

**INSTITUTE OF
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CONTINUOUS BASELINE STUDY

✓ **Project 1108-B**

Progress Report 51

to

FOURDRINIER-KRAFT BOARD INSTITUTE

October 1, 1951

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

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APPLETON, WISCONSIN

In conjunction with the F.K.I. Continuous Baseline Study, one hundred and two different sample lots of 42-lb. Fourdrinier kraft linerboard were submitted by twelve different F.K.I. mills to The Institute of Paper Chemistry for testing during the period September 1 through September 30. In addition to the 42-lb. kraft linerboard, nine samples of special drum stock were also submitted for evaluation by one of the participating mills. The results on the special stock are tabulated separately in this report. A tabulation of the number of samples classified according to mill may be seen in Table I.

TABLE I
DISTRIBUTION OF 42-LB. LINERBOARD SAMPLES

Mill Code	Samples Submitted
A	10
B	16
C	12
D	10
E	0
F	15
G	6
H	8
I	5
J	4
K	4
L	5
M	<u>2</u>
	102

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 September 1 through September 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 42.8 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 99.3. This signifies that the current average basis weight is lower than the cumulative average, which in this case covered the period from July 25, 1947, through August 31, 1951.

A comparison of the results in Table II and Figure 1 shows that the average basis weight results for most of the mills conform to the 42-lb. specification set forth in Rule 41. Mills D and F have the highest average basis weight, it being 43.3 lb. or approximately 3.1% higher than the 42-lb. specification. On the other hand, Mill I has the lowest average basis weight, it being 41.4 lb., about 1.4% 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	+2.4
B	+2.9
C	+0.7
D	+3.1
E	--
F	+3.1
G	+2.9
H	+1.0
I	-1.4
J	+2.1
K	+1.4
L	+2.9
M	+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 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 11.9 for Mill H to a high of 14.4 for Mill G, the average being 13.3 which is somewhat lower than the cumulative average of 14.2.

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

average bursting strength values for the various mills range from a low of 98 for Mill K to a high of 113 for Mill C. The current F.K.I. average bursting strength is 106, the same as the cumulative average.

The data of Table II and Figure 4 show that the average G. E. puncture result for all mills is 35 units. Mill F has the highest G. E. puncture average, 40 units, and Mills B and H share the lowest average, 31 units. The current F.K.I. average for G. E. puncture of 35 units is slightly lower than the cumulative F.K.I. average of 37 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 and Mill I the lowest. Mill D has the highest average across-machine direction tear value, while Mill H has the lowest value. It may be noted that the current F.K.I. average machine and across-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 the same as the cumulative F.K.I. average.

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

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

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

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

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

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

It may be noted in Tables III through XVI that the data have been separated on the basis of the sheet finish. The summarized results are as follows:

Mill Code	No. of Sample Lots		
	W.F.	D.F.	Misc.
A	10*		
B	16*		
C	12		
D	9	1	
E**	9		
F	14		1***

(Continued on next page)

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

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

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

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

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

It may be noted in Tables III through XVI that the data have been separated on the basis of the sheet finish. The summarized results are as follows:

Mill Code	No. of Sample Lots		
	W.F.	D.F.	Misc.
A	10*		
B	16*		
C	12		
D	9	1	
E**	9		
F	14		1***

(Continued on next page)

Mill Code	No. of Sample Lots		
	W.F.	D.F.	Misc.
G	6		
H	8*		
I	2,3*		
J			4****
K			4***
L			5***
M	6	1	

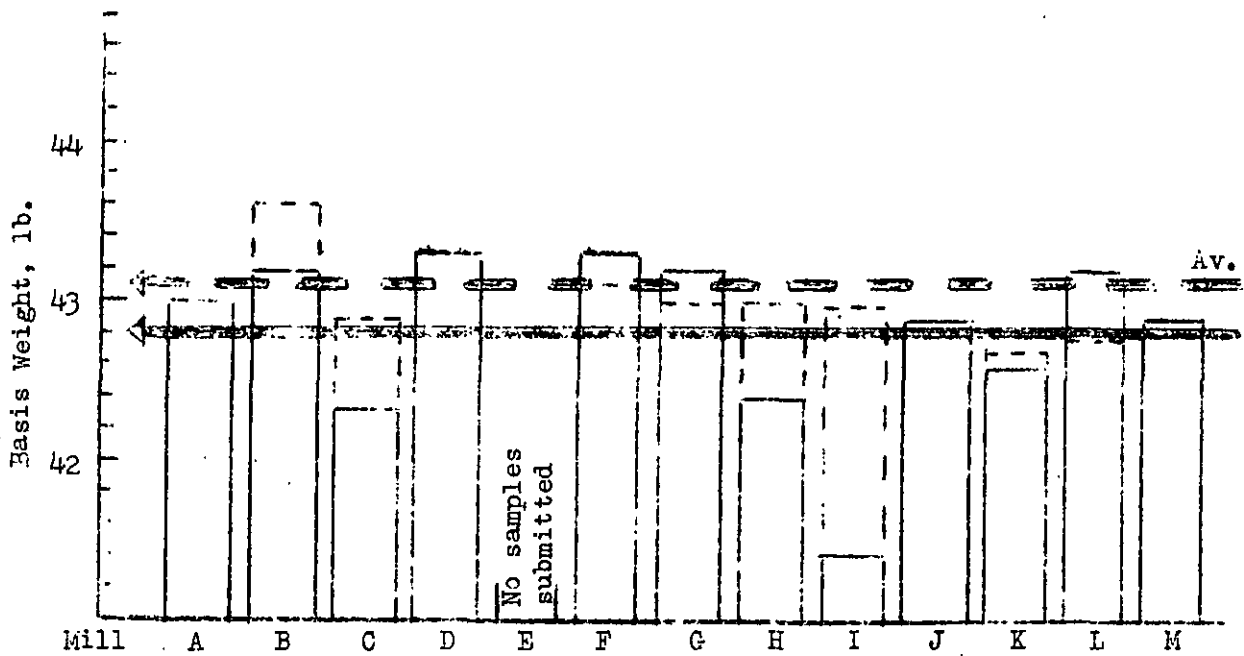
* One side only
** Drum linerboard
*** Sheet finish not reported
**** Semi-water finish

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 AVERAGE--SEPTEMBER 1 THROUGH 30, 1951

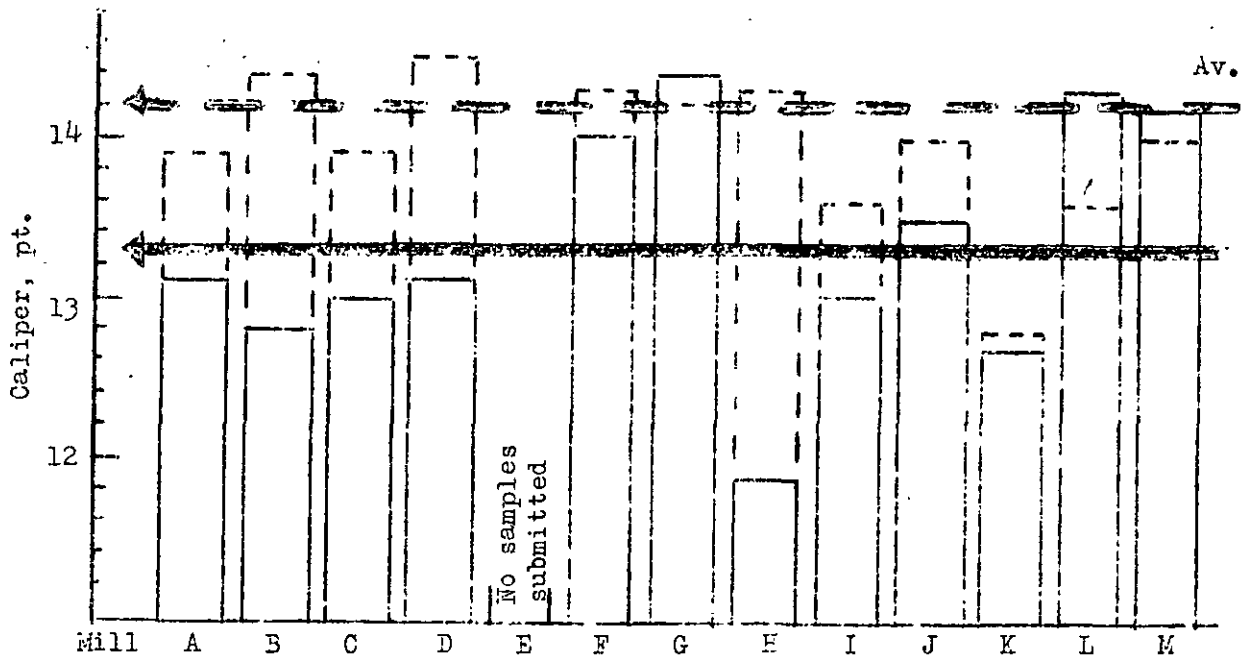
Code No.	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	G. E. Puncture, units	Elmendorf Tear, g./sheet	In Direction Across Direction
A	43.0	13.1	111	33	337	375
B	43.2	12.8	104	31	349	374
C	42.3	13.0	113	36	367	402
D	43.3	13.1	109	39	388	428
E	No samples submitted.					
F	43.3	14.0	106	40	398	421
G	43.2	14.4	106	37	346	389
H	42.4	11.9	105	31	337	351
I	41.4	13.0	108	32	325	389
J	42.9	13.5	102	34	374	370
K	42.6	12.7	98	36	365	397
L	43.2	14.3	109	39	378	402
M	42.9	14.2	102	37	389	417
Current FKI Average:	42.8	13.3	106	35	363	393
Cumulative FKI Average:	43.1	14.2	106	37	377	410
FKI Index, %:	99.3	93.7	100.0	94.6	96.3	95.9

Figure 1



COMPARISON OF BASIS WEIGHT RESULTS
 (Period September 1 - September 30)

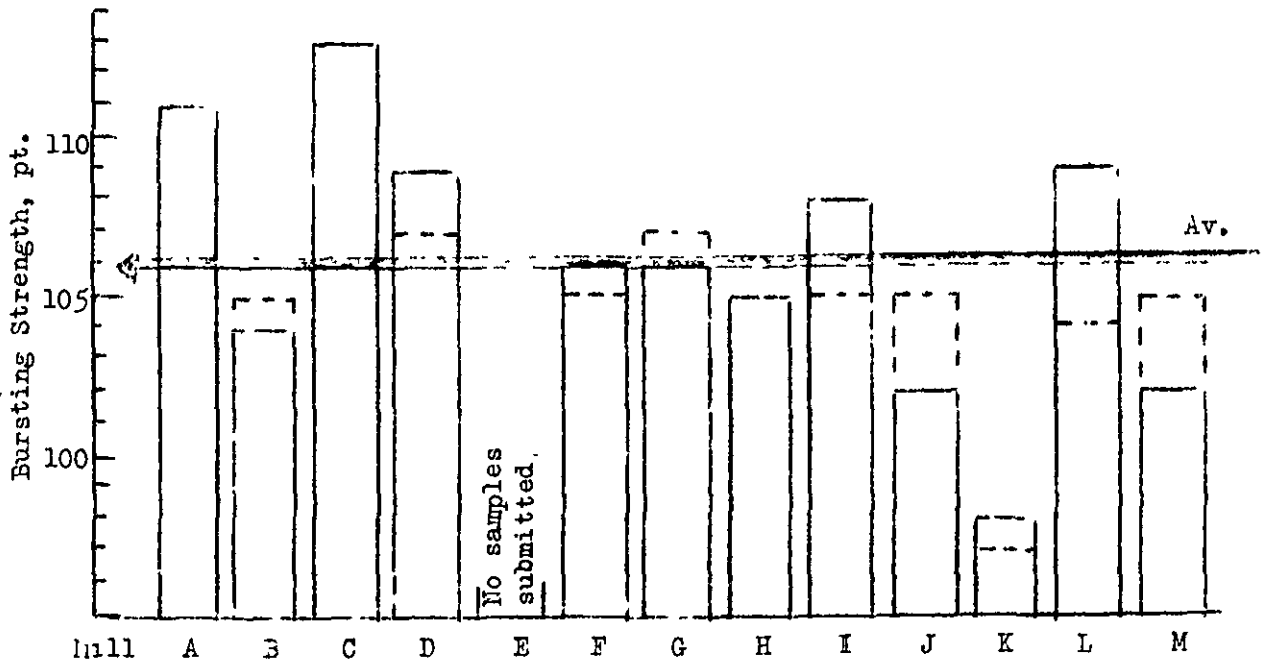
Figure 2



COMPARISON OF CALIPER RESULTS
 (Period September 1 - September 30)

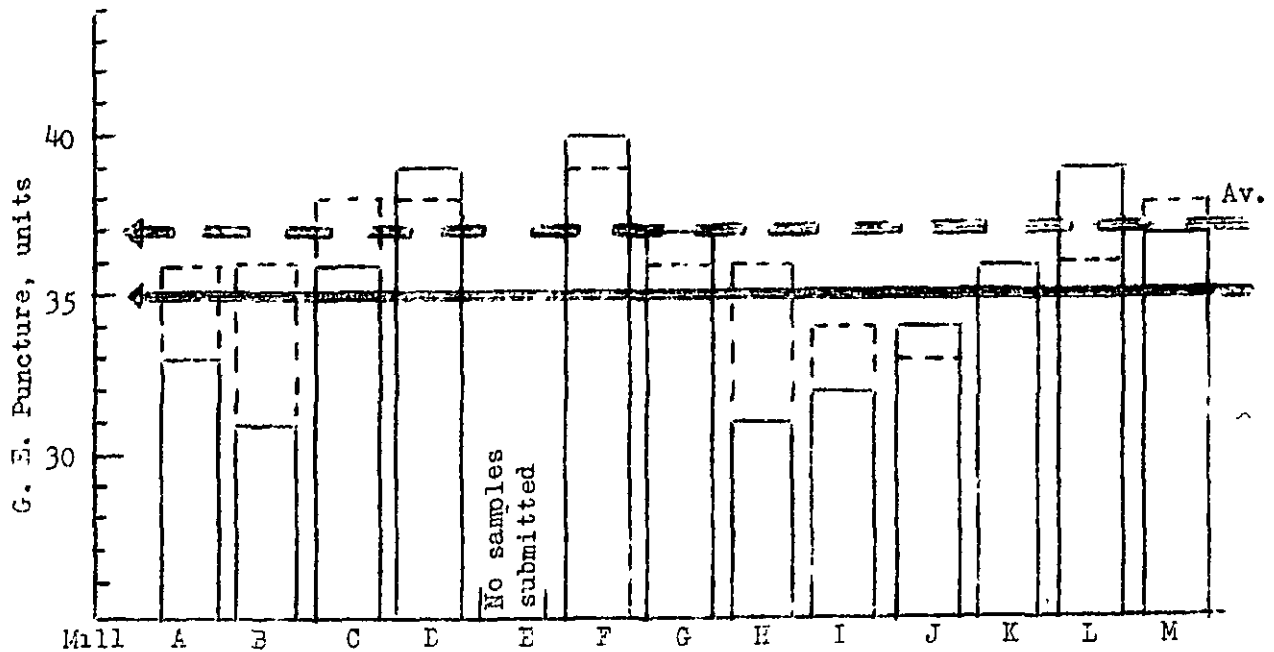
— Current Mill Average
 - - - Cumulative Average

Figure 3



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

Figure 4



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

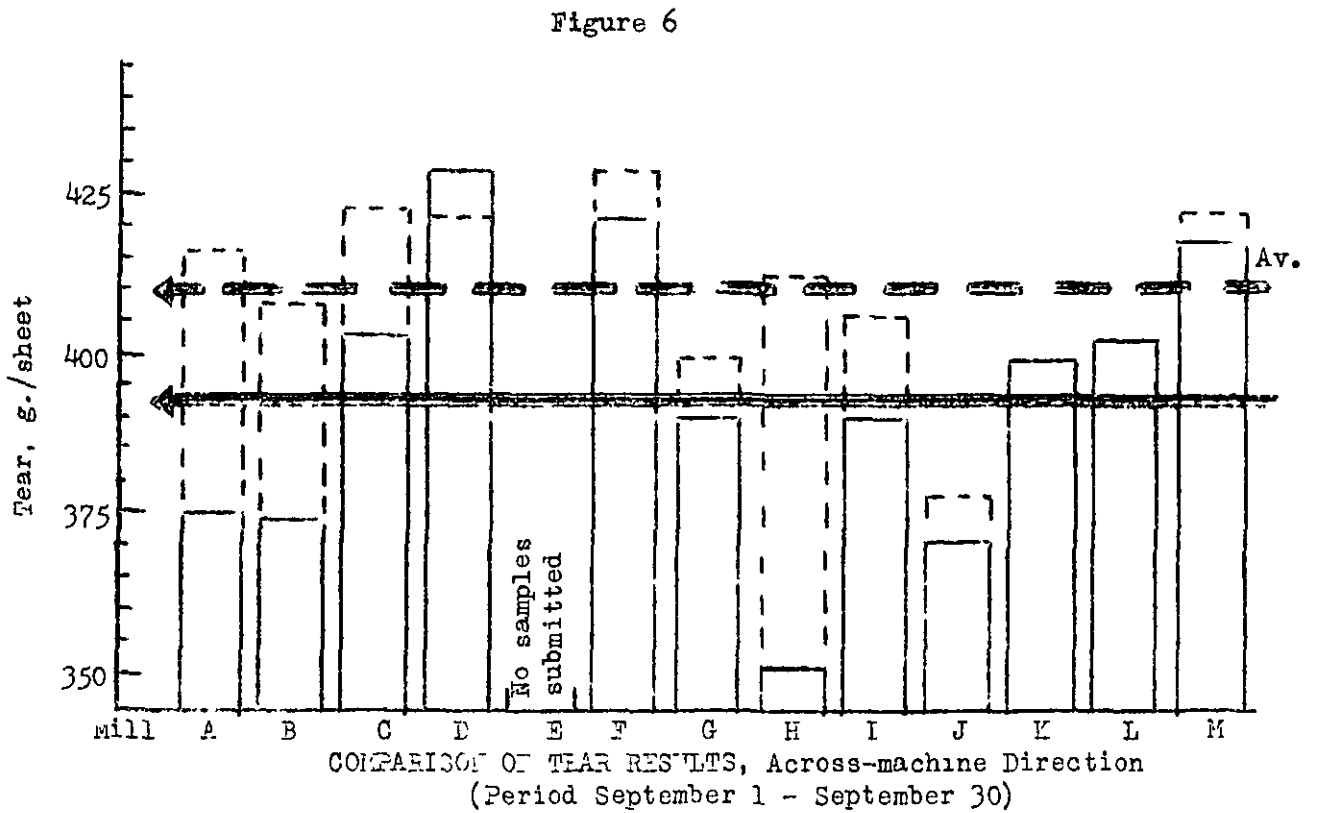
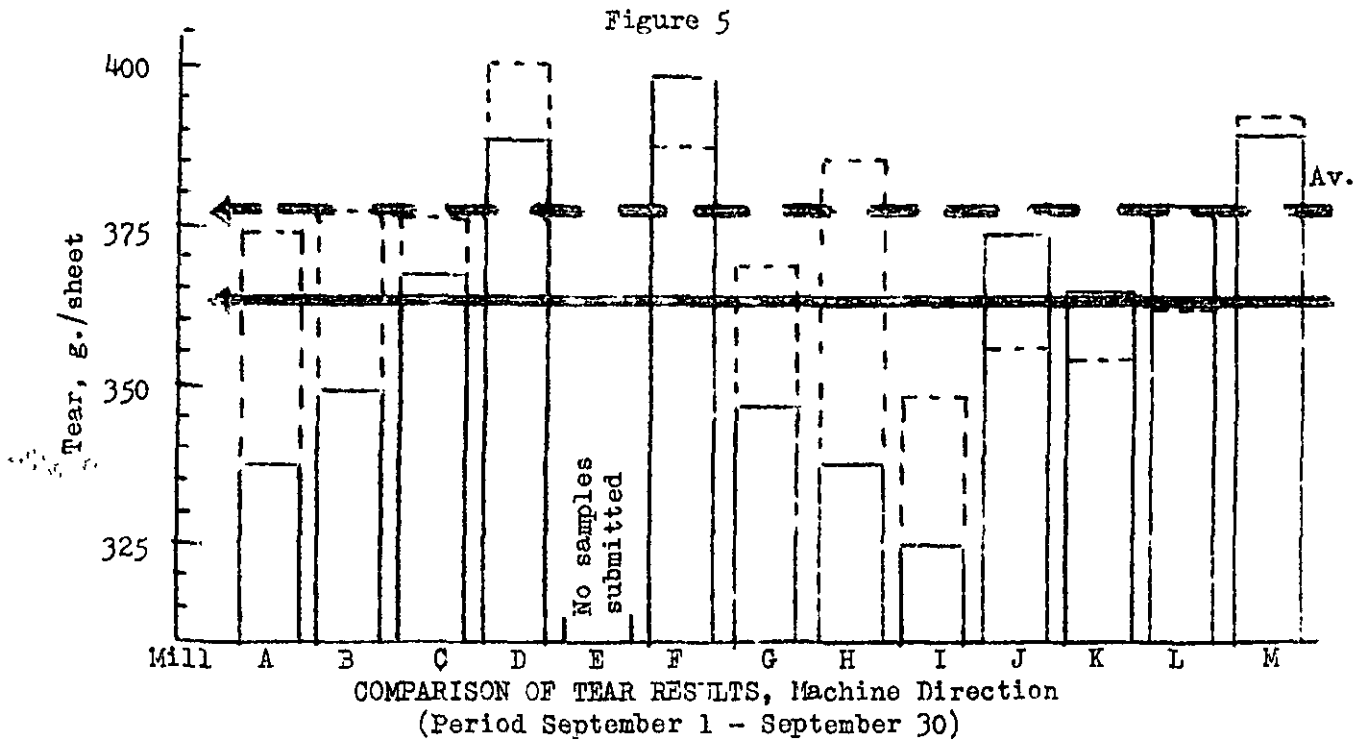


TABLE III

VARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951

Lot No.	Weight, lb.		Caliper, points		Brusting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet							
	Min.	Av.	Max.	Min.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.			
5	42.2	42.9	14.3	12.8	13.5	86	133	38	33	36	400	248	347 ^a	432	344	383 ^c
5	42.0	42.8	14.0	12.7	13.5	95	135	39	32	35	368	296	335	432	328	395 ^a
5	42.4	43.0	13.6	12.8	13.2	88	120	35	30	33	432	272	353	448	328	371 ^a
5	42.0	42.9	13.9	12.6	13.2	88	128	35	31	34	360	248	319 ^a	400	312	349 ^a
5	41.8	42.6	13.0	12.3	12.7	86	126	35	30	33	360	296	331	416	320	355 ^a
5	41.8	42.4	13.0	12.3	12.8	87	122	36	30	32	400	320	347 ^a	408	320	361 ^a
5	43.0	43.7	13.9	13.0	13.4	95	128	36	31	33	352	272	309	408	336	371 ^a
5	42.4	43.2	14.1	13.0	13.5	86	127	36	29	32	352	264	312	416	328	375 ^a
5	43.0	43.6	13.4	12.1	12.7	91	140	37	30	32	416	304	358 ^a	432	368	400 ^a
5	42.0	43.0	13.0	12.0	12.5	89	139	36	30	33	400	304	357 ^a	448	352	393 ^a
	43.0		13.1				111		33				337			375
	42.8		13.9				106		36				374			415
	100.5		94.2				104.7		91.7				90.1			90.4
	99.8		92.3				104.7		89.2				89.4			91.5

Mill A--42-lb. Linerboard

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

TABLE III

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Brusting Strength, p.s.i. gage			G. E. Puncture, units		
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
<u>Mill A--42-lb. Linerboard</u>																	
148041	A-272	WF1S	9/ 7/51	8/27/51	1	43.6	42.2	42.9	14.3	12.8	13.5	86	133	110	38	33	36
148042	A-273	WF1S	9/ 7/51	8/27/51	1	43.6	42.0	42.8	14.0	12.7	13.5	95	135	116	39	32	35
148210	A-274	WF1S	9/20/51	9/ 8/51	1	44.0	42.4	43.0	13.6	12.8	13.2	88	120	106	35	30	33
148211	A-275	WF1S	9/20/51	9/ 8/51	1	44.0	42.0	42.9	13.9	12.6	13.2	88	128	110	35	31	34
148221	A-276	WF1S	9/21/51	9/13/51	2	44.0	41.8	42.6	13.0	12.3	12.7	86	126	109	35	30	33
148222	A-277	WF1S	9/21/51	9/13/51	2	43.6	41.8	42.4	13.0	12.3	12.8	87	122	106	36	30	32
148302	A-278	WF1S	9/26/51	9/17/51	1	44.2	43.0	43.7	13.9	13.0	13.4	95	128	112	36	31	33
148303	A-279	WF1S	9/26/51	9/17/51	1	44.0	42.4	43.2	14.1	13.0	13.5	86	127	109	36	29	32
148326	A-280	WF1S	9/28/51	9/24/51	1	44.0	43.0	43.6	13.4	12.1	12.7	91	140	110	37	30	32
148327	A-281	WF1S	9/28/51	9/24/51	2	45.2	42.0	43.0	13.0	12.0	12.5	89	139	118	36	30	33
Current Mill Average:								43.0			13.1			111			33
Cumulative Mill Average:								42.8			13.9			106			36
Mill Factor, %:								100.5			94.2			104.7			91.7
Mill Index, %:								99.8			92.3			104.7			89.2

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

TABLE IV
VARIETY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

Lot No.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet									
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.								
<u>Mill B--42-lb. Linerboard</u>																
2	43.2	13.9	12.0	12.8	126	78	103	32	28	30	360	288	331 ^a	424	328	363 ^a
2	42.0	43.4	13.5	11.9	12.8	70	100	35	30	32	384	296	341 ^a	424	328	385 ^a
0	42.2	43.2	13.7	12.0	12.9	74	105	36	29	32	368	304	336	456	320	379 ^a
6	42.6	43.7	13.8	12.0	12.9	86	102	39	31	34	392	312	351 ^a	416	336	375 ^a
3	42.4	43.3	13.6	12.2	13.0	82	100	35	30	32	376	288	336 ^a	432	328	365 ^a
0	42.4	43.2	13.6	12.3	13.0	87	105	35	30	31	408	280	338 ^a	448	304	365 ^a
8	42.0	43.3	14.0	12.0	13.2	83	100	32	26	28	384	272	333 ^a	408	336	373 ^a
0	42.4	43.3	14.5	12.5	13.2	83	105	33	26	29	400	272	329 ^a	416	288	348 ^a
2	43.0	43.8	13.2	12.2	12.8	78	101	33	27	31	432	336	369 ^a	424	336	375 ^a
6	42.2	43.8	13.4	12.0	12.8	86	108	35	28	31	456	320	363 ^a	416	328	375 ^a
6	43.2	44.0	13.3	12.0	12.6	82	109	37	28	32	432	320	371 ^a	432	344	387 ^a
8	42.0	43.6	13.5	12.2	12.8	86	103	35	29	32	408	296	352	472	336	389 ^a
2	40.4	42.3	13.2	11.8	12.5	89	104	36	28	32	400	304	351 ^a	464	336	388 ^a
6	40.0	42.0	13.3	11.3	12.3	77	103	34	29	31	416	312	353 ^a	424	320	362 ^a
2	40.2	42.0	13.0	11.0	12.3	78	107	32	27	30	432	320	361 ^a	432	280	373 ^a
4	42.0	42.7	13.4	12.1	12.5	83	107	34	30	31	472	312	365	432	320	378 ^a
	43.2		12.8		104		104		31				349			374
	43.6		14.4		105		105		36				377			407
	99.1		88.9		99.0		99.0		86.1				92.6			91.9
	100.2		90.1		98.1		98.1		83.8				92.6			91.2

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

TABLE IV

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (cont)

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.		Av.
<u>Mill B--42-lb. Linerboard</u>													
147993	B-459	WF1S	9/ 4/51	8/11/51	1	44.2	42.0	43.2	13.9	12.0	12.8	103	28
147994	B-460	WF1S	9/ 4/51	8/11/51	1	44.2	42.0	43.4	13.5	11.9	12.8	100	32
147995	B-461	WF1S	9/ 4/51	8/11/51	1	44.0	42.2	43.2	13.7	12.0	12.9	105	35
147996	B-462	WF1S	9/ 4/51	8/11/51	1	45.6	42.6	43.7	13.8	12.0	12.9	102	36
147997	B-463	WF1S	9/ 4/51	8/23/51	1	44.8	42.4	43.3	13.6	12.2	13.0	100	39
147998	B-464	WF1S	9/ 4/51	8/23/51	1	44.0	42.4	43.2	13.6	12.3	13.0	105	35
147999	B-465	WF1S	9/ 4/51	8/23/51	1	44.8	42.0	43.3	14.0	12.0	13.2	100	35
148000	B-466	WF1S	9/ 4/51	8/23/51	1	45.0	42.4	43.3	14.5	12.5	13.2	105	32
148232	B-467	WF1S	9/22/51	9/ 5/51	1	44.2	43.0	43.8	13.2	12.2	12.8	101	33
148233	B-468	WF1S	9/22/51	9/ 5/51	1	44.6	42.2	43.8	13.4	12.0	12.8	108	33
148234	B-469	WF1S	9/22/51	9/ 5/51	1	45.6	43.2	44.0	13.3	12.0	12.6	109	35
148235	B-470	WF1S	9/22/51	9/ 5/51	1	44.8	42.0	43.6	13.5	12.2	12.8	103	28
148236	B-471	WF1S	9/22/51	9/ 7/51	1	43.2	40.4	42.3	13.2	11.8	12.5	104	29
148237	B-472	WF1S	9/22/51	9/ 7/51	1	42.6	40.0	42.0	13.3	11.3	12.3	103	28
148238	B-473	WF1S	9/22/51	9/ 7/51	1	43.2	40.2	42.0	13.0	11.0	12.3	107	29
148239	B-474	WF1S	9/22/51	9/ 7/51	1	43.4	42.0	42.7	13.4	12.1	12.5	107	27
Current Mill Average:								43.2		12.8		104	30
Cumulative Mill Average:								43.6		14.4		105	31
Mill Factor, %:								99.1		88.9		99.0	81
Mill Index, %:								100.2		90.1		98.1	81

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

TABLE V
OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

Basis Weight, lb.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		In		Across						
	Min.	Av.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Av.				
<u>Mill G--42-lb. Linerboard</u>																	
2.2	40.0	41.3	13.2	11.7	12.6	133	94	110	38	31	35	392	296	351 ^a	448	360	396a
2.2	40.0	41.2	13.5	12.0	12.7	142	89	109	37	33	35	376	312	347	456	352	404a
4.0	42.2	43.1	13.6	12.5	13.0	139	87	114	42	37	40	432	336	383	440	400	421a
3.8	42.0	42.5	14.0	12.0	13.1	145	93	115	38	34	36	464	328	379	472	360	405a
4.2	42.0	43.4	15.0	13.9	14.3	130	79	106	41	35	38	400	328	363	464	376	405a
3.8	42.0	43.0	13.5	12.0	12.8	138	85	113	42	36	38	416	344	375	432	376	408a
4.0	41.8	42.8	13.5	11.6	12.9	146	94	118	38	34	36	424	328	366	448	376	407a
3.6	41.8	42.4	13.6	12.0	12.7	131	97	118	39	31	35	472	336	383 ^a	480	368	403a
4.0	42.0	42.6	13.2	11.4	12.5	137	96	116	37	31	34	416	312	355	432	368	397a
3.0	40.0	41.4	13.8	12.4	13.0	138	86	110	36	30	33	432	336	375	432	368	392a
3.0	40.2	41.6	13.4	12.2	13.0	129	95	113	35	30	32	448	288	355	432	360	391a
4.0	41.4	42.3	13.3	12.2	12.7	138	96	118	38	32	35	480	320	375	432	368	395a
		42.3			13.0			113			36			367			402
		42.9			13.9			106			38			376			422
		98.6			93.5			106.6			94.7			97.6			95.3
		98.1			91.5			106.6			97.3			97.3			98.0

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

TABLE V

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (cont)

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage		G. E Punctu unit	
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.		Av.
<u>Mill C--42-lb. Linerboard</u>															
148013	C-303	W.F.	9/ 4/51	8/27/51	1	42.2	40.0	41.3	13.2	11.7	12.6	133	94	110	38
148014	C-304	W.F.	9/ 4/51	8/27/51	1	42.2	40.0	41.2	13.5	12.0	12.7	142	89	109	37
148015	C-305	W.F.	9/ 4/51	8/28/51	1	44.0	42.2	43.1	13.6	12.5	13.0	139	87	114	42
148016	C-306	W.F.	9/ 4/51	8/28/51	1	43.8	42.0	42.5	14.0	12.0	13.1	145	93	115	38
148082	C-307	W.F.	9/11/51	9/ 6/51	1	44.2	42.0	43.4	15.0	13.9	14.3	130	79	106	41
148330	C-308	W.F.	9/28/51	9/19/51	1	43.8	42.0	43.0	13.5	12.0	12.8	138	85	113	42
148331	C-309	W.F.	9/28/51	9/19/51	1	44.0	41.8	42.8	13.5	11.6	12.9	146	94	118	38
148321	C-310	W.F.	9/27/51	9/24/51	1	43.6	41.8	42.4	13.6	12.0	12.7	131	97	118	39
148322	C-311	W.F.	9/27/51	9/24/51	1	44.0	42.0	42.6	13.2	11.4	12.5	137	96	116	37
148323	C-312	W.F.	9/27/51	9/24/51	1	43.0	40.0	41.4	13.8	12.4	13.0	138	86	110	36
148324	C-313	W.F.	9/27/51	9/24/51	1	43.0	40.2	41.6	13.4	12.2	13.0	129	95	113	35
148325	C-314	W.F.	9/27/51	9/24/51	1	44.0	41.4	42.3	13.3	12.2	12.7	138	96	118	38
Current Mill Average:						42.3			13.0		13.0	113		113	
Cumulative Mill Average:						42.9			13.9		13.9	106		106	
Mill Factor, %:						98.6			93.5		93.5	106.6		106.6	
Mill Index, %:						98.1			91.5		91.5	106.6		106.6	

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

TABLE VI

VARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

Basis Weight, lb.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		Av.								
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.									
5.4	42.0	43.1	14.5	12.5	13.7	130	87	110	42	35	38	416	336	387 ^a	512	360	430 ^a
4.0	42.0	43.1	14.4	12.3	13.2	128	86	109	41	35	38	432	352	392 ^a	448	368	418 ^a
5.0	41.8	43.0	13.1	11.1	12.0	129	81	109	40	34	37	400	336	362 ^a	480	352	413 ^a
5.0	42.2	43.5	14.6	12.8	13.7	132	79	108	42	35	38	448	352	397 ^a	448	384	424 ^a
4.6	42.4	43.6	14.2	13.0	13.6	138	95	112	45	39	42	432	352	400 ^a	464	400	436 ^a
6.0	43.4	44.5	14.8	12.8	13.9	135	67	104	48	39	43	464	368	401 ^a	488	416	453 ^a
4.0	41.6	42.6	13.8	12.2	12.9	136	87	114	42	38	40	432	352	398 ^a	496	400	456 ^a
4.8	42.0	43.6	13.5	12.0	12.9	122	84	106	42	32	37	448	328	393 ^a	544	360	421 ^a
4.0	41.8	42.9	13.2	11.3	12.5	142	88	112	36	32	34	400	320	371 ^a	416	360	387 ^a
4.4	42.2	43.1	13.5	11.9	12.8	130	75	105	46	37	41	416	336	383	576	400	443 ^a
		43.3			13.1			109			39			388			428
		43.3			14.5			107			38			400			421
	100.0				90.3			101.9			102.6			97.0			101.7
	100.5				92.3			102.8			105.4			102.9			104.4

Mill D--42-lb. Linerboard

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

TABLE VI

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (cont)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage		G. E. Puncture units		
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.		Av.	Max.
<u>Mill D--42-lb. Linerboard</u>																
148001	D-439	D.F.	9/ 4/51	8/29/51	4	45.4	42.0	43.1	14.5	12.5	13.7	130	87	110	42	35
148114	D-440	W.F.	9/14/51	9/11/51	4	44.0	42.0	43.1	14.4	12.3	13.2	128	86	109	41	35
148120	D-441	W.F.	9/17/51	9/12/51	4	45.0	41.8	43.0	13.1	11.1	12.0	129	81	109	40	34
148121	D-442	W.F.	9/17/51	9/13/51	4	45.0	42.2	43.5	14.6	12.8	13.7	132	79	108	42	35
148184	D-443	W.F.	9/19/51	9/14/51	4	44.6	42.4	43.6	14.2	13.0	13.6	138	95	112	45	39
148185	D-444	W.F.	9/19/51	9/15/51	4	46.0	43.4	44.5	14.8	12.8	13.9	135	67	104	48	39
148186	D-445	W.F.	9/19/51	9/16/51	4	44.0	41.6	42.6	13.8	12.2	12.9	136	87	114	42	38
148328	D-446	W.F.	9/28/51	9/24/51	4	44.8	42.0	43.6	13.5	12.0	12.9	122	84	106	42	32
148337	D-447	W.F.	9/29/51	9/25/51	4	44.0	41.8	42.9	13.2	11.3	12.5	142	88	112	36	32
148338	D-448	W.F.	9/29/51	9/26/51	4	44.4	42.2	43.1	13.5	11.9	12.8	130	75	105	46	37
Current Mill Average:						43.3			13.1			109				
Cumulative Mill Average:						43.3			14.5			107				
Mill Factor, %:						100.0			90.3			101.9				
Mill Index, %:						100.5			92.3			102.8				

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

TABLE VII

F INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	G. E. Puncture, units	Elmendorf Tear, g./sheet	
				In	Across
Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.

Mill E--42-lb. Linerboard

No samples submitted.

TABLE VIII

Mill F--42-lb. Linerboard

44.0	42.6	43.6	16.5	13.0	14.7	132	92	110	42	34	39	480	304	387 ^a	480	416	450 ^a
44.2	42.0	43.4	15.0	12.5	14.3	125	85	108	45	38	41	408	352	385 ^a	520	376	431 ^a
44.0	40.6	42.9	15.2	13.3	14.3	127	83	105	45	38	41	432	312	393 ^a	448	304	400 ^a
44.2	43.4	43.8	15.1	13.1	14.1	126	80	106	44	38	40	408	336	373 ^a	496	416	443 ^a
44.8	43.0	43.9	15.0	13.6	14.4	127	95	112	46	40	44	440	368	402 ^a	496	408	447 ^a
42.6	40.4	41.9	15.6	13.8	14.4	127	76	102	43	36	40	416	360	381 ^a	448	360	399 ^a
44.6	41.6	43.4	14.0	12.5	13.2	133	93	113	45	37	41	480	352	401	432	344	402 ^a
44.6	42.2	43.5	13.9	12.2	13.1	121	88	108	41	36	39	416	360	381 ^a	448	392	424 ^a
45.6	41.6	43.9	15.0	12.0	13.4	132	76	103	42	36	39	440	360	389	408	344	385 ^a
45.8	44.0	44.9	16.0	14.0	14.8	129	77	104	46	38	42	448	376	413 ^a	488	400	441 ^a
43.6	42.2	42.8	14.8	12.3	13.7	119	80	101	42	37	39	480	328	409	512	376	423 ^a
43.6	41.6	42.5	14.3	12.2	13.4	118	76	96	43	38	40	448	368	399 ^a	456	336	398 ^a
43.6	42.0	42.6	14.7	13.0	13.8	121	75	101	46	38	41	440	400	425 ^a	480	384	419 ^a
44.2	42.4	43.4	14.2	12.7	13.8	140	92	111	42	35	39	472	368	409 ^a	448	376	414 ^a
44.2	42.2	43.1	15.0	13.4	14.5	115	88	104	42	34	38	472	392	425	488	376	427 ^a
43.3					14.0		106			40				398			421
43.1					14.3		105			39				387			428
100.5					97.9		101.0			102.6				102.8			98.4
100.5					98.6		100.0			108.1				105.6			102.7

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

TABLE VII

SUMMARY OF INDIVIDUAL TEST LOTS - SEPTEMBER 1 THROUGH 30, 1951 (continue)

File No.	Mill Code	Fish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage	G. E. Puncti units
						Max.	Min.	Max.	Min.		

Mill E-42-lb. Linerboard

No samples submitted.

TABLE VIII

Mill F-42-lb. Linerboard

148002	F-65	W.F.	9/ 4/51	8/17/51	-	44.0	42.6	43.6	16.5	13.0	14.7	132	92	110	42	34
148003	F-66	W.F.	9/ 4/51	8/20/51	-	44.2	42.0	43.4	15.0	12.5	14.3	125	85	108	45	38
148004	F-67	W.F.	9/ 4/51	8/20/51	-	44.0	40.6	42.9	15.2	13.3	14.3	127	83	105	45	38
148005	F-68	W.F.	9/ 4/51	8/21/51	-	44.2	43.4	43.8	15.1	13.1	14.1	126	80	106	44	38
148044	F-69	W.F.	5/10/51	8/21/51	-	44.8	43.0	43.9	15.0	13.6	14.4	127	95	112	46	40
148045	F-70	W.F.	9/10/51	8/22/51	-	42.6	40.4	41.9	15.6	13.8	14.4	127	76	102	43	36
148046	F-71	W.F.	9/10/51	8/27/51	-	44.6	41.6	43.4	14.0	12.5	13.2	133	93	113	45	37
148098	F-72	W.F.	9/13/51	9/ 2/51	-	44.6	42.2	43.5	13.9	12.2	13.1	121	88	108	41	36
148099	F-73	W.F.	9/13/51	9/ 2/51	-	45.6	41.6	43.9	15.0	12.0	13.4	132	76	103	42	36
148100	F-74	W.F.	9/13/51	9/ 2/51	-	45.8	44.0	44.9	16.0	14.0	14.8	129	77	104	46	38
148125	F-75	W.F.	9/17/51	9/12/51	-	43.6	42.2	42.8	14.8	12.3	13.7	119	80	101	42	37
148212	F-76	W.F.	9/20/51	9/12/51	-	43.6	41.6	42.5	14.3	12.2	13.4	118	76	96	43	38
148240	F-77	W.F.	9/22/51	9/17/51	-	43.6	42.0	42.6	14.7	13.0	13.8	121	75	101	46	38
148304	F-78	--	9/26/51	9/18/51	-	44.2	42.4	43.4	14.2	12.7	13.8	140	92	111	42	35
148305	F-79	W.F.	9/26/51	9/20/51	-	44.2	42.2	43.1	15.0	13.4	14.5	115	88	104	42	34

Current Mill Average: 14.0 106

Cumulative Mill Average: 14.3 105

Mill Factor, %: 97.9 101.0

Mill Index, %: 98.6 100.0

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

TABLE IX

INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

asis Weight, lb.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		Av.					
	Max.	Min.	Max.	Min.	Max.	Min.	In	Across						
Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.					
43.2	16.5	15.0	126	77	108	42	36	38	440	336	377 ^a	448	360	403 ^a
42.2	16.5	14.1	127	73	105	40	34	37	400	288	335 ^a	400	360	385 ^a
43.0	14.2	12.0	140	30	107	41	36	39	360	296	333 ^a	416	320	383 ^a
42.8	14.9	12.8	126	33	104	41	33	38	392	320	357	424	352	392 ^a
42.0	14.1	12.2	123	82	108	37	31	34	360	288	331	424	352	385 ^a
41.4	15.2	13.3	124	86	106	37	31	34	400	304	339	408	336	389 ^a
43.2					106			37			346			389
43.0					107			36			368			399
100.5		101.4			99.1			102.8			94.0			97.5
100.2		101.4			100.0			100.0			91.8			94.9

Mill G--42-lb. Linerboard

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

TABLE IX

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (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. Puncture units				
						Max.	Av.	Max.	Min.	Max.	Min.		Av.	Max.	Min.	
<u>Mill G--42-lb. Linerboard</u>																
148101	G-370	W.F.	9/13/51	9/7/51	1	45.0	43.2	43.9	16.5	15.0	15.8	126	77	108	42	36
148102	G-371	W.F.	9/13/51	9/7/51	1	43.8	42.2	42.9	16.5	14.1	15.4	127	73	105	40	34
148103	G-372	W.F.	9/13/51	9/10/51	1	43.8	43.0	43.4	14.2	12.0	13.2	140	30	107	41	36
148104	G-373	W.F.	9/13/51	9/10/51	1	43.8	42.8	43.4	14.9	12.8	14.0	126	33	104	41	33
148343	G-374	WFL	9/29/51	9/27/51	1	44.2	42.0	43.2	14.1	12.2	13.4	123	82	108	37	31
148344	G-375	W.F.	9/29/51	9/27/51	1	43.2	41.4	42.4	15.2	13.3	14.5	124	86	106	37	31
Current Mill Average:								43.2			14.4			106		
Cumulative Mill Average:								43.0			14.2			107		
Mill Factor, %:								100.5			101.4			99.1		
Mill Index, %:								100.2			101.4			100.0		

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

TABLE X

INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

Dry Weight, lb.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		Across						
	Min.	Av.	Max.	Min.	Max.	Min.	Max.	In	Av.	Max.	Min.	Av.			
40.4	42.6	13.9	12.3	13.3	78	110	36	32	33	400	296	353	440	320	374 ^a
40.4	42.0	12.1	10.6	11.6	76	105	34	30	32	400	264	341	376	304	341 ^a
42.0	42.5	12.2	10.2	11.5	86	103	31	28	30	368	288	323 ^a	360	312	329 ^a
41.6	42.3	12.1	10.6	11.5	77	102	33	25	30	376	296	339 ^a	400	312	349 ^a
41.4	42.7	12.0	10.8	11.5	69	104	35	29	32	408	288	333	416	304	362 ^a
41.8	42.8	12.1	11.2	11.6	77	105	35	30	33	408	304	347 ^a	400	304	349 ^a
41.6	42.0	12.8	11.6	12.2	83	105	33	27	30	344	264	305	376	304	342 ^a
41.8	42.4	12.3	11.4	11.9	88	105	35	28	31	400	320	357 ^a	424	312	365 ^a
	42.4			11.9		105			31			337			351
	43.0			14.3		105			36			385			412
	98.6			83.2		100.0			86.1			87.5			85.2
	98.4			83.8		99.1			83.8			89.4			85.6

Mill H--42-lb. Linerboard

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

TABLE X

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units				
						Max.	Min.	Av.	Max.	Min.	Av.		Max.	Min.	Av.	
<u>Mill H--42-lb. Linerboard</u>																
148006	H-277	WF1S	9/ 4/51	8/14/51	2	44.0	40.4	42.6	13.9	12.3	13.3	133	78	110	36	32
148007	H-278	WF1S	9/ 4/51	8/15/51	2	43.2	40.4	42.0	12.1	10.6	11.6	128	76	105	34	30
148008	H-279	WF1S	9/ 4/51	8/20/51	2	43.0	42.0	42.5	12.2	10.2	11.5	132	86	103	31	28
148009	H-280	WF1S	9/ 4/51	8/21/51	2	43.0	41.6	42.3	12.1	10.6	11.5	118	77	102	33	25
148047	H-281	WF1S	9/10/51	8/30/51	2	43.6	41.4	42.7	12.0	10.8	11.5	127	69	104	35	29
148048	H-282	WF1S	9/10/51	8/31/51	2	43.8	41.8	42.8	12.1	11.2	11.6	124	77	105	35	30
148049	H-283	WF1S	9/10/51	9/ 4/51	2	42.6	41.6	42.0	12.8	11.6	12.2	126	83	105	33	27
148050	H-284	WF1S	9/10/51	9/ 5/50	2	43.0	41.8	42.4	12.3	11.4	11.9	126	88	105	35	28
Current Mill Average:						42.4					11.9		105			31
Cumulative Mill Average:						43.0					14.3		105			36
Mill Factor, %:						98.6					83.2		100.0			86
Mill Index, %:						98.4					83.8		99.1			83

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

TABLE XI

OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

Dry Weight, lb.	Caliper, points		Bursting Strength, p.s.i. gauge		G. E. Puncture, units		Elmendorf Tear, g./sheet		Av.							
	Min.	Max.	Min.	Max.	Min.	Max.	In	Across								
40.0	41.1	13.7	12.8	13.1	127	90	112	37	30	33	368	272	318	432	352	391 ^a
41.0	41.4	13.7	12.7	13.0	117	88	102	34	28	31	424	272	326	480	352	403 ^a
40.2	40.9	13.2	12.0	12.7	122	89	106	33	29	31	352	256	297	464	352	389 ^a
42.0	42.5	13.8	13.0	13.3	135	86	113	37	30	32	376	296	346 ^a	448	352	394 ^a
40.4	41.1	13.3	12.0	12.9	122	85	107	32	29	31	392	280	337	416	336	371 ^a
41.4				13.0		108				32			325			389
43.0				13.6		105				34			348			405
96.3				95.6		102.9				94.1			93.4			96.0
96.1				91.5		101.9				86.5			86.2			94.9

MILL I--42-lb. Linerboard

TABLE XII

MILL J--42-lb. Linerboard

41.8	42.7	14.5	13.0	13.8	117	68	95	38	32	35	432	328	368 ^a	416	320	368 ^a
42.0	42.6	14.9	13.4	14.0	114	80	96	38	33	36	432	344	397 ^a	408	320	367 ^a
42.0	43.0	13.5	12.2	12.9	134	87	107	35	30	32	416	336	366	400	328	358 ^a
42.0	43.4	13.7	12.5	13.1	126	83	109	37	30	33	416	320	365 ^a	496	352	386 ^a
42.9				13.5		102				34			374			370
42.9				14.0		105				33			355			377
100.0				96.4		97.1				103.0			105.4			98.1
99.5				95.1		96.2				91.9			99.2			90.2

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

TABLE XI

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units					
						Max.	Min.	Max.	Min.	Max.	Min.		Max.	Min.			
148126	I-195	WF1S	9/17/51	9/6/51	1	42.4	40.0	41.1	13.7	12.8	13.1	127	90	112	37	30	33
148223	I-196	WF1S	9/21/51	9/17/51	1	42.4	41.0	41.4	13.7	12.7	13.0	117	88	102	34	28	31
148241	I-197	WF1S	9/22/51	9/18/51	1	41.6	40.2	40.9	13.2	12.0	12.7	122	89	106	33	29	31
148291	I-198	WF	9/25/51	9/19/51	1	43.6	42.0	42.5	13.8	13.0	13.3	135	86	113	37	30	32
148292	I-199	WF	9/25/51	9/21/51	1	41.6	40.4	41.1	13.3	12.0	12.9	122	85	107	32	29	31
Current Mill Average:						41.4			13.0		13.0	108			108		32
Cumulative Mill Average:						43.0			13.6		13.6	105			105		34
Mill Factor, %:						96.3			95.6		95.6	102.9			102.9		94.1
Mill Index, %:						96.1			91.5		91.5	101.9			101.9		86.5

Mill I--42-lb. Linerboard

TABLE XII

Mill J--42-lb. Linerboard

148122	J-297	B.F.	9/17/51	9/1/51	1	43.6	41.8	42.7	14.5	13.0	13.8	117	68	95	38	32	35
148123	J-298	B.F.	9/17/51	9/1/51	1	43.6	42.0	42.6	14.9	13.4	14.0	114	80	96	38	33	36
148242	J-299	B.F.	9/22/51	9/11/51	1	44.0	42.0	43.0	13.5	12.2	12.9	134	87	107	35	30	32
148243	J-300	B.F.	9/22/51	9/11/51	1	44.0	42.0	43.4	13.7	12.5	13.1	126	83	109	37	30	33
Current Mill Average:						42.9			13.5		13.5	102			102		34
Cumulative Mill Average:						42.9			14.0		14.0	105			105		33
Mill Factor, %:						100.0			96.4		96.4	97.1			97.1		103.0
Mill Index, %:						99.5			95.1		95.1	96.2			96.2		91.9

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

TABLE XIII

INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

Basis Weight, lb.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		Av.							
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.								
41.0	41.4	13.1	11.5	12.2	139	72	100	38	32	35	368	272	326	432	296	370 ^a
41.2	42.5	13.2	11.8	12.6	117	74	92	40	33	36	448	272	365 ^a	432	352	395 ^a
41.6	43.7	14.2	12.0	13.3	120	81	98	43	35	39	496	352	404	496	384	430 ^a
41.6	43.0	13.7	12.0	12.8	129	83	103	37	31	34	448	272	364 ^a	448	304	393 ^a
42.6			12.7			98				36			365			397
42.7			12.8			97				36			354			392
99.8			99.2			101.0				100.0			103.1			101.3
98.8			89.4			92.5				97.3			96.8			96.8

Mill K--42-lb. Linerboard

TABLE XIV

Mill L--42-lb. Linerboard

42.2	43.1	15.2	12.9	14.4	127	83	107	41	35	37	408	328	357 ^a	456	352	399 ^a
42.2	43.2	14.9	13.0	14.2	122	96	111	40	35	38	416	320	375 ^a	432	344	385 ^a
41.6	42.7	15.1	13.4	14.3	137	82	109	41	37	39	448	376	401 ^a	432	368	407 ^a
42.8	43.7	15.9	13.0	14.4	136	84	108	43	37	40	440	328	385 ^a	448	376	411 ^a
41.6	43.1	15.2	13.3	14.0	129	87	107	44	38	40	400	320	371 ^a	424	368	406 ^a
43.2			14.3			109				39			378			402
42.8			13.6			104				36			362			392
100.9			105.1			104.8				108.3			104.4			102.6
100.2			100.7			102.8				105.4			100.3			98.0

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

TABLE XIII

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

File No	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units					
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	
148095	K-9		9/12/51	9/ 5/51	7	42.4	41.0	41.4	13.1	11.5	12.2	139	72	100	38	32	35
148096	K-10		9/12/51	9/ 7/51	7	44.0	41.2	42.5	13.2	11.8	12.6	117	74	92	40	33	36
148225	K-11		9/21/51	9/14/51	7	45.2	41.6	43.7	14.2	12.0	13.3	120	81	98	43	35	39
148264	K-12		9/24/51	9/20/51	7	44.0	41.6	43.0	13.7	12.0	12.8	129	83	103	37	31	34
Current Mill Average:						42.6		42.6			12.7	98		98			36
Cumulative Mill Average:						42.7		42.7			12.8	97		97			36
Mill Factor, %:						99.8		99.8			99.2	101.0		101.0			100
Mill Index, %:						98.8		98.8			89.4	92.5		92.5			97

Mill K--42-lb. Linerboard

TABLE XIV

Mill L--42-lb. Linerboard

148040	L-31		9/ 7/51	8/21/51	1	44.2	42.2	43.1	15.2	12.9	14.4	127	83	107	41	35	37
148113	L-32		9/14/51	8/28/51	1	44.0	42.2	43.2	14.9	13.0	14.2	122	96	111	40	35	38
148127	L-33		9/17/51	9/ 6/51	1	44.4	41.6	42.7	15.1	13.4	14.3	137	82	109	41	37	39
148195	L-34		9/19/51	9/16/51	1	44.4	42.8	43.7	15.9	13.0	14.4	136	84	108	43	37	40
148196	L-35		9/19/51	9/16/51	1	44.4	41.6	43.1	15.2	13.3	14.0	129	87	107	44	38	40
Current Mill Average:						43.2		43.2			14.3	109		109			39
Cumulative Mill Average:						42.8		42.8			13.6	104		104			36
Mill Factor, %:						100.9		100.9			105.1	104.8		104.8			108
Mill Index, %:						100.2		100.2			100.7	102.8		102.8			105

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

TABLE XV

VIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

Weight, lb.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet									
	Max.	Min.	Max.	Min.	Max.	Min.	In	Across	Max.	Min.	Av.					
1.6	42.6	15.0	13.0	13.9	137	91	110	39	34	36	416	336	381 ^a	496	352	428 ^a
2.8	44.6	16.5	14.1	15.5	140	92	116	44	36	40	448	336	399 ^a	528	352	436 ^a
2.4	43.2	14.7	13.4	14.1	126	80	100	42	32	38	416	336	369 ^a	464	352	410 ^c
2.0	42.2	14.7	13.4	14.2	123	81	100	41	34	37	440	336	391 ^a	456	400	437 ^a
1.6	42.7	14.4	13.3	13.9	113	75	98	39	31	35	456	344	383	448	336	394 ^a
2.0	43.2	14.8	13.3	14.0	120	65	97	42	24	36	448	352	401	480	376	417 ^a
1.0	41.8	14.2	13.0	13.4	115	82	97	38	32	35	432	384	399 ^a	432	344	395 ^a
	42.9		14.2				102			37			389			417
	42.8		14.0				105			38			392			422
	100.2		101.4				97.1			97.4			99.2			98.8
	99.5		100.0				96.2			100.0			103.2			101.7

Mill M--42-lb. Linerboard

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

TABLE XV

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units				
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.
Mill M--42-lb. Linerboard																
148011	M-29	W.	9/ 4/51	8/27/51	2	44.0	41.6	42.6	15.0	13.0	13.9	91	110	39	34	36
148012	M-30	D.	9/ 4/51	8/28/51	2	46.0	42.8	44.6	16.5	14.1	15.5	92	116	44	36	40
148076	M-31	W.	9/10/51	9/ 5/51	2	44.0	42.4	43.2	14.7	13.4	14.1	80	100	42	32	38
148261	M-32	W.	9/24/51	9/ 9/51	2	43.4	42.0	42.2	14.7	13.4	14.2	81	100	41	34	37
148262	M-33	W.	9/24/51	9/16/51	2	44.0	41.6	42.7	14.4	13.3	13.9	75	98	39	31	35
148263	M-34	W.	9/24/51	9/17/51	2	45.4	42.0	43.2	14.8	13.3	14.0	65	97	42	24	36
148342	M-35	W.	9/29/51	9/25/51	2	43.4	41.0	41.8	14.2	13.0	13.4	82	97	38	32	35
Current Mill Average:								42.9		14.2		102				37
Cumulative Mill Average:								42.8		14.0		105				38
Mill Factor, %:								100.2		101.4		97.1				97.4
Mill Index, %:								99.5		100.0		96.2				100.0

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

TABLE XVI

DUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

Weight, lb.	Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet						
	Max.	Min.	Max.	Min.	Max.	Min.	In	Across					
Av.	Av.	Av.	Av.	Av.	Av.	Av.	Min.	Max.	Min.	Av.			
<u>Mill E--44/46-1b. Drum Linerboard</u>													
47.5	15.9	13.5	14.6	126	96	109	36	480	376	435 ^a	432	312	367 ^a
45.8	14.2	13.1	13.7	127	100	113	38	488	384	437 ^a	448	368	405 ^a
46.7	14.2	12.8	13.6	127	87	111	37	512	368	430 ^a	416	352	383 ^a
47.9	14.8	13.7	14.3	122	80	105	41	480	400	437 ^a	448	368	407 ^a
47.4	15.4	14.0	14.8	125	85	98	40	496	432	451 ^a	456	368	405 ^a
48.4	15.6	14.0	15.2	124	87	106	44	520	424	465 ^a	464	392	421 ^a
48.6	15.8	14.4	15.0	129	86	103	42	464	384	427 ^a	480	352	417 ^a
47.5	15.2	13.7	14.6	109	72	88	36	544	352	435 ^a	432	296	389 ^a
48.8	15.2	13.8	14.5	116	80	97	39	528	360	465 ^a	504	344	413 ^a
47.6			14.5			103	39			443			401
47.1			14.2			99	41			448			429
101.1			102.1			104.0	95.1			98.9			93.5

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

TABLE XVI

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units					
						Max.	Min.	AV.	Max.	Min.	AV.	Max.	Min.	AV.	Max.		
Mill E-44/46-lb. Drum Linerboard																	
148010	E-269	W.F.	9/ 4/51	8/29/51	1	49.2	46.0	47.5	15.9	13.5	14.6	126	96	109	38	32	36
148039	E-270	W.F.	9/ 6/51	8/31/51	1	47.0	45.0	45.8	14.2	13.1	13.7	127	100	113	41	34	38
148043	E-271	W.F.	9/ 7/51	9/ 4/51	1	48.4	45.4	46.7	14.2	12.8	13.6	127	87	111	40	34	37
148097	E-272	W.F.	9/12/51	9/ 7/51	1	49.0	46.6	47.9	14.8	13.7	14.3	122	80	105	45	38	41
148124	E-273	W.F.	9/17/51	9/10/51	1	48.6	46.0	47.4	15.4	14.0	14.8	125	85	98	43	38	40
148197	E-274	W.F.	9/19/51	9/14/51	1	49.8	46.4	48.4	15.6	14.0	15.2	124	87	106	47	40	44
148224	E-275	W.F.	9/21/51	9/18/51	1	50.4	48.0	48.6	15.8	14.4	15.0	129	86	103	46	39	42
148265	E-276	W.F.	9/24/51	9/21/51	1	48.4	46.4	47.5	15.2	13.7	14.6	109	72	88	39	32	36
148329	E-277	W.F.	9/28/51	9/26/51	1	50.0	47.8	48.8	15.2	13.8	14.5	116	80	97	42	36	39
Current Mill Average:								47.6			14.5			103			39
Cumulative Mill Average:								47.1			14.2			99			41
Mill Factor, %:								101.1			102.1			104.0			95.1

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

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

TABLE XVII

Mill Code	Preconditioning			Conditioning		
	R.H., %	Temp., ° F.	Time, hr.	R.H., %	Temp., ° F.	Time, hr.
A	No preconditioning			50-72	80-91	--
B	56-84	76-87	1/2	50	70	24
C	38-46	72-73	24-264	39-45	71-73	4-48
D	30	76	8	50-53	73	16
E*	No preconditioning			42-62	84-94	--
F	No preconditioning			No conditioning		
G	No preconditioning			50	73	24-72
H	No preconditioning			50	73	24
I	No preconditioning			50-55	84-85	--
J	No preconditioning			50-51	72-73	1/2
K	No preconditioning			50	73	24
L	No preconditioning			57-82	77-90	--
M	No preconditioning			38-75	79-95	--

* Drum linerboard.

A summary of the mill comparisons for the current period as compared with the previous period may be seen in Tables XVIII and XIX, respectively. The comparison for the various mills is given in Tables

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

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

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

The maximum variation in caliper for the current period is five per cent. Compared with the values for the Institute, the average

results for Mills B, C, D, F, G, I, J, K, L, and M are lower, and the average results for Mills A and H are the same. The accord between Institute and mill caliper values is good with a possible exception in the case of Mill M.

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

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

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

With regard to the across-machine direction tear results, it may be noted that the average results for Mills A, F, H, I, J, L, and M are higher than those for the Institute, whereas the average results for Mills B, C, D, G, and K are lower. Only the differences for Mills C, G, and I appear to be excessive.

TABLE XVIII

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

Mills*	A	B	C	D	F	G	H	I	J	K	L	M
No. Samples Compared	10	16	12	10	15	6	8	5	4	4	5	7
Basis Weight Institute Mill	43.0	43.2	42.3	43.3	43.3	43.2	42.4	41.4	42.9	42.6	43.2	42.9
Av. Diff.**	42.8	43.2	42.2	43.1	43.6	43.0	43.1	42.0	43.4	43.0	43.3	42.9
Max. Diff.***	-0.2	0.0	-0.1	-0.2	+0.3	-0.2	+0.7	+0.6	+0.5	+0.4	+0.1	0.0
	-0.8	-0.4	-0.5	-0.8	+1.5	-0.4	+1.4	+1.6	+0.5	+0.5	+0.4	+1.0
Caliper Institute Mill	13.1	12.8	13.0	13.1	14.0	14.4	11.9	13.0	13.5	12.7	14.3	14.2
Av. Diff.**	13.1	12.6	12.7	12.7	13.7	14.1	11.9	12.8	13.2	12.4	14.2	13.5
Max. Diff.***	0.0	-0.2	-0.3	-0.4	-0.3	-0.3	0.0	-0.2	-0.3	-0.3	-0.1	-0.7
	+0.3	-0.4	-0.5	-0.6	-1.0	-0.5	+0.4	-0.6	-0.4	-0.4	-0.4	-0.9
Bursting Strength Institute Mill	111	104	113	109	106	106	105	108	102	98	109	102
Av. Diff.**	109	105	112	104	103	101	107	110	97	102	107	96
Max. Diff.***	-2	+1	-1	-5	-3	-5	+2	+2	-5	+4	-2	-6
	-7	-7	+12	-10	-8	-10	+5	+6	-9	+5	+4	-11
G. E. Puncture Institute Mill	33	31	36	39	40	37	31	32	34	36	39	37
Av. Diff.**	34	35	33	--	49	34	31	32	33	--	--	32
Max. Diff.***	+1	+4	-3	--	+9	-3	0	0	-1	--	--	-5
	+3	+9	-7	--	+13	-3	+1	-3	-3	--	--	-7
Tearing Strength, in Institute Mill	337	349	367	388	398	346	337	325	374	365	378	389
Av. Diff.**	347	335	370	371	408	293	322	369	370	330	390	406
Max. Diff.***	+10	-14	+3	-17	+10	-53	-15	+44	-4	-35	+12	+17
	+37	-50	+68	-43	+52	-71	-45	+64	-22	-66	+64	+57
Tearing Strength, across Institute Mill	375	374	402	428	421	389	351	389	370	397	402	417
Av. Diff.**	387	367	357	422	448	349	356	433	390	376	430	428
Max. Diff.***	+12	-7	-45	-6	+27	-40	+5	+44	+20	-21	+28	+11
	+33	-33	-93	-37	+97	-47	+50	+57	+29	-48	+57	+45

* Comparison based on averages involves only those samples on which mill test data were submitted.

** Average difference is the difference between the Institute mill average and the mill average based on mill test data.

*** Maximum difference encountered in comparing the Institute average and the mill average for any sample submitted by that particular mill.

TABLE XIX
SUMMARY OF TEST RESULTS--COMPARISON BY PERIODS

	Basis	Average Difference, %			Tearing	Strength
	Weight	Caliper	Bursting	G. E.	in	across
			Strength	Puncture		
Mill A						
Current period	-0.5	0	-2	+3	+3	+3
50th period	+0.5	0	-2	+6	+6	+2
49th period	-0.5	+0.8	-4	+3	-3	-3
Mill B						
Current period	0	-2	+1	+13	-4	-2
50th period	-0.7	0	+2	+13	+2	+3
49th period	-0.2	-2	+3	--	-10	-3
Mill C						
Current period	-0.2	-2	-0.9	-8	+0.8	-11
50th period	0	-2	-2	-3	-5	+1
49th period	+0.2	-1	+2	-3	-11	-7
Mill D						
Current period	-0.5	-3	-5	--	-4	-1
50th period	-1	-4	-5	--	-3	+0.5
49th period	+0.2	-3	-4	--	-3	+6
Mill F						
Current period	+0.7	-2	-3	+22	+3	+6
50th period	+0.2	-4	-4	+10	-0.3	+4
49th period	+0.2	-2	-5	-10	+1	+3
Mill G						
Current period	-0.5	-2	-5	-8	-15	-10
50th period	-0.5	-4	-6	-3	-13	-8
49th period	+0.2	-3	-2	0	-10	-5
Mill H						
Current period	+2	0	+2	0	-4	+1
50th period	+0.7	-2	-0.9	0	-6	-0.8
49th period	+2	0	+4	0	-6	-3
Mill I						
Current period	+1	-2	+2	0	+14	+11
50th period	+0.7	+0.8	+5	0	+7	+16
49th period	-0.9	-2	+3	-6	+8	+7
Mill J						
Current period	+1	-2	-5	-3	-1	+5
50th period	+0.5	-2	-6	+3	+3	+10
49th period	+1	-0.7	-4	+3	+6	+8
Mill K						
Current period	+0.9	-2	+4	--	-10	-5
50th period	-0.2	-3	+5	--	-4	+1
49th period	+2	-0.8	+6	--	+13	+8
Mill L						
Current period	+0.2	-0.7	-2	--	+3	+7
50th period	-0.2	-1	0	--	+7	+8
49th period	-0.7	+3	+8	--	-0.3	-6
Mill M						
Current period	0	-5	-6	-14	+4	+3
50th period	-0.9	-6	-6	-14	+2	+3
49th period	0	-4	-5	-13	+5	+5

TABLE XX

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951

Institute Data versus Mill Data

	Caliper, points	IPC Mill Diff.	Bursting Strength, P.S.I. gage		IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Elmendorf Tear, g./sheet				
			IPC Mill Diff.	IPC Mill Diff.					In	Across			
<u>Mill A--42-lb. Linerboard</u>													
3	13.5	13.2	-0.3	110	0	36	36	347 ^a	357	+10	383 ^a	399	+16
1	13.5	13.3	-0.2	116	-7	35	35	335	357	+22	395 ^a	404	+9
1	13.2	13.0	-0.2	106	+2	33	34	353	334	-19	371 ^a	384	+13
1	13.2	13.0	-0.2	110	-1	34	34	319 ^a	356	+37	349 ^a	382	+33
2	12.7	12.7	0.0	109	-2	33	34	331	344	+13	355 ^a	367	+12
2	12.8	12.8	0.0	106	+2	32	35	347 ^a	348	+1	361 ^a	378	+17
3	13.4	13.7	+0.3	112	-3	33	35	309	328	+19	371 ^a	378	+7
3	13.5	13.7	+0.2	109	-1	32	34	312	342	+30	375 ^a	388	+13
3	12.7	12.8	+0.1	110	0	32	35	358 ^a	346	-12	400 ^a	402	+2
5	12.5	12.4	-0.1	118	-7	33	35	357 ^a	358	+1	393 ^a	393	0
2	13.1	13.1	0.0	111	-2	33	34	337	347	+10	375	387	+12

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

ded from the totals of the individual readings.

TABLE XI

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951

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.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.					
148041	A-272	WF1S	8/27/51	1	42.9	-0.3	13.5	13.2	-0.3	110	110	36	34	-2	347 ^a
148042	A-273	WF1S	8/27/51	1	42.8	+0.1	13.5	13.3	-0.2	116	109	35	35	0	355
148210	A-274	WF1S	9/ 8/51	1	43.0	+0.1	13.2	13.0	-0.2	106	108	33	34	+1	353
148211	A-275	WF1S	9/ 8/51	1	42.9	0.0	13.2	13.0	-0.2	110	109	34	34	0	319 ^a
148221	A-276	WF1S	9/13/51	2	42.6	+0.2	12.7	12.7	0.0	109	107	33	34	+1	331
148222	A-277	WF1S	9/13/51	2	42.4	+0.2	12.8	12.8	0.0	106	108	32	35	+3	347 ^a
148302	A-278	WF1S	9/17/51	1	43.7	-0.8	13.4	13.7	+0.3	112	109	33	35	+2	309
148303	A-279	WF1S	9/17/51	1	43.2	-0.5	13.5	13.7	+0.2	109	108	32	34	+2	312
148326	A-280	WF1S	9/24/51	1	43.6	-0.6	12.7	12.8	+0.1	110	110	32	35	+3	358 ^a
148327	A-281	WF1S	9/24/51	2	43.0	-0.3	12.5	12.4	-0.1	118	111	33	35	+2	357 ^a
Current Mill Average:					43.0	-0.2	13.1	13.1	0.0	111	109	33	34	+1	337

Mill A--42-lb. Linerboard

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

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

TABLE XXI

MARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (Continued)

Institute Data versus Mill Data

	Caliper, points	IPC Mill Diff.	Bursting Strength, P.s.i. gage		G. E. Puncture, units	IPC Mill Diff.	IPC	IPC Mill Diff.	IPC	IPC Mill Diff.	IPC	IPC Mill Diff.	Elmendorf Tear, g./sheet	
			IPC Mill Diff.	IPC Mill Diff.									In	Across
1	12.8	12.8	0.0	103	107	+4	30	34	341	+10	363 ^a	378	+15	
2	12.8	12.8	0.0	100	105	+5	32	34	335	-6	385 ^a	361	-24	
1	12.9	12.7	-0.2	105	109	+4	32	35	336	0	379 ^a	363	-16	
2	12.9	12.7	-0.2	102	105	+3	34	36	337	-14	375 ^a	373	-2	
1	13.0	13.0	0.0	100	104	+4	32	37	331	-5	365 ^a	350	-15	
2	13.0	13.0	0.0	105	110	+5	31	37	315	-23	365 ^a	351	-14	
3	13.2	13.0	-0.2	100	105	+5	28	37	329	-4	373 ^a	346	-27	
4	13.2	12.9	-0.3	105	106	+1	29	37	324	-5	348 ^a	375	+27	
5	12.8	12.5	-0.3	101	106	+5	31	35	353	-16	375 ^a	405	+30	
6	12.8	12.5	-0.3	108	102	-6	31	35	333	-30	375 ^a	381	+6	
7	12.6	12.5	-0.1	109	102	-7	32	34	339	-32	387 ^a	354	-33	
8	12.8	12.4	-0.4	103	106	+3	32	35	349	-3	389 ^a	374	-15	
9	12.5	12.2	-0.3	104	101	-3	32	35	343	-8	388 ^a	383	-5	
10	12.3	12.0	-0.3	103	102	-1	31	35	348	-5	362 ^a	374	+12	
11	12.3	12.1	-0.2	107	102	-5	30	34	311	-50	373 ^a	345	-28	
12	12.5	12.1	-0.4	107	104	-3	31	35	339	-26	378 ^a	353	-25	
13	12.8	12.6	-0.2	104	105	+1	31	35	335	-14	374	367	-7	

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

ded from the totals of the individual readings.

TABLE XXI

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (Conti.)

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight,		Caliper,		Institute Data versus Mill Data		G. E.					
					lb. Mill	IPC Mill Diff.	points IPC Mill	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Bursting Strength, p. s. i. gage units	IPC Mill Diff.	IPC Mill Diff.			
147993	B-459	WF1S	8/11/51	1	45.2	+0.1	12.8	12.8	0.0	103	107	+4	30	34	34	331a
147994	B-460	WF1S	8/11/51	1	45.4	-0.2	12.8	12.8	0.0	100	105	+5	32	34	34	341a
147995	B-461	WF1S	8/11/51	1	45.2	-0.1	12.9	12.7	-0.2	105	109	+4	32	35	35	336
147996	B-462	WF1S	8/11/51	1	45.7	-0.2	12.9	12.7	-0.2	102	105	+3	34	36	36	351a
147997	B-463	WF1S	8/23/51	1	45.3	-0.1	13.0	13.0	0.0	100	104	+4	32	37	37	336a
147998	B-464	WF1S	8/23/51	1	45.2	0.0	13.0	13.0	0.0	105	110	+5	31	37	37	338a
147999	B-465	WF1S	8/23/51	1	45.3	0.0	13.2	13.0	-0.2	100	105	+5	28	37	37	333a
148000	B-466	WF1S	8/23/51	1	43.3	+0.2	13.2	12.9	-0.3	105	106	+1	29	37	37	329a
148232	B-467	WF1S	9/ 5/51	1	43.8	0.0	12.8	12.5	-0.3	101	106	+5	31	35	35	369a
148233	B-468	WF1S	9/ 5/51	1	43.8	0.0	12.8	12.5	-0.3	108	102	-6	31	35	35	363a
148234	B-469	WF1S	9/ 5/51	1	44.0	-0.1	12.6	12.5	-0.1	109	102	-7	32	34	34	371a
148235	B-470	WF1S	9/ 5/51	1	43.6	+0.2	12.8	12.4	-0.4	103	106	+3	32	35	35	352
148236	B-471	WF1S	9/ 7/51	1	42.3	+0.2	12.5	12.2	-0.3	104	101	-3	32	35	35	351a
148237	B-472	WF1S	9/ 7/51	1	42.0	+0.1	12.3	12.0	-0.3	103	102	-1	31	35	35	353a
148238	B-473	WF1S	9/ 7/51	1	42.0	+0.1	12.3	12.1	-0.2	107	102	-5	30	34	34	361a
148239	B-474	WF1S	9/ 7/51	1	42.7	-0.4	12.5	12.1	-0.4	107	104	-3	31	35	35	365
Current Mill Average:					43.2	0.0	12.8	12.6	-0.2	104	105	+1	31	35	35	349

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 XXII

INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

Institute Data versus Mill Data

Caliper, points	IPC Mill Diff.	Bursting Strength, p.s.i. gage		G. E. Puncture, units	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Elmendorf Tear, g./sheet		IPC Mill Diff.		
		IPC Mill Diff.	IPC Mill Diff.					In.	Across			
12.6	12.3	-0.3	110	106	-4	35	28	371	+20	396 ^a	307	-89
12.7	12.3	-0.4	109	108	-1	35	31	415	+68	404 ^a	321	-83
13.0	12.7	-0.3	114	108	-6	40	35	394	+11	421 ^a	328	-93
13.1	12.6	-0.5	115	111	-4	36	35	382	+3	405 ^a	335	-70
14.3	14.1	-0.2	106	109	+3	38	34	336	-27	405 ^a	388	-17
12.8	12.5	-0.3	113	125	+12	38	34	337	-38	408 ^a	395	-13
12.9	12.7	-0.2	118	118	0	36	34	363	-3	407 ^a	408	+1
12.7	12.5	-0.2	118	122	+4	35	30	385	+2	403 ^a	326	-77
12.5	12.4	-0.1	116	119	+3	34	31	382	+27	397 ^a	412	+15
13.0	12.9	-0.1	110	107	-3	33	32	389	+5	392 ^a	358	-34
13.0	12.8	-0.2	113	105	-8	32	33	305	-50	391 ^a	376	-15
12.7	12.6	-0.1	118	109	-9	35	34	394	+19	395 ^a	332	-63
13.0	12.7	-0.3	113	112	-1	36	33	370	+3	402	357	-45

Mill C--42-lb. Linerboard

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

from the totals of individual readings.

TABLE XIII

SUMMARY OF INDIVIDUAL TEST LOTS - SEPTEMBER 1 THROUGH 30, 1951 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units	Eli In Mill					
					IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.							
148013	C-303	W.F.	8/27/51	1	41.3	-0.4	12.6	12.3	-0.3	110	106	-4	35	28	-7	351 ^a	371
148014	C-304	W.F.	8/27/51	1	41.2	0.0	12.7	12.3	-0.4	109	108	-1	35	31	-4	347	415
148015	C-305	W.F.	8/28/51	1	43.1	-0.5	13.0	12.7	-0.3	114	108	-6	40	35	-5	383	394
148016	C-306	W.F.	8/28/51	1	42.5	-0.1	13.1	12.6	-0.5	115	111	-4	36	35	-1	379	382
148082	C-307	W.F.	9/6/51	1	43.4	-0.2	14.3	14.1	-0.2	106	109	+3	38	34	-4	363	336
148330	C-308	W.F.	9/19/51	1	43.0	-0.3	12.8	12.5	-0.3	113	125	+12	38	34	-4	375	337
148331	C-309	W.F.	9/19/51	1	42.8	-0.1	12.9	12.7	-0.2	118	118	0	36	34	-2	366	363
148321	C-310	W.F.	9/24/51	1	42.4	+0.2	12.7	12.5	-0.2	118	122	+4	35	30	-5	383 ^a	385
148322	C-311	W.F.	9/24/51	1	42.6	+0.2	12.5	12.4	-0.1	116	119	+3	34	31	-3	355	382
148323	C-312	W.F.	9/24/51	1	41.4	+0.3	13.0	12.9	-0.1	110	107	-3	33	32	-1	375	380
148324	C-313	W.F.	9/24/51	1	41.6	+0.1	13.0	12.8	-0.2	113	105	-8	32	33	+1	355	305
148325	C-314	W.F.	9/24/51	1	42.3	0.0	12.7	12.6	-0.1	118	109	-9	35	34	-1	375	394
Current Mill Average:					42.3	-0.1	13.0	12.7	-0.3	113	112	-1	36	33	-3	367	370

Mill C--42-lb. Linerboard

^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 individual readings.

TABLE XXIII
OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (Continued)

Institute Data versus Mill Data				Elmendorf Tear, g./sheet								
Caliper, points	IPC Mill Diff.	Bursting Strength, p.s.i. gage	G. E. Puncture, units	In		Across						
				IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.					
Mill D--42-lb. Linerboard												
13.7	13.2	-0.5	110	106	-4	38	387 ^a	383	-4	430 ^a	439	+9
13.2	12.6	-0.6	109	103	-6	38	392 ^a	349	-43	418 ^a	423	+5
12.0	11.8	-0.2	109	104	-5	37	362 ^a	353	-9	413 ^a	411	-2
13.7	13.1	-0.6	108	105	-3	38	397 ^a	365	-32	424 ^a	419	-5
13.6	13.2	-0.4	112	108	-4	42	400 ^a	381	-19	436 ^a	457	+21
13.9	13.5	-0.4	104	104	0	43	401 ^a	408	+7	453 ^a	451	-2
12.9	12.6	-0.3	114	104	-10	40	398 ^a	388	-10	456 ^a	434	-22
12.9	12.6	-0.3	106	104	-2	37	393 ^a	365	-28	421 ^a	384	-37
12.5	12.1	-0.4	112	106	-6	34	371 ^a	349	-22	387 ^a	394	+7
12.8	12.7	-0.1	105	103	-2	41	383	371	-12	443 ^a	412	-31
13.1	12.7	-0.4	109	104	-5	39	388	371	-17	428	422	-6

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

TABLE VIII

SUMMARY OF INDIVIDUAL TEST LOTS - SEPTEMBER 1 THROUGH 30, 1951 (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.	IPC Mill Diff.	IPC Mill Diff.					
148001	D-439	D.F.	8/29/51	4	43.1	43.4	+0.3	13.7	13.2	-0.5	110	106	-4	38	387 ^a
148114	D-440	W.F.	9/11/51	4	43.1	42.3	-0.8	13.2	12.6	-0.6	109	103	-6	38	392 ^a
148120	D-441	W.F.	9/12/51	4	43.0	42.9	-0.1	12.0	11.8	-0.2	109	104	-5	37	362 ^a
148121	D-442	W.F.	9/13/51	4	43.5	43.4	-0.1	13.7	13.1	-0.6	108	105	-3	38	397 ^a
148184	D-443	W.F.	9/14/51	4	43.6	43.5	-0.1	13.6	13.2	-0.4	112	108	-4	42	400 ^a
148185	D-444	W.F.	9/15/51	4	44.5	44.6	+0.1	13.9	13.5	-0.4	104	104	0	43	401 ^a
148186	D-445	W.F.	9/16/51	4	42.6	42.7	+0.1	12.9	12.6	-0.3	114	104	-10	40	398 ^a
148328	D-446	W.F.	9/24/51	4	43.6	43.3	-0.3	12.9	12.6	-0.3	106	104	-2	37	393 ^a
148337	D-447	W.F.	9/25/51	4	42.9	42.5	-0.4	12.5	12.1	-0.4	112	106	-6	34	371 ^a
148338	D-448	W.F.	9/26/51	4	43.1	42.8	-0.3	12.8	12.7	-0.1	105	103	-2	41	383
Current Mill Average:					43.3	43.1	-0.2	13.1	12.7	-0.4	109	104	-5	39	388

Mill D--42-lb. Linerboard

^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 individual readings.

TABLE XXIV

SUMMARY OF INDIVIDUAL TEST LOTS - SEPTEMBER 1 THROUGH 30, 1951 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Institute Data		G. E.	
					IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Bursting Strength, p.s.i. gage	Puncture, units		

Mill E--42-lb. Linerboard

No samples submitted.

TABLE XXV

Mill F--42-lb. Linerboard

148002	F-65	W.F.	8/17/51	-	43.6	43.6	0.0	14.7	14.1	-0.6	110	108	-2	39	48	+9	387 ^a
148003	F-66	W.F.	8/20/51	-	43.4	44.5	+1.1	14.3	14.4	+0.1	108	102	-6	41	53	+12	385 ^a
148004	F-67	W.F.	8/20/51	-	42.9	42.8	-0.1	14.3	14.1	-0.2	105	104	-1	41	51	+10	393 ^a
148005	F-68	W.F.	8/21/51	-	43.8	43.4	-0.4	14.1	13.8	-0.3	106	107	+1	40	48	+8	373 ^a
148044	F-69	W.F.	8/21/51	-	43.9	44.1	+0.2	14.4	14.1	-0.3	112	109	-3	44	51	+7	402 ^a
148045	F-70	W.F.	8/22/51	-	41.9	42.0	+0.1	14.4	13.8	-0.6	102	99	-3	40	48	+8	381 ^a
148046	F-71	W.F.	8/27/51	-	43.4	43.3	-0.1	13.2	12.8	-0.4	113	109	-4	41	47	+6	401
148098	F-72	W.F.	9/ 2/51	-	43.5	44.1	+0.6	13.1	12.9	-0.2	108	106	-2	39	45	+6	381 ^a
148099	F-73	W.F.	9/ 2/51	-	43.9	43.8	-0.1	13.4	13.6	+0.2	103	98	-5	39	45	+6	389 ^a
148100	F-74	W.F.	9/ 2/51	-	44.9	45.3	+0.4	14.8	14.3	-0.5	104	98	-6	42	49	+7	413 ^a
148125	F-75	W.F.	9/12/51	-	42.8	42.6	-0.2	13.7	12.7	-1.0	101	103	+2	39	47	+8	409
148212	F-76	W.F.	9/12/51	-	42.5	42.1	-0.4	13.4	13.1	-0.3	96	97	+1	40	47	+7	399 ^a
148240	F-77	W.F.	9/17/51	-	42.6	43.3	+0.7	13.8	13.6	-0.2	101	97	-4	41	50	+9	425 ^a
148304	F-78	--	9/18/51	-	43.4	44.9	+1.5	13.8	13.5	-0.3	111	103	-8	39	52	+13	409 ^a
148305	F-79	W.F.	9/20/51	-	43.1	43.8	+0.7	14.5	14.1	-0.4	104	106	+2	38	48	+10	425
Current Mill Average:																	
					43.3	43.6	+0.3	14.0	13.7	-0.3	106	103	-3	40	49	+9	398

^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 individual readings.

TABLE XXVI
 INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

Institute Data versus Mill Data														
Caliper, points	IPC Mill Diff.	Bursting Strength, p.s.i. gage	IPC Mill Diff.	G. E. Puncture, units	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Elmendorf Tear, g./sheet						
								In	Across					
15.8	15.4	-0.4	108	105	-3	38	36	-2	377 ^a	306	-71	403 ^a	371	-32
15.4	15.0	-0.4	105	103	-2	37	34	-3	335 ^a	290	-45	385 ^a	343	-44
13.2	13.0	-0.2	107	97	-10	39	36	-3	333 ^a	299	-34	383 ^a	342	-41
14.0	13.6	-0.4	104	95	-9	38	35	-3	357	292	-65	392 ^a	355	-37
13.4	13.2	-0.2	108	108	0	34	34	0	331	298	-33	385 ^a	341	-44
14.5	14.0	-0.5	106	100	-6	34	33	-1	339	273	-66	389 ^a	342	-47
14.4	14.1	-0.3	106	101	-5	37	34	-3	346	293	-53	389	349	-40

Mill G--42-lb. Linerboard

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

TABLE XXVI

SUMMARY OF INDIVIDUAL TEST LOTS - SEPTEMBER 1 THROUGH 30, 1951 (continued)

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		IPC Mill Diff.		IPC Mill Diff.		IPC Mill Diff.		IPC Mill Diff.	IPC Mill	
					IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Bursting Strength, p.s.i. gage	G. E. Puncture, units							
148101	G-370	W.F.	9/ 7/51	1	43.9	43.6	-0.3	15.8	15.4	-0.4	108	105	- 3	38	36	-2	377 ^a
148102	G-371	W.F.	9/ 7/51	1	42.9	42.5	-0.4	15.4	15.0	-0.4	105	103	- 2	37	34	- 3	335 ^a
148103	G-372	W.F.	9/10/51	1	43.4	43.4	0.0	13.2	13.0	-0.2	107	97	-10	39	36	- 3	335 ^a
148104	G-373	W.F.	9/10/51	1	43.4	43.1	-0.3	14.0	13.6	-0.4	104	95	- 9	38	35	- 3	357
148343	G-374	WFL	9/27/51	1	43.2	43.4	+0.2	13.4	13.2	-0.2	108	108	0	34	34	0	331
148344	G-375	W.F.	9/27/51	1	42.4	42.2	-0.2	14.5	14.0	-0.5	106	100	- 6	34	33	-1	339
Current Mill Average:					43.2	43.0	-0.2	14.4	14.1	-0.3	106	101	- 5	37	34	- 3	346

Mill G--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 XXVII
OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

Institute Data versus Mill Data

Lot	Caliper, points	IPC Mill Diff.	Bursting Strength, P.s.i. Gage		G. E. Puncture, units	IPC Mill Diff.	Elmendorf Tear, g./sheet					
			IPC Mill Diff.	IPC Mill Diff.			In	Across				
			<u>Mill H--42-lb. Linerboard</u>									
+1.4	13.3	-0.2	110	113 +3	33	0	353	383	+30	374 ^a	412	+38
+0.7	11.6	0.0	105	108 +3	32	0	341	363	+22	341 ^a	391	+50
+0.6	11.5	+0.4	103	107 +4	30	+1	323 ^a	283	-40	329 ^a	303	-26
+0.6	11.5	+0.1	102	104 +2	30	0	339 ^a	297	-42	349 ^a	329	-20
+0.1	11.5	0.0	104	107 +3	32	0	333	315	-18	362 ^a	363	+1
-0.1	11.6	0.0	105	110 +5	33	-1	347 ^a	329	-18	349 ^a	363	+14
+1.0	12.2	-0.2	105	106 +1	30	0	305	291	-14	342 ^a	335	-7
+1.0	11.9	-0.1	105	103 -2	31	0	357 ^a	312	-45	365 ^a	348	-17
+0.7	11.9	0.0	105	107 +2	31	0	337	322	-15	351	356	+5

TABLE XXVIII

Lot	Caliper, points	IPC Mill Diff.	Bursting Strength, P.s.i. Gage		G. E. Puncture, units	IPC Mill Diff.	Elmendorf Tear, g./sheet					
			IPC Mill Diff.	IPC Mill Diff.			In	Across				
			<u>Mill I--42-lb. Linerboard</u>									
+0.5	13.1	-0.3	112	109 -3	33	-3	318	382	+64	391 ^a	429	+38
+0.7	13.0	-0.2	102	108 +6	31	+1	326	379	+53	403 ^a	431	+28
+1.6	12.7	+0.1	106	110 +4	31	+1	297	359	+62	389 ^a	446	+57
-0.3	13.3	-0.6	113	111 -2	32	+1	346 ^a	378	+32	394 ^a	438	+44
+0.6	12.9	+0.1	107	110 +3	31	+2	337	347	+10	371 ^a	423	+52
+0.6	13.0	-0.2	108	110 +2	32	0	325	369	+44	389	433	+44

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

lated from the totals of the individual readings.

TABLE XXVII

SUMMARY OF INDIVIDUAL TEST LOGS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units				
					IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.			
148006	H-277	WF1S	8/14/51	2	42.6	+1.4	13.3	13.1	-0.2	110	113	+3	33	0	353
148007	H-278	WF1S	8/15/51	2	42.0	+0.7	11.6	11.6	0.0	105	108	+3	32	0	341
148008	H-279	WF1S	8/20/51	2	42.5	+0.6	11.5	11.9	+0.4	103	107	+4	30	+1	323 ^a
148009	H-280	WF1S	8/21/51	2	42.3	+0.6	11.5	11.6	+0.1	102	104	+2	30	0	339 ^a
148047	H-281	WF1S	8/30/51	2	42.7	+0.1	11.5	11.5	0.0	104	107	+3	32	0	333
148048	H-282	WF1S	8/31/51	2	42.8	-0.1	11.6	11.6	0.0	105	110	+5	33	-1	347 ^a
148049	H-283	WF1S	9/ 4/51	2	42.0	+1.0	12.2	12.0	-0.2	105	106	+1	30	0	305
148050	H-284	WF1S	9/ 5/51	2	42.4	+1.0	11.9	11.8	-0.1	105	103	-2	31	0	357 ^a
Current Mill Average:													31	0	337

TABLE XXVIII

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units				
					IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.			
148126	I-195	WF1S	9/ 6/51	1	41.1	+0.5	13.1	12.8	-0.3	112	109	-3	33	-3	318
148223	I-196	WF1S	9/17/51	1	41.4	+0.7	13.0	12.8	-0.2	102	108	+6	31	+1	326
148241	I-197	WF1S	9/18/51	1	40.9	+1.6	12.7	12.8	+0.1	106	110	+4	31	+1	297
148291	I-198	W.F.	9/19/51	1	42.5	-0.3	13.3	12.7	-0.6	113	111	-2	32	+1	346 ^a
148292	I-199	W.F.	9/21/51	1	41.1	+0.6	12.9	13.0	+0.1	107	110	+3	31	+2	337
Current Mill Average:													32	0	325

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

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

TABLE XXII
OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (Continued)

Institute Data versus Mill Data

Caliper, points	IPC Mill Diff.	Bursting Strength, P.s.i. gage	IPC Mill Diff.	G. E. Puncture, units	IPC Mill Diff.	Elmendorf Tear, g./sheet		IPC Mill Diff.	Across IPC Mill Diff.					
						IPC Mill Diff.	In							
5 13.8	13.7	-0.1	95	94	-1	35	32	-3	368 ^a	379	+11	368 ^a	397	+25
5 14.0	13.6	-0.4	96	90	-6	36	35	-1	397 ^a	375	-22	367 ^a	396	+29
3 12.9	12.9	0.0	107	105	-2	32	32	0	366	357	-9	358 ^a	380	+22
4 13.1	12.8	-0.3	109	100	-9	33	32	-1	365 ^a	367	+2	386 ^a	387	+1
5 13.5	13.2	-0.3	102	97	-5	34	33	-1	374	370	-4	370	390	+20

TABLE XXX
Mill K--42-lb. Linerboard

4 12.2	11.8	-0.4	100	101	+1	35	326	314	-12	370 ^a	357	-13
5 12.6	12.3	-0.3	92	97	+5	36	365 ^a	340	-25	395 ^a	385	-10
3 13.3	12.9	-0.4	98	103	+5	39	404	338	-66	430 ^a	382	-48
4 12.8	12.4	-0.4	103	107	+4	34	364 ^a	328	-36	393 ^a	379	-14
4 12.7	12.4	-0.3	98	102	+4	36	365	330	-35	397	376	-21

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

TABLE XXIX

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (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.						
148122	J-297	B.F.	9/1/51	1	42.7	+0.5	13.8	13.7	-0.1	95	94	-1	35	32	-3	368 ^a	37	
148123	J-298	B.F.	9/1/51	1	42.6	+0.5	14.0	13.6	-0.4	96	90	-6	36	35	-1	397 ^a	37	
148242	J-299	B.F.	9/11/51	1	43.0	+0.3	12.9	12.9	0.0	107	105	-2	32	32	0	366	35	
148243	J-300	B.F.	9/11/51	1	43.4	+0.4	13.1	12.8	-0.3	109	100	-9	33	32	-1	365 ^a	36	
Current Mill Average:					42.9	43.4	-0.5	13.5	13.2	-0.3	102	97	-5	34	33	-1	374	37

TABLE XXX

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.					
148095	K-9	9/5/51	7	41.4	+0.4	12.2	11.8	-0.4	100	101	+1	35	326	314		
148096	K-10	9/7/51	7	42.5	+0.5	12.6	12.3	-0.3	92	97	+5	36	365 ^a	340		
148225	K-11	9/14/51	7	43.7	+0.2	13.3	12.9	-0.4	98	103	+5	39	404	338		
148264	K-12	9/20/51	7	43.0	+0.4	12.8	12.4	-0.4	103	107	+4	34	364 ^a	328		
Current Mill Average:					42.6	43.0	+0.4	12.7	12.4	-0.3	98	102	+4	36	365	330

^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 XXXI
OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

Lot	Caliper, points		Bursting Strength, P.s.i. Sage		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.	IPC Mill Diff.					
10.1	14.4	14.6	+0.2	107	111	+4	37	357 ^a	355	-2	399 ^a	410	+11
10.1	14.2	14.5	+0.3	111	108	-3	38	375 ^a	360	-15	385 ^a	409	+24
0.0	14.3	14.4	+0.1	109	105	-4	39	401 ^a	350	-51	407 ^a	399	-8
10.4	14.4	14.0	-0.4	108	105	-3	40	385 ^a	448	+63	411 ^a	468	+57
10.2	14.0	13.7	-0.3	107	105	-2	40	371 ^a	435	+64	406 ^a	461	+55
10.1	14.3	14.2	-0.1	109	107	-2	39	378	390	+12	402	430	+28

TABLE XXXII

Lot	Mull M--42-lb. Linerboard		Mull L--42-lb. Linerboard										
	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.									
0.1	13.9	13.0	-0.9	110	101	-9	36	381 ^a	438	+57	428 ^a	473	+45
0.3	15.5	15.0	-0.5	116	105	-11	40	399 ^a	452	+53	436 ^a	472	+36
0.1	14.1	13.5	-0.6	100	90	-10	38	369 ^a	407	+38	410 ^a	448	+38
0.2	14.2	13.6	-0.6	100	94	-6	37	391 ^a	378	-13	437 ^a	415	-22
0.0	13.9	13.2	-0.7	98	94	-4	35	383	371	-12	394 ^a	382	-12
0.6	14.0	13.1	-0.9	97	98	+1	36	401	356	-45	417 ^a	383	-34
1.0	13.4	13.0	-0.4	97	92	-5	35	399 ^a	439	+40	395 ^a	426	+31
0.0	14.2	13.5	-0.7	102	96	-6	37	389	406	+17	417	428	+11

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

TABLE XXXI

SUMMARY OF INDIVIDUAL TEST LOGS - SEPTEMBER 1 THROUGH 30, 1951 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		G. E. Puncture, units		IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC M	
					IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.							
148040	L-31		8/21/51	1	43.1	43.2	+0.1	14.4	14.6	+0.2	107	111	+4	37	357 ^a
148113	L-32		8/28/51	1	43.2	43.3	+0.1	14.2	14.5	+0.3	111	108	-3	38	375 ^a
148127	L-33		9/ 6/51	1	42.7	42.7	0.0	14.3	14.4	+0.1	109	105	-4	39	401 ^a
148195	L-34		9/16/51	1	43.7	44.1	+0.4	14.4	14.0	-0.4	108	105	-3	40	385 ^a
148196	L-35		9/16/51	1	43.1	43.3	+0.2	14.0	13.7	-0.3	107	105	-2	40	371 ^a
Current Mill Average:													39	378	

Mill L--42-lb. Linerboard

TABLE XXXII

Mill M--42-lb. Linerboard

148011	M-29	W.	8/27/51	2	42.6	42.5	-0.1	13.9	13.0	-0.9	110	101	-9	36	381 ^a
148012	M-30	D.	8/28/51	2	44.6	44.3	-0.3	15.5	15.0	-0.5	116	105	-11	40	399 ^a
148076	M-31	W.	9/ 5/51	2	43.2	43.1	-0.1	14.1	13.5	-0.6	100	90	-10	38	369 ^a
148261	M-32	W.	9/ 9/51	2	42.2	42.4	+0.2	14.2	13.6	-0.6	100	94	-6	37	391 ^a
148262	M-33	W.	9/16/51	2	42.7	42.7	0.0	13.9	13.2	-0.7	98	94	-4	35	383
148263	M-34	W.	9/17/51	2	43.2	42.6	-0.6	14.0	13.1	-0.9	97	98	+1	36	401
148342	M-35	W.	9/25/51	2	41.8	42.8	+1.0	13.4	13.0	-0.4	97	92	-5	35	399 ^a
Current Mill Average:													37	389	

^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 XXXIII

F INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (continued)

Institute Data versus Mill Data		G. E.		Elmendorf Tear,										
Caliper, points	IPC Mill Diff.	Bursting Strength, p.s.i. gage	Puncture, units	IPC Mill Diff.	IPC Mill Diff.	g./sheet	IPC Mill Diff.	IPC Mill Diff.						
									IPC Mill Diff.	IPC Mill Diff.	In	Across		
<u>Mill E--44/46-1b. Drum Linerboard</u>														
14.6	13.4	-1.2	109	103	-6	36	40	+4	435 ^a	403	-32	367 ^a	389	+22
13.7	12.7	-1.0	113	99	-14	38	42	+4	437 ^a	415	-22	405 ^a	423	+18
13.6	12.9	-0.7	111	97	-14	37	41	+4	430 ^a	414	-16	383 ^a	375	-8
14.3	13.2	-1.1	105	98	-7	41	41	0	437 ^a	376	+39	407 ^a	344	-63
14.8	13.6	-1.2	98	88	-10	40	40	0	451 ^a	385	-66	405 ^a	351	-54
15.2	14.2	-1.0	106	92	-14	44	47	+3	465 ^a	426	-39	421 ^a	405	-16
15.0	13.8	-1.2	103	98	-5	42	41	-1	427 ^a	458	+31	417 ^a	438	+21
14.6	13.2	-1.4	88	79	-9	36	40	+4	435 ^a	438	+3	389 ^a	401	+12
14.5	13.7	-0.8	97	86	-11	39	41	+2	465 ^a	445	-20	413 ^a	399	-14
14.5	13.4	-1.1	103	93	-10	39	41	+2	443	418	-25	401	392	-9

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

and from the totals of the individual readings.

TABLE XXXIII

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH 30, 1951 (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.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.						
148010	E-269	W.F.	8/29/51	1	47.5	46.4	-1.1	14.6	13.4	-1.2	109	103	-6	36	40	+4	435 ^a	40
148039	E-270	W.F.	8/31/51	1	45.8	45.5	-0.4	13.7	12.7	-1.0	113	99	-14	38	42	+4	437 ^a	41
148043	E-271	W.F.	9/ 4/51	1	46.7	47.0	+0.3	13.6	12.9	-0.7	111	97	-14	37	41	+4	430 ^a	41
148097	E-272	W.F.	9/ 7/51	1	47.9	48.3	+0.4	14.3	13.2	-1.1	105	98	-7	41	41	0	437 ^a	37
148124	E-273	W.F.	9/10/51	1	47.4	47.1	-0.3	14.8	13.6	-1.2	98	88	-10	40	40	0	451 ^a	38
148197	E-274	W.F.	9/14/51	1	48.4	48.3	-0.1	15.2	14.2	-1.0	106	92	-14	44	47	+3	465 ^a	42
148224	E-275	W.F.	9/18/51	1	48.6	49.4	+0.8	15.0	13.8	-1.2	103	98	-5	42	41	-1	427 ^a	45
148265	E-276	W.F.	9/21/51	1	47.5	47.7	+0.2	14.6	13.2	-1.4	88	79	-9	36	40	+4	435 ^a	43
148329	E-277	W.F.	9/26/51	1	48.8	48.6	-0.2	14.5	13.7	-0.8	97	86	-11	39	41	+2	465 ^a	44
Current Mill Average:					47.6	47.6	0.0	14.5	13.4	-1.1	103	93	-10	39	41	+2	443	41

Mill E--44/46-lb. Drum Linerboard

* 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.

