	12.6	12.3	-0.3	107	106	- 1	34	371 ^a	379 + 8
43.6	44.5	+0.9	13.4	13.0	-0.4	98	101	+ 3	36	374 ^a	373 - 1
42.8	43.2	+0.4	12.7	12.6	-0.1	108	104	- 4	35	373 ^a	362 -11
42.8	44.2	+1.4	12.6	12.7	+0.1	108	101	- 7	36	375 ^a	383 + 8
43.3	43.2	-0.1	12.5	12.6	+0.1	107	103	- 4	36	351 ^a	383 +32
43.3	44.4	+1.1	12.7	12.1	-0.6	108	108	0	35	372 ^a	386 +14
42.5	43.7	+1.2	12.2	12.0	-0.2	110	107	- 3	33	360 ^a	396 +36
45.4	45.0	-0.4	13.1	13.0	-0.1	105	103	- 2	39	390 ^a	390 0
43.0	43.8	+0.8	12.1	12.1	0.0	110	102	- 8	38	383 ^a	386 + 3
43.1	43.7	+0.6	12.7	12.5	-0.2	106	104	- 2	36	373	383 +10

^a data are calculated from the totals of the individual readings.

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

TABLE XXV

SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin-fish	Date Made	Mch. No.	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. sage	G.E. Puncture, units	Elmendo g./s
					IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	
<u>Mill D -- 42-lb. Linerboard</u>									
156099	D-708	W.F.	11/ 4/53	4	42.3	42.3	0.0	12.8	34
156112	D-709	W.F.	11/ 5/53	4	42.2	42.9	+0.7	12.6	-0.3
156139	D-710	W.F.	11/ 6/53	4	43.6	44.5	+0.9	12.3	-0.4
156140	D-711	W.F.	11/ 7/53	4	42.8	43.2	+0.4	12.7	-0.1
156141	D-712	W.F.	11/ 8/53	4	42.8	44.2	+1.4	12.6	-0.1
156145	D-713	W.F.	11/ 9/53	4	43.3	43.2	-0.1	12.5	+0.1
156165	D-714	W.F.	11/10/53	4	43.3	44.4	+1.1	12.7	-0.6
156194	D-715	W.F.	11/12/53	4	42.5	43.7	+1.2	12.0	-0.2
156215	D-716	W.F.	11/13/53	4	45.4	45.0	-0.4	13.1	-0.1
156216	D-717	W.F.	11/14/53	4	43.0	43.8	+0.8	12.1	-0.0
Current Mill Average:									
					43.1	43.7	+0.6	12.7	-0.2
								104	-2
								36	
									383
									+10
									373

^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.

SUMMARY OF INDIVIDUAL TEST LOTS—MONTHS ER 1 THROUGH NOVEMBER 30, 1953 (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 Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Across Mill Diff.	
<u>Mill E—42-1b. Linerboard</u>									
43.1	44.3	+1.2	14.1	13.6	-0.5	100	96	-4	31
42.0	42.6	+0.6	12.8	12.4	-0.4	91	96	+5	31
43.8	42.6	-1.2	12.9	12.2	-0.7	100	90	-10	32
43.0	43.2	+0.2	13.3	12.7	-0.6	97	94	-3	31
									33
									+2
									357
									329
									-28
									339
									340
									+1

TABLE XXVII

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 Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Across Mill Diff.	
<u>Mill F—42-1b. Linerboard</u>									
42.3	41.8	-0.5	12.9	12.3	-0.6	112	119	+7	36
42.4	42.1	-0.3	13.3	12.7	-0.6	108	122	+14	36
42.4	41.8	-0.6	13.2	12.4	-0.8	102	109	+7	38
43.0	42.3	-0.7	13.1	12.6	-0.5	116	118	+2	37
42.8	41.7	-1.1	13.5	12.6	-0.9	110	108	-2	37
42.3	41.7	-0.6	13.5	12.6	-0.9	109	112	+3	37
42.5	42.0	-0.5	13.4	12.7	-0.7	112	112	0	38
42.2	41.3	-0.9	13.4	12.6	-0.8	105	109	+4	38
42.5	41.9	-0.6	13.3	12.6	-0.7	109	114	+5	37
									34
									+3
									379
									342
									-37
									418
									391
									-27

ings 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--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			G. E. Puncture, units			Elme g
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	In	
<u>MILL E--42-1b. Linerboard</u>																	
156052	E-40	W.F.	10/29/53	2	43.1	44.3	+1.2	14.1	13.6	-0.5	100	96	-4	31	34	+ 3	384a
156192	E-43	W.F.	11/13/53	2	42.0	42.6	+0.6	12.8	12.4	-0.4	91	96	+ 5	31	33	+ 2	337a
156224	E-44	W.F.	11/16/53	2	43.8	42.6	-1.2	12.9	12.2	-0.7	100	90	-10	32	32	0	351a
Current Mill Average:					43.0	43.2	+0.2	13.3	12.7	-0.6	97	94	-3	31	33	+ 2	357
<u>MILL F--42-1b. Linerboard</u>																	
156066	F-64	W.F.	10/20/53	--	42.3	41.8	-0.5	12.9	12.3	-0.6	112	119	+ 7	36	34	- 2	370a
156067	F-65	W.F.	10/22/53	--	42.4	42.1	-0.3	13.3	12.7	-0.6	108	122	+14	36	34	- 2	391a
156068	F-66	W.F.	10/26/53	--	42.4	41.8	-0.6	13.2	12.4	-0.8	102	109	+ 7	38	36	- 2	381a
156069	F-67	W.F.	10/26/53	--	43.0	42.3	-0.7	13.1	12.6	-0.5	116	118	+ 2	37	35	- 2	387a
156070	F-68	W.F.	10/27/53	--	42.8	41.7	-1.1	13.5	12.6	-0.9	110	108	-2	37	33	- 4	375a
156244	F-69	W.F.	10/27/53	--	42.3	41.7	-0.6	13.5	12.6	-0.9	109	112	+ 3	37	33	- 4	368a
156245	F-70	W.F.	10/28/53	--	42.5	42.0	-0.5	13.4	12.7	-0.7	112	112	0	38	33	- 5	387
156246	F-71	W.F.	10/28/53	--	42.2	41.3	-0.9	13.4	12.6	-0.8	105	109	+ 4	38	33	- 5	369a
Current Mill Average:					42.5	41.9	-0.6	13.3	12.6	-0.7	109	114	+ 5	37	34	- 3	379

TABLE XXVII

156066	F-64	W.F.	10/20/53	--	42.3	41.8	-0.5	12.9	12.3	-0.6	112	119	+ 7	36	34	- 2	370a
156067	F-65	W.F.	10/22/53	--	42.4	42.1	-0.3	13.3	12.7	-0.6	108	122	+14	36	34	- 2	391a
156068	F-66	W.F.	10/26/53	--	42.4	41.8	-0.6	13.2	12.4	-0.8	102	109	+ 7	38	36	- 2	381a
156069	F-67	W.F.	10/26/53	--	43.0	42.3	-0.7	13.1	12.6	-0.5	116	118	+ 2	37	35	- 2	387a
156070	F-68	W.F.	10/27/53	--	42.8	41.7	-1.1	13.5	12.6	-0.9	110	108	-2	37	33	- 4	375a
156244	F-69	W.F.	10/27/53	--	42.3	41.7	-0.6	13.5	12.6	-0.9	109	112	+ 3	37	33	- 4	368a
156245	F-70	W.F.	10/28/53	--	42.5	42.0	-0.5	13.4	12.7	-0.7	112	112	0	38	33	- 5	387
156246	F-71	W.F.	10/28/53	--	42.2	41.3	-0.9	13.4	12.6	-0.8	105	109	+ 4	38	33	- 5	369a
Current Mill Average:					42.5	41.9	-0.6	13.3	12.6	-0.7	109	114	+ 5	37	34	- 3	379

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

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

TABLE XXVIII
SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (Continued)

Institute Data versus Mill Data									
Mch. No.	Basis Weight, lb.	Caliper, points	Bursting Strength,		G. E. Puncture, units	In IPC Mill Diff.	In IPC Mill Diff.	Across IPC Mill Diff.	Elmendorf Tear, g./sheet
			IPC	Mill					
<u>MILL G—42-1b. Linerboard</u>									
—	42.2	42.2	0.0	11.1	10.8	-0.3	123	122	-1
—	44.6	43.6	-1.0	12.2	11.7	-0.5	119	119	0
—	44.2	44.3	+0.1	12.4	12.0	-0.4	116	119	+ 3
—	42.8	43.3	+0.5	12.0	11.7	-0.3	119	118	-1
—	43.8	43.7	-0.1	12.1	11.9	-0.2	124	124	0
—	44.1	43.7	-0.4	12.4	12.1	-0.3	127	128	+ 1
43.6	43.5	-0.1	12.0	11.7	-0.3	121	122	+ 1	
							33	30	- 3
								359	344
									-15
									382
									364
									-18

TABLE XXIX

MILL H—42-1b. Linerboard									
2	42.5	42.8	+0.3	12.3	12.2	-0.1	109	106	- 3
2	42.5	43.0	+0.5	12.2	12.3	+0.1	108	107	- 1
2	42.7	42.7	0.0	12.4	12.3	-0.1	104	103	- 1
42.4	42.9	+0.5	12.3	12.3	0.0	107	105	- 2	
									33
									0
									346
									328
									-18
									396
									370
									-26

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

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

TABLE XXVIII

SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight,			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 G—42-lb. Linerboard</u>																
156060	G-536	W.F.	10/25/53	--	42.2	42.2	0.0	11.1	10.8	-0.3	123	122	-1	31	30	-1
156061	G-537	W.F.	10/25/53	--	44.6	43.6	-1.0	12.2	11.7	-0.5	119	119	0	33	30	-3
156189	G-538	W.F.	11/ 5/53	--	44.2	44.3	+0.1	12.4	12.0	-0.4	116	119	+ 3	34	31	-3
156190	G-539	W.F.	11/ 5/53	--	42.8	43.3	+0.5	12.0	11.7	-0.3	119	118	-1	32	30	-2
156263	G-540	W.F.	11/12/53	--	43.8	43.7	-0.1	12.1	11.9	-0.2	124	124	0	34	30	-4
156264	G-541	W.F.	11/12/53	--	44.1	43.7	-0.4	12.4	12.1	-0.3	127	128	+ 1	36	31	-5
Current Mill Average:					43.6	43.5	-0.1	12.0	11.7	-0.3	121	122	+ 1	33	30	-3

TABLE XXIX

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight,			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 H—42-lb. Linerboard</u>																
156041	H-425	WFIS	10/19/53	2	42.1	42.9	+0.8	12.4	12.5	+0.1	107	106	-1	32	34	+ 2
156042	H-426	WFIS	10/20/53	2	42.5	42.8	+0.3	12.3	12.2	-0.1	109	106	-3	32	35	+ 3
156269	H-427	WFIS	11/16/53	2	42.5	43.0	+0.5	12.2	12.3	+0.1	108	107	-1	34	32	-2
156270	H-428	WFIS	11/17/53	2	42.7	42.7	0.0	12.4	12.3	-0.1	104	103	-1	34	31	-3
Current Mill Average:					42.4	42.9	+0.5	12.3	12.3	0.0	107	105	-2	33	33	0

^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 XXX
SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (Continued)
Institute Data versus Mill Data

Mch. No.	Basis Weight, lb.	IPC Mill Diff.	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.
<u>Mill I-42-1b. Linerboard</u>												
1	42.4	42.4	0.0	13.1	12.8	-0.3	113	114	+ 1	29	+ 3	327
1	42.5	42.2	-0.3	13.1	12.6	-0.5	107	113	+ 6	29	+ 3	301
1	43.1	42.5	-0.6	13.6	13.5	-0.1	107	104	- 3	30	0	315a
1	43.2	42.6	-0.6	13.5	13.4	-0.1	104	105	+ 1	31	- 1	313
1	42.5	42.3	-0.2	13.1	13.0	-0.1	106	108	+ 2	31	0	343a
1	42.6	42.3	-0.3	13.1	12.9	-0.2	110	106	- 4	31	+ 1	366
1	42.6	42.5	-0.1	13.0	12.4	-0.6	113	108	- 5	31	- 2	323a
1	42.4	42.1	-0.3	13.3	12.7	-0.6	107	107	0	32	- 4	328a
1	42.4	42.4	0.0	13.1	12.9	-0.2	109	111	+ 2	32	- 2	322a
1	42.2	42.4	+0.2	13.3	12.8	-0.5	109	108	- 1	32	- 1	333a
1	42.4	42.1	-0.3	13.2	13.0	-0.2	110	109	- 1	34	- 2	333
1	42.3	42.4	+0.1	13.2	13.0	-0.2	105	109	+ 4	35	- 3	322a
42.5	42.3	-0.2	13.2	12.9	-0.3	108	108	0	31	31	0	328
												+22
												381
												418
												+37

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

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

TABLE XXX

SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (Continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			G. E. Puncture, units		
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
<u>Mill I--42-lb. Linerboard</u>																
156038	I-337	WFLS	10/24/53	1	42.4	42.4	0.0	13.1	12.8	-0.3	113	114	+ 1	29	32	+ 3
156039	I-338	WFLS	10/23/53	1	42.5	42.2	-0.3	13.1	12.6	-0.5	107	113	+ 6	29	32	+ 3
156058	I-339	WFLS	10/27/53	1	43.1	42.5	-0.6	13.6	13.5	-0.1	107	104	- 3	30	30	0
156103	I-340	WFLS	10/29/53	1	43.2	42.6	-0.6	13.5	13.4	-0.1	104	105	+ 1	31	30	- 1
156104	I-341	WFLS	11/ 2/53	1	42.5	42.3	-0.2	13.1	13.0	-0.1	106	108	+ 2	31	31	0
156105	I-342	WFLS	11/ 2/53	1	42.6	42.3	-0.3	13.1	12.9	-0.2	110	106	- 4	31	32	+ 1
156115	I-343	W.F.	11/ 5/53	1	42.6	42.5	-0.1	13.0	12.4	-0.6	113	108	- 5	31	29	- 2
156195	I-344	WFLS	11/ 6/53	1	42.4	42.1	-0.3	13.3	12.7	-0.6	107	107	0	32	28	- 4
156211	I-345	WFLS	11/11/53	1	42.4	42.4	0.0	13.1	12.9	-0.2	109	111	+ 2	32	29	- 3
156212	I-346	WFLS	11/12/53	1	42.2	42.4	+0.2	13.3	12.8	-0.5	109	108	- 1	32	31	- 1
156254	I-347	W.F.	11/16/53	1	42.4	42.1	-0.3	13.2	13.0	-0.2	110	109	- 1	34	32	- 2
156255	I-348	W.F.	11/17/53	1	42.3	42.4	+0.1	13.2	13.0	-0.2	105	109	+ 4	35	32	- 3
Current Mill Average:																
					42.5	42.3	-0.2	13.2	12.9	-0.3	108	108	0	31	31	0

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 XXXI
SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

Institute Data versus Mill Data

Mch. No.	Basis Weight, lb.	IPC Mill Diff.	Caliper, points			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.	
<u>Mill J-42-lb. Linerboard</u>															
—	43.1	44.0	+0.9	13.4	13.7	+0.3	110	108	-2	30	0	348a	345	-3	
—	43.0	44.1	+1.1	13.7	13.5	-0.2	111	110	-1	30	31	+1	372a	340	-32
—	43.5	43.9	+0.4	13.7	13.7	0.0	111	107	-4	29	30	+1	372a	345	-27
—	43.2	44.0	+0.8	13.6	13.6	0.0	110	109	-1	29	30	+1	341a	338	-3
—	42.4	43.4	+1.0	13.1	13.0	-0.1	107	103	-4	29	28	-1	313a	297	-16
—	42.5	43.3	+0.8	13.2	13.0	-0.2	105	102	-3	29	29	0	318a	307	-11
—	43.0	43.8	+0.8	13.5	13.4	-0.1	109	106	-3	29	30	+1	344	329	-15

TABLE XXXII

Mill K-42-lb. Linerboard

No samples submitted.

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

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

TABLE XXXII

SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (CONTINUED)

Institute Data versus Mill Data

File No.	Mill Code	Fin-fish	Date Made	Mch. No.	Basis Weight, 1b.			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 J—42-lb. Linerboard</u>																
156036	J-453	B.F.	10/12/53	--	43.1	44.0	+0.9	13.4	13.7	+0.3	110	108	-2	30	30	0
156037	J-454	B.F.	10/12/53	--	43.0	44.1	+1.1	13.7	13.5	-0.2	111	110	-1	30	31	+1
156056	J-455	B.F.	10/21/53	--	43.5	43.9	+0.4	13.7	13.7	0.0	111	107	-4	29	30	+1
156057	J-456	B.F.	10/21/53	--	43.2	44.0	+0.8	13.6	13.6	0.0	110	109	-1	29	30	+1
156187	J-457	B.F.	10/31/53	--	42.4	43.4	+1.0	13.1	13.0	-0.1	107	103	-4	29	28	-1
156188	J-458	B.F.	10/31/53	--	42.5	43.3	+0.8	13.2	13.0	-0.2	105	102	-3	29	29	0
Current Mill Average:				43.0	43.8	+0.8		13.5	13.4	-0.1	109	106	-3	29	30	+1
<u>Mill K—42-lb. Linerboard</u>																
No samples submitted.																

TABLE XXXII

Mill K—42-lb. Linerboard

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

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

TABLE XXXIII
SUMMARY OF INDIVIDUAL TEST LOTS—NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

Institute Data versus Mill Data

Mch. No.	Basis Weight, 1b. IPC	Caliper, points IPC Mill	Bursting Strength, P.s.i. gage IPC Mill Diff.			G. E. Puncture, units IPC Mill Diff.	Elmendorf Tear, g./sheet IPC Mill Diff.									
			Mill	Diff.	IPC Mill Diff.											
<u>Mill I--42-lb. Linerboard</u>																
1	43.8	42.6	-1.2	14.1	12.8	-1.3	112	114	+ 2	38	381a	371	-10	409a	408	-1
1	42.4	41.5	-0.9	13.9	12.5	-1.4	101	106	+ 5	35	357a	306	-51	395a	361	-34
1	42.0	41.9	-0.1	12.0	11.7	-0.3	110	105	- 5	34	336a	311	-25	379a	371	-8
1	42.2	41.6	-0.6	13.1	11.9	-1.2	106	114	+ 8	34	359a	264	-95	395a	319	-76
1	42.7	42.8	+0.1	12.8	12.4	-0.4	108	108	0	36	351a	332	-19	389a	389	0
1	43.0	42.4	-0.6	13.2	12.5	-0.7	113	108	- 5	35	350a	304	-46	381a	364	-17
1	42.7	42.1	-0.6	13.2	12.3	-0.9	108	109	+ 1	36	356	315	-41	391	369	-22

TABLE XXXIV

Mch. No.	Basis Weight, 1b. IPC	Caliper, points IPC Mill	Bursting Strength, P.s.i. gage IPC Mill Diff.			G. E. Puncture, units IPC Mill Diff.	Elmendorf Tear, g./sheet IPC Mill Diff.											
			Mill	Diff.	IPC Mill Diff.													
<u>Mill M--42-lb. Linerboard</u>																		
2	42.4	41.7	-0.7	13.5	12.6	-0.9	111	122	+11	36	32	- 4	377a	363	-14	423a	433	+10
4	43.6	43.3	-0.3	13.9	13.1	-0.8	107	116	+ 9	36	37	+ 1	407a	449	+42	409a	466	+57
2	43.1	41.0	-2.1	15.2	13.7	-1.5	116	124	+ 8	34	29	- 5	367a	311	-56	425a	407	-18
2	43.7	41.7	-2.0	13.9	12.6	-1.3	108	117	+ 9	35	26	- 9	339	340	+ 1	396a	375	-21
2	43.0	41.0	-2.0	14.1	12.9	-1.2	108	117	+ 9	35	20	- 5	361	338	-23	405a	374	-31
2	43.6	41.8	-1.8	14.2	12.8	-1.4	100	112	+12	39	31	- 8	405a	409	+ 4	413a	412	-1
2	43.2	41.8	-1.4	14.2	13.0	-1.2	108	118	+10	36	31	- 5	376	368	- 8	412	411	- 1

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

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

TABLE XXXV
SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (Continued)

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

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

TABLE XXXV
SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (Continued)
Institute Data versus Mill Data

File No.	Mill Code	Fin-fish	Date Made	Mch. No.	Basis weight. lb.	Caliper, points	Bursting Strength, p.s.i. gage			G. E. Puncture, units			IPC	In Mill Diff.	IPC Mill Diff.	IPC	In Mill Diff.
							IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.					
<u>MILL N -- 42-lb. Linerboard</u>																	
156045	N-35	WFLS	10/23/53	1	43.1	43.5	+0.4	12.6	12.2	-0.4	99	98	-1	31	343 ^a	364	
156046	N-36	-----	10/25/53	1	41.8	41.3	-0.5	12.3	12.0	-0.3	101	102	+1	29	341 ^a	323	
156047	N-37	-----	10/26/53	1	43.6	43.2	-0.4	13.2	12.6	-0.6	106	106	0	32	363 ^a	-18	
156083	N-38	-----	10/30/53	1	42.7	42.7	0.0	12.9	12.5	-0.4	101	101	0	32	334	-29	
156084	N-39	WFLS	11/1/53	1	41.9	41.6	-0.3	12.5	12.1	-0.4	101	101	0	32	342 ^a	334	
156196	N-40	WFLS	11/10/53	1	42.4	42.3	-0.1	12.0	11.7	-0.5	106	104	+1	30	335 ^a	-13	
156226	N-41	WFLS	11/15/53	1	43.5	42.6	-0.9	12.5	12.0	-0.5	96	99	-2	33	315 ^a	327	
156227	N-42	-----	11/14/53	1	42.6	42.4	-0.2	12.6	12.0	-0.6	105	106	+1	33	331 ^a	-8	
156228	N-43	WFLS	11/13/53	1	42.7	42.7	0.0	12.2	11.8	-0.4	104	101	-3	34	354 ^a	319	
156229	N-44	W.F.	11/12/53	1	42.5	42.5	0.0	12.6	12.2	-0.4	112	110	-2	32	319 ^a	-35	
Current Mill Average:				42.7	42.5	-0.2	12.5	12.1	-0.4	104	104	0	32	338 ^a	320		
^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.														314	-24		
														339	329		
														-10			

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

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SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued).

Institute Data versus Mill Data.

Mch. No.	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.	
<u>MILL 0—42-lb. Linerboard</u>												
3	39.3	39.7	+0.4	12.0	11.6	-0.4	111	105	-6	33	346a	311 -35
3	41.7	42.0	+0.3	12.3	12.0	-0.3	115	110	-5	32	350a	344 -6
3	40.6	40.8	+0.2	12.4	12.0	-0.4	113	104	-9	33	349a	325 -24
3	42.2	42.5	+0.3	12.5	12.2	-0.3	116	107	-9	35	269a	339 -30
3	40.7	41.5	+0.8	12.2	11.9	-0.3	102	98	-4	35	327	296 -31
3	40.7	41.2	+0.5	12.4	12.0	-0.4	105	98	-7	37	350a	311 -39
3	41.5	41.6	+0.1	11.9	11.7	-0.2	117	118	+1	36	342a	321 -21
3	42.2	42.1	-0.1	11.9	11.7	-0.2	113	113	0	33	335a	328 -7
41.1	41.4	+0.3	12.2	11.9	-0.3	112	107	-5	34	346	322 -24	
											376	384 +8

TABLE XXXVII

MILL E—44.4/45-lb. Drum Linerboard

2	47.5	49.5	+2.0	15.1	14.6	-0.5	98	92	-6	40	42 +2	391a 437 +46
2	48.8	49.3	+0.5	14.6	13.9	-0.7	85	86	+1	39	41 +2	390a 392 +2
48.2	49.4	+1.2	14.8	14.2	-0.6	92	89	-3	39	42 +3	391 414 +23	384 444 +60

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

47-lb. Drum Linerboard.

a all data are calculated from the totals of the individual readings.

TABLE XXXVI

SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

Institute Data versus Mill Data											
File No.	Mill Code	Fins- ish	Date Made	Mch. No.	Basis Weight, lb.	Caliper, points	Bursting - Strength, P.s.i. gauge	G. S. units	In IPC Mill Diff.	In IPC Mill Diff.	In Mill I
<u>Mill O—42-lb. Linerboard</u>											
156043	O-10	W.F.	10/24/53	3	39.3	39.7	+0.4	12.0	-0.4	111	105
156044	O-11	W.F.	10/24/53	3	41.7	42.0	+0.3	12.3	-0.3	115	110
156050	O-12	W.F.	10/28/53	3	40.6	40.8	+0.2	12.4	-0.4	113	104
156051	O-13	W.F.	10/28/53	3	42.2	42.5	+0.3	12.5	-0.3	116	107
156171	O-14	W.F.	11/ 5/53	3	40.7	41.5	+0.8	12.2	-0.3	102	98
156172	O-15	W.F.	11/ 6/53	3	40.7	41.2	+0.5	12.4	-0.4	105	98
156265	O-16	W.F.	11/19/53	3	41.5	41.6	+0.1	11.9	-0.2	117	118
156266	O-17	W.F.	11/19/53	3	42.2	42.1	-0.1	11.9	-0.2	113	113
Current Mill Average:											
					41.1	41.4	+0.3	12.2	11.9	-0.3	112
									107	-5	34

TABLE XXXVII

					<u>Mill E-44-1/4S-lb. Drum Linerboard</u>
156059	E-39 ^b	W.F.	10/26/53	2	47.5
156191	E-42	W.F.	11/10/53	2	48.8

Current Mill Average:

a This average includes 31 observations.

This sample was identified as 17-1b, *Dolichorhynchus*.

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

SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (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
No. IPC	Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	In IPC Mill Diff.
				Across IPC Mill Diff.

Mill E -- 72-lb. Linerboard

72.2	72.7	+0.5	21.2	20.3	-0.9	131	123	-3	69	70	+1	639 ^a	530	-109	672 ^a	597	-75
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^as for one or more specimens which tore beyond the 3/8-inch limit.

IPC

Mill E -- 90-lb. Linerboard

91.3	90.0	-1.3	27.5	25.9	-1.6	160	128	-32	96	92	-4	788 ^a	582	-206	835 ^a	713	-122
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^as for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XXXVIII
SUMMARY OF INDIVIDUAL TEST LOTS--NOVEMBER 1 THROUGH NOVEMBER 30, 1953 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.	Caliper, Points	Bursting Strength, p.s.i. gage	G. E. units	Puncture, In Mill Diff.	Elmendorf g./sr
<u>Mill E -- 72-lb. Linerboard</u>										
156114	E-41	W.F.	11/ 2/53	2	72.2	72.7	+0.5	21.2	20.3 -0.9	131
<u>Mill E -- 90-lb. Linerboard</u>										
156225	E-45	W.F.	11/17/53	2	91.3	90.0	-1.3	27.5	25.9 -1.6	160

^aThis 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.