

CONTINUOUS BASELINE STUDY

Project 1108-B

Progress Report 75

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

October 1, 1953

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

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In conjunction with the F.K.I. Continuous Baseline Study, ninety-nine 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 September 1 through September 30. In addition to the 42-lb. kraft linerboard, two samples of special drum stock and one sample of 69-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	20
C	8
D	11
E	3
F	9
G	8
H	6
I	2
J	4
K	0
L	8
M	3
N	8
O	1
	<hr/>
	99

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 42.7 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 99.1. 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 August 31, 1953.

A comparison of the results in Table II and Figure 1 shows that the average basis weight results for all mills except O conform to the 42-lb. specification set forth in Rule 41. Mill G has the highest average basis weight, it being 44.8 lb. or approximately 6.7% higher than the 42-lb. specification. On the other hand, Mill O has

the lowest average basis weight, it being 40.7 lb., approximately 3.1% 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	+2.4
B	+1.9
C	+1.2
D	+2.6
E	+0.5
F	+0.5
G	+6.7
H	+1.4
I	+1.2
J	+3.1
K	—
L	+3.3
M	+1.9
N	+1.0
O	-3.1

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 12.1 for Mill N to a high of 13.6 for Mill L, the average being 12.8 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 105 for Mills I and L to a high of 127 for Mill G. The current F.K.I. average bursting strength is 112, considerably 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, 36 units; Mill B 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 M has the highest average machine direction tear value while Mill B has the lowest. Mill F has the highest average cross-machine direction tear value, 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	20 ^a		
C	8		
D	10	1	

(Continued on next page.)

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

^a One side only.

^b Drum linerboard.

^c Sheet finish not reported.

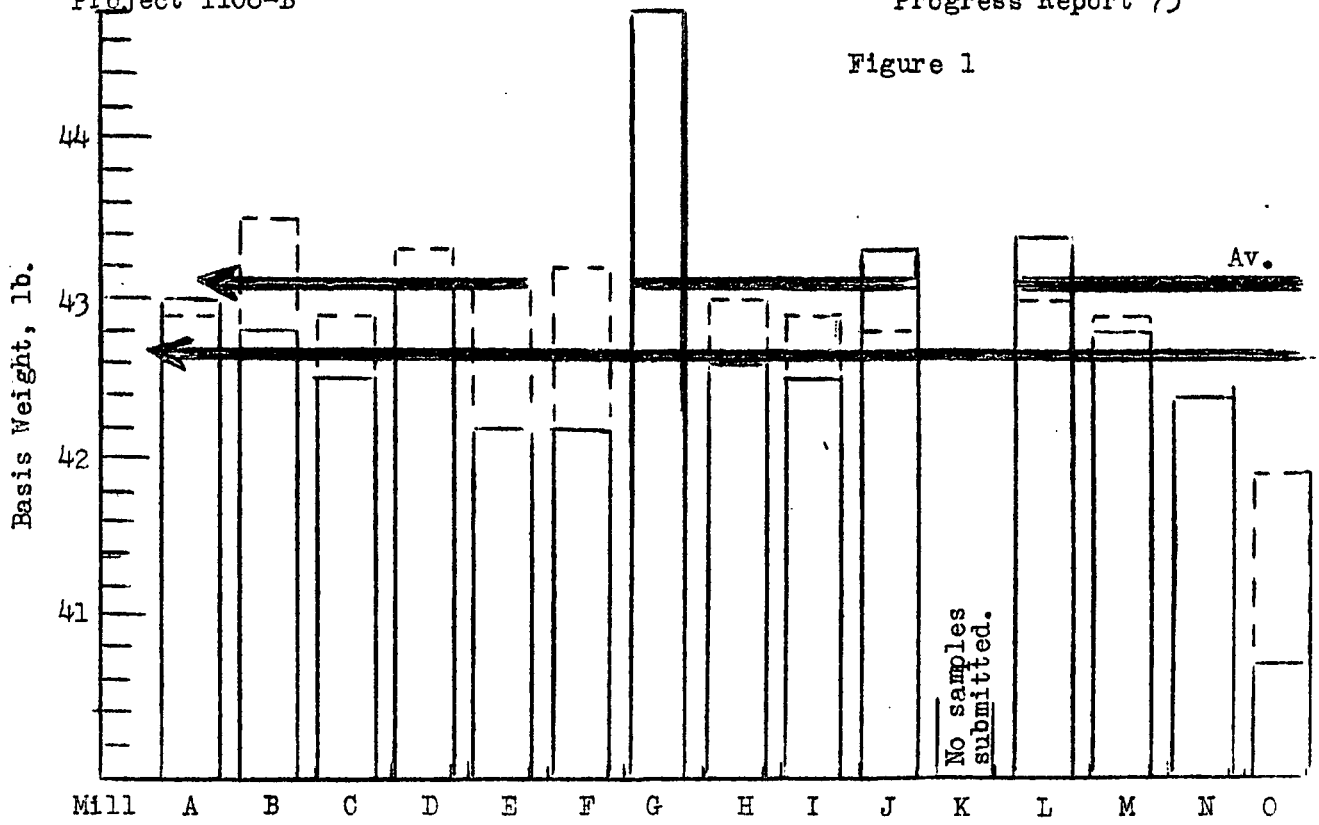
^d Semi-water finish.

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

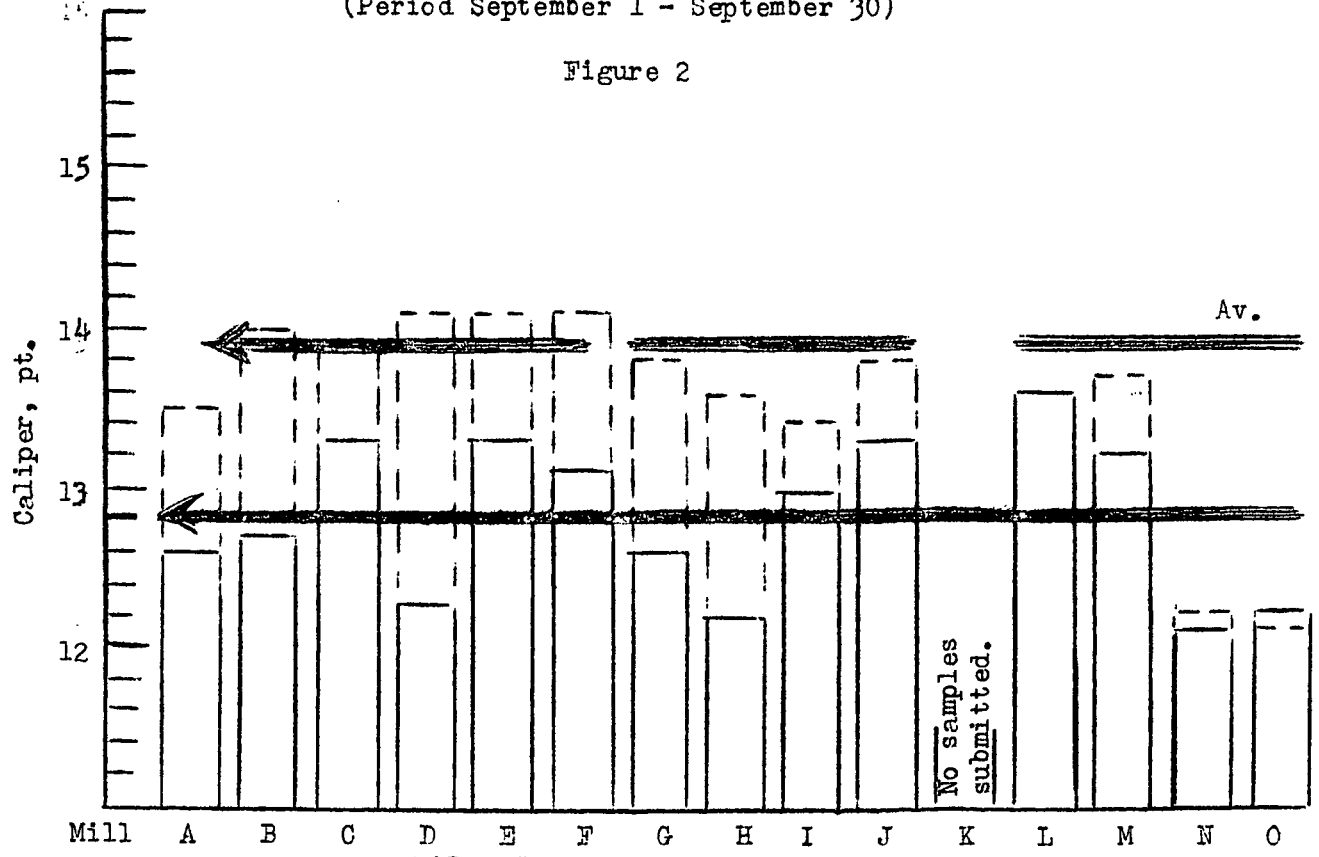
TABLE II

SUMMARY OF COMPOSITE MILL AVERAGES--SEPTEMBER 1 THROUGH SEPTEMBER 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	43.0	12.6	113	33	322	372
B	42.8	12.7	119	29	300	353
C	42.5	13.3	113	34	344	382
D	43.1	12.3	110	34	357	372
E	42.2	13.3	106	30	344	342
F	42.2	13.1	113	36	377	419
G	44.8	12.6	127	34	342	378
H	42.6	12.2	110	32	332	372
I	42.5	13.0	105	32	316	376
J	43.3	13.3	112	31	340	359
K	No samples submitted.					
L	43.4	13.6	105	35	355	382
M	42.8	13.2	112	33	379	393
N	42.4	12.1	110	31	335	372
O	40.7	12.2	109	32	331	365
Current FKI Average:	42.7	12.8	112	33	341	374
Cumulative FKI Average:	43.1	13.9	106	36	371	404
FKI Index, %:	99.1	92.1	105.7	91.7	91.9	92.6

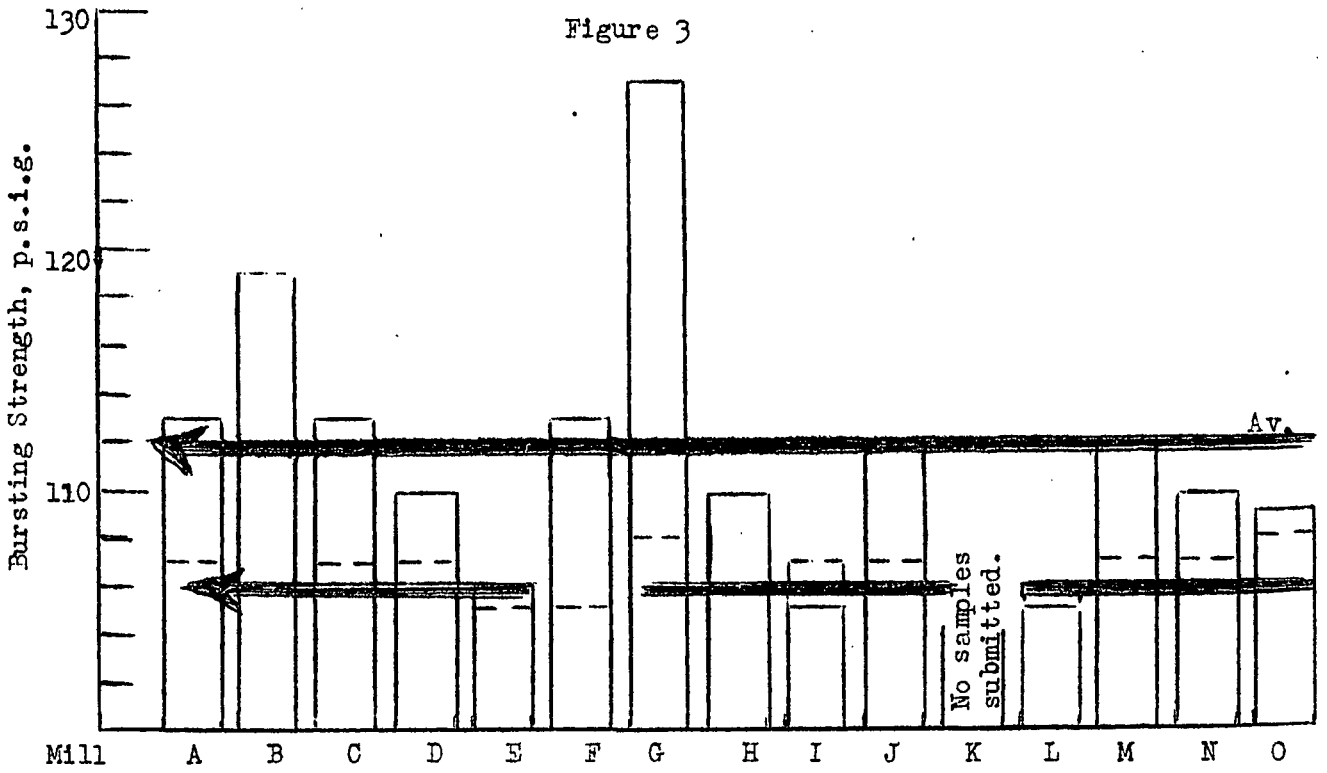


COMPARISON OF BASIS WEIGHT RESULTS
 (Period September 1 - September 30)

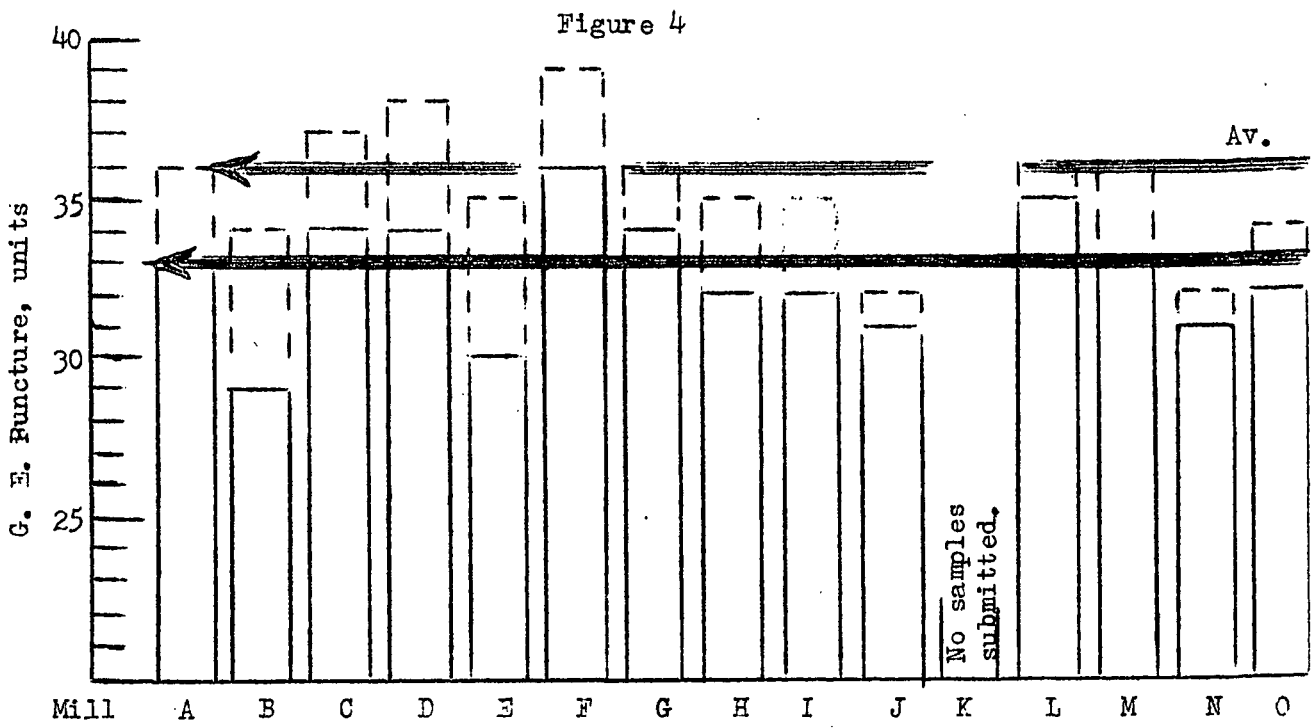


COMPARISON OF CALIPER RESULTS
 (Period September 1 - September 30)

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



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



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

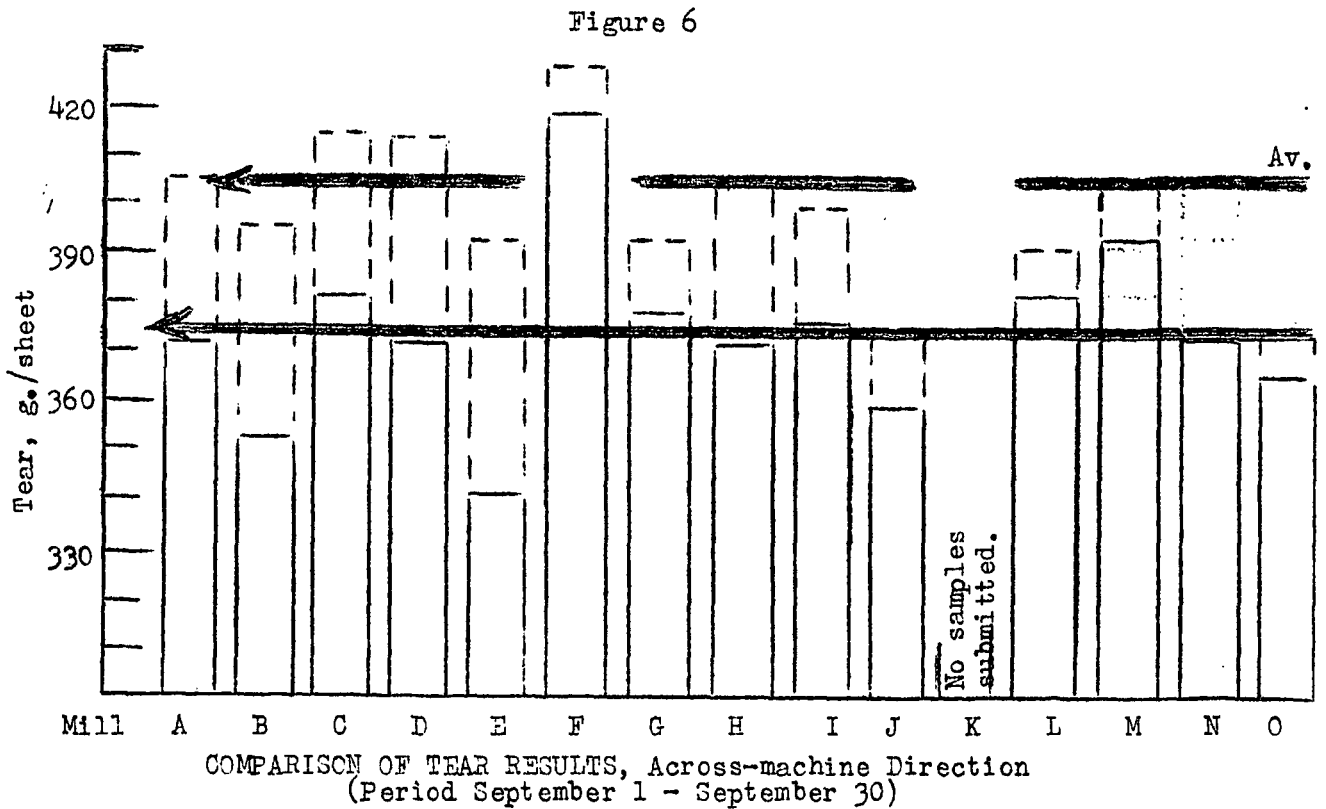
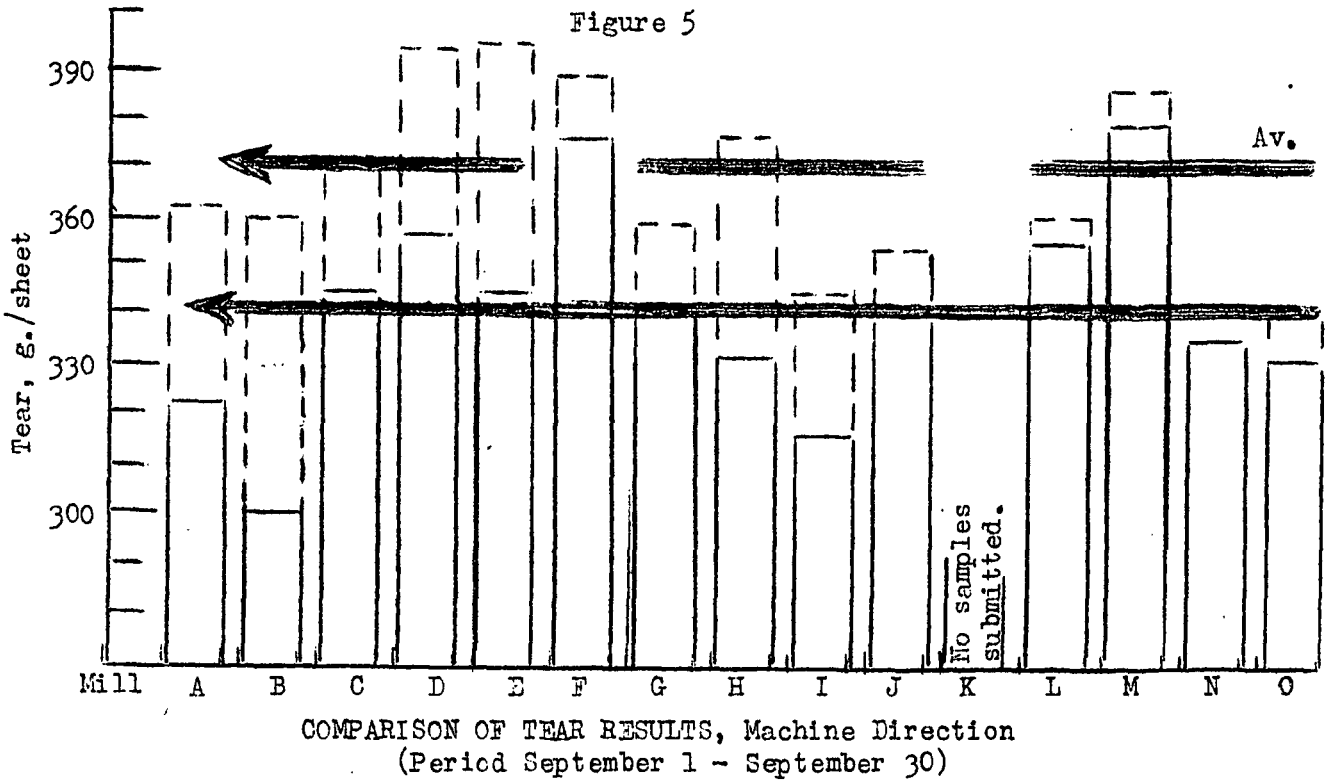


TABLE III

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 30, 1953

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			Elmendorf Tear, g./sheet					
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	In		Across		Av.	
<u>Mill A--42-lb. Linerboard</u>																							
155241	A-476	WFLS	9/ 3/53	8/23/53	2	44.2	42.2	43.1	13.0	12.2	12.5	125	86	107	34	30	32	360	288	317a	384	336	367 ^a
155266	A-477	WFLS	9/ 8/53	8/30/53	1	43.6	42.2	42.9	12.9	12.0	12.4	122	94	111	38	33	35	384	280	333	400	344	373 ^a
155366	A-478	WFLS	9/14/53	8/31/53	2	43.6	41.4	42.9	13.3	12.8	13.0	135	80	110	37	30	33	352	256	312	408	336	369 ^a
155367	A-479	WFLS	9/14/53	9/ 2/53	1	43.6	42.0	42.7	12.8	12.0	12.3	136	87	113	35	32	33	400	256	330	448	320	384 ^a
155594	A-480	WFLS	9/18/53	9/10/53	2	43.4	42.4	42.9	13.0	12.2	12.6	133	88	107	38	32	34	368	280	308a	384	320	353a
155595	A-481	WFLS	9/18/53	9/12/53	2	44.0	42.4	43.2	13.0	12.1	12.6	146	94	119	38	32	35	384	280	333a	448	344	385a
155647	A-482	WFLS	9/23/53	9/14/53	2	44.0	42.2	42.7	13.1	12.0	12.4	139	93	115	33	29	31	408	272	317a	384	320	365a
155648	A-483	WFLS	9/23/53	9/14/53	2	44.0	41.4	43.4	13.1	12.1	12.7	135	94	119	35	31	33	384	280	327 ^a	416	344	383a
Current Mill Average:						43.0			12.6			113			33			322			372		
Cumulative Mill Average:						42.9			13.5			107			36			362			405		
Mill Factor, %:						100.2			93.3			105.6			91.7			89.0			91.9		
Mill Index, %:						99.8			90.6			106.6			91.7			86.8			92.1		

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

TABLE IV

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 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			Elmendorf Tear, g./sheet								
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	In		Across						
<u>Mill B--42-lb. Linerboard</u>																										
155290	B-855	WFLS	9/ 9/53	8/26/53	1	44.4	42.2	43.8	13.5	12.4	12.9	141	106	124	31	27	29	376	280	308a	432	328	373a			
155291	B-856	WFLS	9/ 9/53	8/26/53	1	44.2	41.8	43.4	13.2	12.3	12.9	139	97	121	32	28	30	328	240	297	400	344	365a			
155292	B-857	WFLS	9/ 9/53	8/26/53	1	44.6	43.0	43.8	13.2	12.3	12.9	139	96	118	32	28	30	344	256	295a	400	320	358a			
155293	B-858	WFLS	9/ 9/53	8/26/53	1	44.2	42.4	43.6	13.2	12.2	12.9	138	92	117	33	29	32	368	304	328	384	328	361a			
155294	B-859	WFLS	9/ 9/53	8/26/53	1	45.0	42.6	44.0	13.3	12.4	12.9	133	94	117	34	28	31	336	280	309	448	360	389a			
155295	B-860	WFLS	9/ 9/53	8/26/53	1	44.6	42.2	43.7	13.3	12.4	12.9	130	88	116	34	29	32	336	272	312	400	336	359a			
155296	B-861	WFLS	9/ 9/53	8/26/53	1	44.2	42.0	43.4	13.3	12.3	12.8	132	101	118	33	27	30	376	280	330a	400	344	364a			
155297	B-862	WFLS	9/ 9/53	8/26/53	1	44.8	42.4	43.7	13.6	12.1	12.9	131	92	118	33	28	30	384	240	331a	400	336	369a			
155600	B-863	WFLS	9/18/53	9/ 3/53	1	42.6	40.6	41.7	13.3	12.2	12.6	135	100	118	30	24	27	312	272	292a	376	312	337a			
155601	B-864	WFLS	9/18/53	9/ 3/53	1	42.2	40.4	41.8	12.9	12.1	12.5	135	89	118	30	26	28	320	240	283	376	304	337a			
155602	B-865	WFLS	9/18/53	9/ 3/53	1	42.4	40.4	41.6	13.0	12.0	12.5	140	100	116	29	26	27	320	232	274	392	320	335a			
155603	B-866	WFLS	9/18/53	9/ 3/53	1	43.2	41.4	41.9	13.3	12.2	12.6	131	85	119	29	24	27	336	240	279a	384	304	343a			
155604	B-867	WFLS	9/18/53	9/ 3/53	1	43.4	40.0	42.1	13.0	12.1	12.5	134	109	121	30	26	28	304	256	281	360	304	329a			
155605	B-868	WFLS	9/18/53	9/ 3/53	1	42.0	40.0	41.4	12.8	12.0	12.5	137	103	121	27	24	26	328	256	283	376	304	339a			
155606	B-869	WFLS	9/18/53	9/ 3/53	1	42.4	40.4	41.4	13.0	11.9	12.6	128	100	116	30	25	27	320	272	294a	368	304	340a			
155607	B-870	WFLS	9/18/53	9/ 3/53	1	42.0	40.4	41.5	13.0	12.0	12.6	133	102	119	30	26	28	336	264	292a	384	320	347e			
155640	B-871	WFLS	9/22/53	9/15/53	1	44.0	42.0	42.9	13.2	11.9	12.5	136	102	118	32	26	29	368	256	293	384	320	349a			
155641	B-872	WFLS	9/22/53	9/15/53	1	44.4	41.8	42.9	13.2	12.0	12.6	139	107	121	32	26	29	352	256	308a	384	328	351a			
155642	B-873	WFLS	9/22/53	9/15/53	1	44.4	42.2	43.5	13.3	11.1	12.6	135	109	120	32	28	30	336	264	296	376	328	359a			
155643	B-874	WFLS	9/22/53	9/15/53	1	44.6	42.4	43.4	13.8	12.0	12.6	144	102	121	32	26	29	336	256	305	400	336	363a			
Current Mill Average:						42.8			12.7			119			29			300						353		
Cumulative Mill Average:						43.5			14.0			106			34			360						395		
Mill Factor, %:						98.4			90.7			112.3			85.3			83.3						89.4		
Mill Index, %:						99.3			91.4			112.3			80.6			80.9						87.4		

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

TABLE V

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 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			Elmendorf Tear, g./sheet					
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
<u>Mill C--42-lb. Linerboard</u>																							
155360	C-499	W.F.	9/14/53	9/ 1/53	1	44.4	42.2	43.5	14.3	12.8	13.5	136	62	109	38	33	36	416	328	368a	432	352	382a
155361	C-500	W.F.	9/14/53	9/ 1/53	1	44.8	42.8	43.6	14.3	12.2	13.5	130	86	109	39	32	36	384	336	357a	448	368	400a
155362	C-501	W.F.	9/14/53	9/ 2/53	1	43.6	41.4	42.3	14.1	12.3	13.2	129	89	114	35	32	33	392	288	334a	400	344	373a
155363	C-502	W.F.	9/14/53	9/ 2/53	1	43.8	41.6	42.3	14.0	12.4	13.0	130	93	113	37	31	34	384	296	333a	400	344	372a
155364	C-503	W.F.	9/14/53	9/ 3/53	1 ^a	44.0	42.0	43.1	14.0	12.7	13.4	137	103	117	38	32	35	416	320	353a	416	352	392a
155365	C-504	W.F.	9/14/53	9/ 3/53	1	44.0	42.0	43.2	14.0	13.0	13.5	142	86	116	37	32	35	448	304	366	440	360	399a
155618	C-505	W.F.	9/19/53	9/10/53	1	41.8	40.2	40.9	13.8	12.5	12.9	131	97	115	33	30	31	376	288	323	400	328	365a
155619	C-506	W.F.	9/19/53	9/10/53	1	41.6	40.2	40.9	13.5	12.6	13.1	131	96	112	33	30	31	360	272	318	408	352	373a
Current Mill Average:						42.5			13.3			113			34			344			382		
Cumulative Mill Average:						42.9			13.9			107			37			369			415		
Mill Factor, %:						99.1			95.7			105.6			91.9			93.2			92.0		
Mill Index, %:						98.6			95.7			106.6			94.4			92.7			94.6		

^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--SEPTEMBER 1 THROUGH SEPTEMBER 30, 1953 (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			Elmendorf Tear, g./sheet								
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	In		Across		Av.				
<u>Mill D--42-1b. Linerboard</u>																										
155249	D-687	W.F.	9/ 4/53	9/ 1/53	4	43.8	41.8	42.8	12.9	11.7	12.1	141	96	116	36	32	34	384	312	347 ^a	408	336	380a			
155250	D-688	W.F.	9/ 4/53	9/ 2/53	4	43.6	40.4	41.8	12.6	11.9	12.2	125	80	112	36	30	33	480	312	344a	363	336	382a			
155298	D-689	W.F.	9/ 9/53	9/ 4/53	4	43.2	41.8	42.6	13.2	12.0	12.4	122	85	106	40	32	35	400	312	362a	424	336	371a			
155357	D-690	W.F.	9/14/53	9/ 6/53	4	44.0	42.0	42.8	12.8	12.0	12.2	127	88	109	37	32	34	408	312	359a	432	320	379a			
155590	D-691	W.F.	9/17/53	9/11/53	4	44.0	41.8	43.2	12.8	11.5	12.2	121	71	103	37	32	34	368	288	327a	424	296	353a			
155388	D-692	W.F.	9/15/53	9/12/53	4	44.0	41.6	43.0	12.8	12.0	12.3	138	89	110	37	32	34	368	320	341a	400	304	359a			
155591	D-693	W.F.	9/18/53	9/13/53	4	43.8	41.2	42.6	12.9	12.0	12.3	125	90	112	35	30	32	432	296	355a	384	320	357a			
155592	D-694	W.F. ^b	9/18/53	9/14/53	4	44.8	43.0	44.2	13.0	12.0	12.4	136	89	116	38	33	36	376	320	351a	440	368	401a			
155657	D-695	W.F.	9/24/53	9/17/53	4	44.4	42.0	43.4	12.9	12.0	12.4	135	87	109	38	30	34	432	320	372a	464	352	383a			
155658	D-696	W.F.	9/24/53	9/18/53	4	44.4	43.0	43.7	13.1	12.1	12.7	132	69	104	37	33	35	464	344	385a	448	312	383a			
155659	D-697	W.F.	9/24/53	9/20/53	4	44.4	42.2	43.6	13.0	12.0	12.5	131	81	112	34	29	32	432	344	379a	384	304	350a			
Current Mill Average:									43.1			12.3			110			34			357			372		
Cumulative Mill Average:									43.3			14.1			107			38			394			414		
Mill Factor, %:									99.5			87.2			102.8			89.5			90.6			89.9		
Mill Index, %:									100.0			88.5			103.8			94.4			96.2			92.1		

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

^b This identification appeared on the sample received by the Institute. The mill data sheet refers to the finish as "W.F."

TABLE VII

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 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			Elmendorf Tear, g./sheet								
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.						
<u>Mill E--42-lb. Linerboard</u>																										
155248	E-28	W.F.	9/ 4/53	8/31/53	2	44.0	42.0	43.1	13.5	12.0	12.8	129	86	114	32	25	28	368	288	317a	416	272	336a			
155301	E-29	W.F.	9/10/53	8/ 3/53	2	42.4	40.6	41.6	13.9	12.8	13.3	121	84	104	34	26	30	400	320	358a	368	288	335a			
155593	E-31	W.F.	9/18/53	9/14/53	2	42.8	40.6	41.8	14.3	12.9	13.7	118	82	100	36	28	32	408	304	357	384	336	355a			
Current Mill Average:									42.2			13.3			106			30			344			342		
Cumulative Mill Average:									43.1			14.1			105			35			395			393		
Mill Factor, %:									97.9			94.3			101.0			85.7			87.1			87.0		
Mill Index, %:									97.9			95.7			100.0			83.3			92.7			84.7		

TABLE VIII

<u>Mill F--42-lb. Linerboard</u>																										
155368	F-47	W.F.	9/14/53	8/13/53	--	43.6	41.0	42.1	14.1	13.0	13.4	132	90	111	42	36	38	416	320	372a	472	384	434a			
155369	F-48	W.F.	9/14/53	8/19/53	--	44.0	42.0	42.8	14.7	13.0	13.6	137	92	112	44	38	42	456	352	397a	496	400	453a			
155370	F-49	W.F.	9/14/53	8/20/53	--	44.4	40.8	42.5	13.4	12.3	12.9	133	94	115	41	36	38	432	352	393a	504	400	449a			
155371	F-50	W.F.	9/14/53	8/28/53	--	43.6	41.6	42.6	13.3	12.2	12.8	135	101	116	39	33	37	424	344	387a	504	352	421a			
155372	F-51	W.F.	9/14/53	8/28/53	--	44.0	41.6	42.6	13.9	12.7	13.3	137	99	114	39	34	36	440	320	376	464	384	413a			
155373	F-52	W.F.	9/14/53	9/ 2/53	--	43.4	41.2	42.0	13.4	11.8	12.9	123	92	107	39	33	36	440	360	401	496	360	436a			
155670	F-53	W.F.	9/25/53	9/ 3/53	--	41.8	39.8	40.5	13.3	11.2	12.4	128	77	108	37	30	32	400	320	349a	424	352	381a			
155671	F-54	W.F.	9/25/53	9/ 5/53	--	43.4	41.2	42.0	13.8	11.6	13.1	130	96	116	36	30	33	384	288	356a	432	328	402a			
155672	F-56	W.F.	9/25/53	9/10/53	--	43.0	41.6	42.2	13.6	12.8	13.1	130	92	112	34	30	32	400	328	366	448	352	387a			
Current Mill Average:									42.2			13.1			113			36			377			419		
Cumulative Mill Average:									43.2			14.1			105			39			389			427		
Mill Factor, %:									97.7			92.9			107.6			92.3			96.9			98.1		
Mill Index, %:									97.9			94.2			106.6			100.0			101.6			103.7		

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

TABLE IX

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 30, 1953 (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			Elmendorf Tear, g./sheet								
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.			
<u>Mill G--42-lb. Linerboard</u>																										
155233	G-520	W.F.	9/ 1/53	8/26/53	--	45.2	43.2	44.3	13.3	12.4	12.9	144	100	119	38	31	34	392	304	353a	480	344	383a			
155234	G-521	W.F.	9/ 1/53	8/26/53	--	46.0	44.0	44.9	13.3	12.9	13.1	151	91	129	36	29	33	368	288	320a	432	352	381a			
155267	G-522	W.F.	9/ 8/53	9/ 2/53	--	47.8	45.6	46.9	13.3	12.1	12.8	151	125	138	37	33	35	376	304	347a	432	352	386a			
155268	G-523	W.F.	9/ 8/53	9/ 2/53	--	46.8	41.8	44.1	13.9	12.3	13.2	131	101	115	36	31	33	368	312	333a	316	336	377a			
155616	G-524	W.F.	9/19/53	9/11/53	--	45.0	43.0	44.0	12.8	12.0	12.3	147	112	127	36	31	34	400	304	333a	416	352	385a			
155617	G-525	W.F.	9/19/53	9/11/53	--	44.2	42.8	43.6	13.0	12.0	12.4	144	90	124	38	32	34	384	320	344a	432	336	385a			
155655	G-526	W.F.	9/24/53	9/16/53	--	46.0	44.4	45.1	12.5	11.4	11.9	141	108	129	36	32	34	400	336	365a	400	320	355a			
155656	G-527	W.F.	9/24/53	9/16/53	--	46.0	44.4	45.4	12.8	12.0	12.1	149	117	136	36	31	33	368	304	342a	432	336	368a			
Current Mill Average:									44.8			12.6			127			34			342			378		
Cumulative Mill Average:									43.1			13.8			108			36			359			393		
Mill Factor, %:									103.9			91.3			117.6			94.4			95.3			96.2		
Mill Index, %:									103.9			90.6			119.8			94.4			92.2			93.6		

TABLE X

Mill H--42-lb. Linerboard

155220	H-413	WFLS	9/ 1/53	8/17/53	2	42.8	41.2	42.0	12.4	11.2	11.9	132	84	108	33	28	30	344	280	310	392	320	355a			
155221	H-414	WFLS	9/ 1/53	8/18/53	2	42.8	41.6	42.1	12.7	12.0	12.2	131	84	107	35	29	32	368	280	325	440	312	375a			
155596	H-415	WFLS	9/18/53	9/ 8/53	2	43.2	41.8	42.6	13.0	12.0	12.4	142	76	107	36	31	33	384	272	320a	408	312	375a			
155597	H-416	WFLS	9/18/53	9/ 9/53	2	44.6	42.0	42.8	12.9	11.9	12.6	137	81	108	35	29	33	432	328	371	464	352	391a			
155652	H-417	WFLS	9/24/53	9/13/53	2	44.2	43.0	43.8	12.7	11.8	12.2	136	92	115	34	28	31	424	280	347	456	320	381a			
155653	H-418	WFLS	9/24/53	9/14/53	2	43.6	41.8	42.4	12.5	11.8	12.1	152	85	116	34	26	30	384	240	322a	400	320	353a			
Current Mill Average:									42.6			12.2			110			32			332			372		
Cumulative Mill Average:									43.0			13.6			106			35			376			405		
Mill Factor, %:									99.1			89.7			103.8			91.4			88.3			91.9		
Mill Index, %:									98.8			87.8			103.8			88.9			89.5			92.1		

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

TABLE XI

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 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			Elmendorf Tear, g./sheet								
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.						
<u>Mill I--42-lb. Linerboard</u>																										
155389	I-327	WF1S	9/15/53	9/ 8/53	1	43.2	42.0	42.4	13.4	12.8	13.0	118	92	105	34	30	32	384	288	325a	392	336	366a			
155390	I-328	WF1S	9/15/53	9/ 9/53	1	43.2	42.0	42.6	13.2	12.2	13.0	118	94	106	33	30	32	360	272	307	432	352	387a			
Current Mill Average:									42.5			13.0			105			32			316			376		
Cumulative Mill Average:									42.9			13.4			107			33			344			399		
Mill Factor, %:									99.1			97.0			98.1			97.0			91.9			94.2		
Mill Index, %:									98.6			93.5			99.1			88.9			85.2			93.1		

TABLE XII

Mill J--42-lb. Linerboard

155222	J-445	B.F.	9/ 1/53	8/20/53		45.0	42.4	43.3	13.4	12.1	13.0	126	84	112	31	28	30	368	280	328a	400	304	349a			
155223	J-446	B.F.	9/ 1/53	8/20/53		44.4	42.2	42.9	13.8	13.0	13.3	133	90	115	33	29	31	408	272	320a	384	336	354a			
155354	J-447	B.F.	9/12/53	9/ 1/53		43.8	42.4	43.2	13.8	13.0	13.4	128	95	109	35	29	32	448	312	353a	416	352	376a			
155355	J-448	B.F.	9/12/53	9/ 1/53		44.0	42.8	43.6	13.8	13.0	13.3	133	88	111	36	30	32	384	320	358a	400	328	356a			
Current Mill Average:									43.3			13.3			112			31			340			359		
Cumulative Mill Average:									42.8			13.8			107			32			353			375		
Mill Factor, %:									101.2			96.4			104.7			96.9			96.3			95.7		
Mill Index, %:									100.5			95.7			105.7			86.1			91.6			88.9		

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--SEPTEMBER 1 THROUGH SEPTEMBER 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			Elmendorf Tear, g./sheet			Av.		
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.		In	Across
<u>Mill L--42-lb. Linerboard</u>																							
155269	L-205		9/ 8/53	8/16/53	1	44.2	42.0	43.0	14.7	13.0	13.8	125	82	103	39	33	37	400	312	357a	432	352	389a
155270	L-206		9/ 8/53	8/20/53	1	43.8	42.0	42.7	14.3	12.8	13.5	123	84	104	37	32	34	392	312	348a	408	352	377a
155262	L-207		9/ 8/53	8/25/53	1	44.0	42.0	43.0	13.4	11.3	12.4	126	91	109	32	28	30	416	288	338a	400	320	352a
155263	L-208		9/ 8/53	8/30/53	1	44.2	42.2	43.2	13.9	12.6	13.2	126	87	107	38	32	35	384	320	348a	432	368	398a
155393	L-209		9/16/53	9/ 1/53	1	44.0	41.8	42.8	14.9	13.5	14.2	123	88	104	39	32	36	416	320	366a	432	328	384a
155394	L-210		9/16/53	9/2/53	1	45.6	42.6	44.3	14.7	13.4	14.1	128	90	103	40	34	37	416	328	364a	440	336	394a
155667	L-211		9/25/53	9/10/53	1	45.4	42.8	44.3	14.5	13.0	13.8	119	82	105	38	32	36	400	320	364a	408	328	373a
155668	L-212		9/25/53	9/11/53	1	45.0	43.4	44.1	14.8	13.2	13.9	130	74	105	40	32	36	400	320	354a	408	360	386a
Current Mill Average:						43.4			13.6			105			35			355			382		
Cumulative Mill Average:						43.0			13.6			106			36			360			391		
Mill Factor, %:						100.9			100.0			99.1			97.2			98.6			97.7		
Mill Index, %:						100.7			97.8			99.1			97.2			95.7			94.6		

TABLE XV

Mill M--42-lb. Linerboard

155242	M-192	W.	9/ 3/53	8/24/53	2	44.4	41.8	43.3	14.2	13.1	13.6	134	100	116	36	30	32	400	320	354	448	360	407a
155243	M-193	W.	9/ 3/53	8/27/53	4	43.8	41.6	42.7	13.7	12.2	13.0	125	94	109	34	30	32	432	368	402a	432	336	379a
155387	M-194	W.	9/15/53	9/ 1/53	2	44.2	40.2	42.3	13.7	12.3	13.0	124	81	111	38	31	36	448	320	380a	448	344	393a
Current Mill Average:						42.8			13.2			112			33			379			393		
Cumulative Mill Average:						42.9			13.7			107			36			387			405		
Mill Factor, %:						99.8			96.4			104.7			91.7			97.9			97.0		
Mill Index, %:						99.3			95.0			105.7			91.7			102.2			97.3		

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

TABLE XVI

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 30, 1953 (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			Elmendorf Tear, g./sheet								
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.			
<u>Mill N--42-lb. Linerboard</u>																										
155219	N-18	WFLS	9/ 1/53	8/16/53	1	44.0	42.0	43.0	12.5	11.5	12.1	139	93	113	38	32	35	424	312	348a	448	352	397a			
155224	N-19	----	9/1/53	8/24/53	1	43.0	42.0	42.4	12.1	11.5	11.9	127	96	113	32	28	30	384	272	325a	400	328	351a			
155225	N-20	WFLS	9/ 1/53	8/26/53	1	43.8	41.4	42.0	12.5	11.4	12.0	131	98	118	30	26	28	368	288	321	424	320	370a			
155240	N-21	WFLS	9/ 3/53	8/27/53	1	44.0	40.2	42.0	13.1	12.0	12.5	112	88	100	34	29	32	400	328	358a	432	344	380a			
155264	N-22	WFLS	9/8/53	8/31/53	1	43.8	41.8	42.5	13.1	12.0	12.5	128	89	109	32	27	30	456	312	368a	480	352	387a			
155598	N-23	WFLS	9/18/53	9/12/53	1	43.6	41.0	41.8	12.0	11.4	11.8	129	86	109	35	31	33	368	272	319	408	352	374a			
155599	N-24	W.F.	9/18/53	9/ 9/53	1	44.0	42.8	43.4	12.9	12.0	12.3	127	96	111	35	29	31	368	272	317a	400	320	362a			
155669	N-25	----	9/25/53	9/18/53	1	42.4	41.0	41.8	12.6	11.4	12.0	123	91	108	30	26	29	368	272	323	384	336	357a			
Current Mill Average:									42.4			12.1			110			31			335			372		
Cumulative Mill Average:									42.4			12.2			107			32			335			372		
Mill Factor, %:									100.0			99.2			102.8			96.9			100.0			100.0		
Mill Index, %:									98.4			87.1			103.8			86.1			90.3			92.1		

TABLE XVII

<u>Mill O--42-lb. Linerboard</u>																										
155265	O-7	W.F.	9/ 8/53	8/31/53	3	42.0	39.8	40.7	13.0	11.9	12.2	123	95	109	35	29	32	384	272	331a	384	328	365a			
Current Mill Average:									40.7			12.2			109			32			331			365		
Cumulative Mill Average:									41.9			12.1			108			34			340			373		
Mill Factor, %:									97.1			100.8			100.9			94.1			97.4			97.9		
Mill Index, %:									94.4			87.8			102.8			88.9			89.2			90.3		

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

TABLE XVIII

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 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			Elmendorf Tear, g./sheet					
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
<u>Mill E--44/46-lb. Linerboard</u>																							
155356	E-30	W.F.	9/12/53	9/ 8/53	2	47.4	45.8	46.3	14.9	13.3	14.1	113	82	98	44	36	41	416	320	382a	456	384	422a
155646	E-400 ^b	W.F.	9/23/53	9/17/53	1	48.6	46.4	47.5	15.0	13.2	14.1	95	71	84	41	33	37	480	344	421a	400	320	367a
Current Mill Average:						46.9			14.1			91			39			402			395		
Cumulative Mill Average:						47.1			14.4			101			40			438			418		
Mill Factor, %:						99.6			97.9			90.1			97.5			91.8			94.5		
<u>Mill E--69-lb. Linerboard</u>																							
155654	E-32	W.F.	9/24/53	9/22/53	2	69.0	66.2	67.3	20.9	20.0	20.3	177	125	149	69	60	63	688	496	610a	656	544	609a

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

^b This sample was identified as 47-lb. Linerboard.

As a supplementary part of the Continuous Baseline Study, comparisons of the mill test results with those obtained at The Institute of Paper Chemistry on corresponding samples have been included in this report. As may be noted in Table 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		48-69	78-88	--
B	27-75	85-90	0.5	50	70	48-192
C		None		50	73	96-168
D	31-32	77-78	8	50-51	71-73	16
E		None		45-59	80-98	--
F		None		51-58	70-75	48-168
G		None		50	73	24-60
H		None		50	73	24
I		None		50	82	--
J		None		50	73	0.5
K		No samples submitted.				
L		None		61-77	80-86	--
M		None		48-60	70-78	--
N		None		44-50	73-76	24
O		None		50	73	2
E*		None		50-57	80-86	--

* Drum linerboard.

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

Tables XX to XXXVII, the Institute's test values have been used as the reference line.

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

It may be noted in Table XXI that the maximum variation between the average basis weight results of the Institute and those of a given mill on corresponding samples is two per cent for the current period. This 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, E, F, G, H, J, and O are higher than those for the Institute, whereas the results for Mills A, B, I, and N are lower and the results for Mills D, L, and M are the same. In general, the agreement in basis weight is very good.

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 J, N, and O are higher while the average results for Mills B, C, E, F, G, L, and M are lower and the results

for Mills A, D, H, and I are the same. The accord between Institute and mill caliper values is good with the exception of Mill E and M.

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

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

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

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

average results for Mills E and G are lower. The maximum variation for the current period is fifteen per cent. The differences for Mills D, I, J, M, and N appear to be excessive.

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

	Mills*													
	A	B	C	D	E	F	G	H	I	J	L	M	N	O
No. Samples Compared	8	20	8	11	3	9	8	6	2	4	8	3	8	1
	<u>Basis Weight</u>													
Institute	43.0	42.8	42.5	43.1	42.2	42.2	44.8	42.6	42.5	43.3	43.4	42.8	42.4	40.7
Mill	42.8	42.4	43.1	43.1	42.7	42.3	44.9	42.9	42.4	44.0	43.4	42.8	42.3	41.4
Av. Diff.**	-0.2	-0.4	+0.6	0.0	+0.5	+0.1	+0.1	+0.3	-0.1	+0.7	0.0	0.0	-0.1	+0.7
Max. Diff.***	-0.6	-1.0	+0.8	-1.2	+1.2	+0.9	+0.5	-1.3	-0.3	+1.0	-0.9	+0.6	+0.7	+0.7
	<u>Caliper</u>													
Institute	12.6	12.7	13.3	12.3	13.3	13.1	12.6	12.2	13.0	13.3	13.6	13.2	12.1	12.2
Mill	12.6	12.6	13.2	12.3	12.7	12.9	12.5	12.2	13.0	13.5	13.3	12.5	12.3	12.4
Av. Diff.**	0.0	-0.1	-0.1	0.0	-0.6	-0.2	-0.1	0.0	0.0	+0.2	-0.3	-0.7	+0.2	+0.2
Max. Diff.***	+0.1	-0.2	-0.2	-0.3	-1.4	-0.4	-0.2	-0.5	-0.1	+0.3	-0.8	-0.8	+3.4	+0.2
	<u>Bursting Strength</u>													
Institute	113	119	113	110	106	113	127	110	105	112	105	112	110	109
Mill	115	120	109	105	101	107	122	108	108	112	104	116	103	102
Av. Diff.**	+2	+1	-4	-5	-5	-6	-5	-2	+3	0	-1	+4	-7	-7
Max. Diff.***	+6	+9	-7	-9	-10	-12	-10	-6	+3	-5	-4	+5	-11	-7
	<u>G. E. Puncture</u>													
Institute	33	29	34	34	30	36	34	32	32	31	35	33	31	32
Mill	35	28	34	--	30	38	32	32	33	35	--	33	--	--
Av. Diff.**	+2	-1	0	--	0	+2	-2	0	+1	+4	--	0	--	--
Max. Diff.***	+4	-3	+2	--	-4	+5	-3	+2	+1	+4	--	-1	--	--

(Continued on next page.)

TABLE XX (Cont.)

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

No. Samples Compared	Mills*													
	A	B	C	D	E	F	G	H	I	J	L	M	N	O
	8	20	8	11	3	9	8	6	2	4	8	3	8	1
	<u>Tearing Strength, in</u>													
Institute	322	300	344	357	344	377	342	332	316	340	355	379	335	331
Mill	320	282	339	376	311	394	339	326	352	332	370	426	338	311
Av. Diff.**	-2	-18	-5	+19	-33	+17	-3	-6	+36	-8	+15	+47	+3	-20
Max. Diff.***	-18	-32	-22	+49	-87	+50	-32	-29	+48	-21	+63	+57	-29	-20
	<u>Tearing Strength, across</u>													
Institute	372	353	382	372	342	419	378	372	376	359	382	393	372	365
Mill	375	357	409	413	315	449	362	376	433	408	410	435	418	376
Av. Diff.**	+3	+4	+27	+41	-27	+30	-16	+4	+57	+49	+28	+42	+46	+11
Max. Diff.***	+13	+18	+50	+56	-83	+67	-39	-28	+63	+58	+88	+66	+65	+11

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

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

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

TABLE XXI

COMPARISON OF INSTITUTE-MILL DIFFERENCES BY PERIODS

	Basis Weight	Caliper	Average Difference, per cent			
			Bursting Strength	G. E. Puncture	Tearing in	Strength across
Mill A						
Current period	-0.5	0	+2	+6	-0.6	+0.8
74th period	-0.7	+2	0	+3	+1	-1
73rd period	-1	-0.8	+2	+3	-0.9	-0.8
Mill B						
Current period	-0.9	-0.8	+0.8	-3	-6	+1
74th period	-2	+0.8	+2	-7	-5	+0.3
73rd period	-1	-0.8	0	-4	-4	+2
Mill C						
Current period	+1	-0.8	-4	0	-1	+7
74th period	-0.7	-2	-3	-3	-1	+6
73rd period	+0.5	-4	+3	0	+4	+12
Mill D						
Current period	0	0	-5	--	+5	+11
74th period	0	-0.8	-2	--	+1	+6
73rd period	+0.9	0	-2	--	-0.8	+3
Mill E						
Current period	+1	-5	-5	0	-10	-8
74th period	+2	-2	-6	+7	+0.6	-6
73rd period	+0.2	-6	-10	+3	-7	-6
Mill F						
Current period	+0.2	-2	-5	+6	+5	+7
74th period	-2	-3	-7	+8	-2	+0.7
73rd period	-0.9	-0.8	+2	+11	-2	+4
Mill G						
Current period	+0.2	-0.8	-4	-6	-0.9	-4
74th period	-2	-0.8	-2	-6	+3	+1
73rd period	0	0	-4	0	+3	+5
Mill H						
Current period	+0.7	0	-2	0	-2	+1
74th period	+0.7	0	-3	+3	-4	-4
73rd period	+2	+2	-4	0	-8	-3
Mill I						
Current period	-0.2	0	+3	+3	+11	+15
74th period	-2	-0.8	-4	+9	+12	+10
73rd period	-1	-1	-2	-3	+10	+11
Mill J						
Current period	+2	+2	0	+13	-2	+14
74th period	+2	0	-0.9	+10	-4	+5
73rd period	+1	+2	-2	+3	+0.3	+8
Mill L						
Current period	0	-2	-1	--	+4	+7
74th period	-1	-2	+0.9	--	+11	+14
73rd period	-0.9	-4	+4	--	+4	+6
Mill M						
Current period	0	-5	+4	0	+12	+11
74th period	-1	-7	+4	-6	+7	+10
73rd period	-0.7	-7	+2	-6	+5	+7
Mill N						
Current period	-0.2	+2	-6	--	+0.9	+12
74th period	-0.5	-2	-5	--	-2	+12
73rd period	-0.5	-5	-1	--	-7	+6
Mill O						
Current period	+2	+2	-6	--	-6	+3
74th period	+0.2	+2	-0.9	--	-1	+6
73rd period	+1	+2	+2	--	-7	+1

TABLE XXII

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 30, 1953

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			Elmendorf Tear, g./sheet					
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
<u>Mill A--42-lb. Linerboard</u>																						
155241	A-476	WFLS	8/23/53	2	43.1	42.9	-0.2	12.5	12.6	+0.1	107	113	+ 6	32	34	+ 2	317a	318	+ 1	367a	366	- 1
155266	A-477	WFLS	8/30/53	1	42.9	42.7	-0.2	12.4	12.4	0.0	111	116	+ 5	35	34	- 1	333	331	- 2	373a	363	-10
155366	A-478	WFLS	8/31/53	2	42.9	42.6	-0.3	13.0	13.0	0.0	110	114	+ 4	33	34	+ 1	312	321	+ 9	369a	379	+10
155367	A-479	WFLS	9/ 2/53	1	42.7	42.7	0.0	12.3	12.4	+0.1	113	113	0	33	34	+ 1	330	312	-18	384a	372	-12
155594	A-480	WFLS	9/10/53	2	42.9	42.5	-0.4	12.6	12.6	0.0	107	113	+ 6	34	35	+ 1	308a	305	- 3	353a	361	+ 8
155595	A-481	WFLS	9/12/53	2	43.2	43.1	-0.1	12.6	12.6	0.0	119	120	+ 1	35	37	+ 2	333a	325	- 8	385a	388	+ 3
155647	A-482	WFLS	9/14/53	2	42.7	42.8	+0.1	12.4	12.4	0.0	115	116	+ 1	31	35	+ 4	317a	311	- 6	365a	374	+ 9
155648	A-483	WFLS	9/14/53	2	43.4	42.8	-0.6	12.7	12.8	+0.1	119	113	- 6	33	35	+ 2	327a	340	+13	383a	396	+13
Current Mill Average:					43.0	42.8	-0.2	12.6	12.6	0.0	113	115	+ 2	33	35	+ 2	322	320	- 2	372	375	+ 3

^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 XXIII

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 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			Elmendorf Tear, g./sheet					
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	In IPC	Mill	Diff.
<u>Mill B--42-lb. Linerboard</u>																						
155290	B-855	WF1S	8/26/53	1	43.8	43.2	-0.6	12.9	12.7	-0.2	124	127	+ 3	29	31	+ 2	308a	285	-23	373a	361	-12
155291	B-856	WF1S	8/26/53	1	43.4	43.3	-0.1	12.9	12.9	0.0	121	124	+ 3	30	31	+ 1	297	289	- 8	365a	364	- 1
155292	B-857	WF1S	8/26/53	1	43.8	43.2	-0.6	12.9	12.9	0.0	118	127	+ 9	30	31	+ 1	295a	283	-12	358a	358	0
155293	B-858	WF1S	8/26/53	1	43.6	43.0	-0.6	12.9	12.9	0.0	117	125	+ 8	32	31	- 1	328	299	-29	361a	373	+12
155294	B-859	WF1S	8/26/53	1	44.0	43.2	-0.8	12.9	12.7	-0.2	117	125	+ 8	31	29	- 2	309	301	- 8	389a	381	- 8
155295	B-860	WF1S	8/26/53	1	43.7	43.3	-0.4	12.9	12.9	0.0	116	121	+ 5	32	29	- 3	312	293	-19	359a	368	+ 9
155296	B-861	WF1S	8/26/53	1	43.4	43.1	-0.3	12.8	12.8	0.0	118	123	+ 5	30	29	- 1	330a	303	-27	364a	371	+ 7
155297	B-862	WF1S	8/26/53	1	43.7	43.3	-0.4	12.9	12.8	-0.1	118	122	+ 4	30	29	- 1	331a	300	-31	369a	379	+10
155600	B-863	WF1S	9/ 3/53	1	41.7	41.6	-0.1	12.6	12.5	-0.1	118	117	- 1	27	26	- 1	292a	260	-32	337a	337	0
155601	B-864	WF1S	9/ 3/53	1	41.8	41.6	-0.2	12.5	12.3	-0.2	118	116	- 2	28	26	- 2	283	268	-15	337a	341	+ 4
155602	B-865	WF1S	9/ 3/53	1	41.6	41.4	-0.2	12.5	12.4	-0.1	116	118	+ 2	27	26	- 1	274	273	- 1	335a	336	+ 1
155603	B-866	WF1S	9/ 3/53	1	41.9	41.6	-0.3	12.6	12.4	-0.2	119	118	- 1	27	26	- 1	279a	265	-14	343a	329	-14
155604	B-867	WF1S	9/ 3/53	1	42.1	41.8	-0.3	12.5	12.5	0.0	121	119	- 2	28	27	- 1	281	259	-22	329a	337	+ 8
155605	B-868	WF1S	9/ 3/53	1	41.4	41.4	0.0	12.5	12.5	0.0	121	118	- 3	26	26	0	283	267	-16	339a	338	- 1
155606	B-869	WF1S	9/ 3/53	1	41.4	41.7	+0.3	12.6	12.7	+0.1	116	117	+ 1	27	26	- 1	294a	284	-10	340z	355	+15
155607	B-870	WF1S	9/ 3/53	1	41.5	41.2	-0.3	12.6	12.6	0.0	119	117	- 2	28	26	- 2	292a	271	-21	347a	340	- 7
155640	B-871	WF1S	9/15/53	1	42.9	42.5	-0.4	12.5	12.5	0.0	118	118	0	29	30	+ 1	293	276	-17	349a	367	+18
155641	B-872	WF1S	9/15/53	1	42.9	42.5	-0.4	12.6	12.5	-0.1	121	117	- 4	29	30	+ 1	308a	291	-17	351a	363	+12
155642	B-873	WF1S	9/15/53	1	43.5	42.5	-1.0	12.6	12.5	-0.1	120	117	- 3	30	32	+2	296	283	-13	359a	360	+ 1
155643	B-874	WF1S	9/15/53	1	43.4	42.7	-0.7	12.6	12.6	0.0	121	118	- 3	29	31	+ 2	305	298	- 7	363a	372	+ 9
Current Mill Average:					42.8	42.4	-0.4	12.7	12.6	-0.1	119	120	+ 1	29	28	- 1	300	282	-18	353	357	+ 4

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

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

TABLE XXIV

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 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			Elmendorf Tear g./sheet					
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	In	Across	IPC
<u>Mill C--42-lb. Linerboard</u>																						
155360	C-499	W.F.	9/ 1/53	1	43.5	44.2	+0.7	13.5	13.6	+0.1	109	108	- 1	36	36	0	368a	346	-22	382a	416	+34
155361	C-500	W.F.	9/ 1/53	1	43.6	44.3	+0.7	13.5	13.6	+0.1	109	108	- 1	36	36	0	357a	368	+11	400a	440	+40
155362	C-501	W.F.	9/ 2/53	1	42.3	43.0	+0.7	13.2	13.1	-0.1	114	111	- 3	33	33	0	334a	329	- 5	373a	397	+24
155363	C-502	W.F.	9/ 2/53	1	42.3	42.9	+0.6	13.0	12.9	-0.1	113	111	- 2	34	34	0	333a	329	- 4	372a	392	+20
155364	C-503	W.F.	9/ 3/53	1	43.1	43.5	+0.4	13.4	13.4	0.0	117	111	- 6	35	37	+ 2	353a	364	+11	392a	442	+50
155365	C-504	W.F.	9/ 3/53	1	43.2	43.6	+0.4	13.5	13.5	0.0	116	112	- 4	35	37	+ 2	366	372	+ 6	399a	431	+32
155618	C-505	W.F.	9/10/53	1	40.9	41.6	+0.7	12.9	12.9	0.0	115	108	- 7	31	31	0	323	302	-21	365a	376	+11
155619	C-506	W.F.	9/10/53	1	40.9	41.7	+0.8	13.1	12.9	-0.2	112	108	- 4	31	31	0	318	302	-16	373a	379	+ 6
Current Mill Average:					42.5	43.1	+0.6	13.3	13.2	-0.1	113	109	- 4	34	34	0	344	339	- 5	382	409	+27

^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--SEPTEMBER 1 THROUGH SEPTEMBER 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			Elmendorf Tear, g./sheet				
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill
<u>Mill D--42-lb. Linerboard</u>																					
155249	D-687	W.F.	9/ 1/53	4	42.8	43.2	+0.4	12.1	12.3	+0.2	116	108	- 8	34		347a	339	- 8	380a	388	+ 8
155250	D-688	W.F.	9/ 2/53	4	41.8	40.6	-1.2	12.2	12.2	0.0	112	103	- 9	33		344a	393	+49	382a	416	+34
155298	D-689	W.F.	9/ 4/53	4	42.6	42.2	-0.4	12.4	12.3	-0.1	106	104	- 2	35		362a	391	+29	371a	417	+46
155357	D-690	W.F.	9/ 6/53	4	42.8	43.3	+0.5	12.2	12.2	0.0	109	106	- 3	34		359a	369	+10	379a	412	+33
155590	D-691	W.F.	9/11/53	4	43.2	43.8	+0.6	12.2	12.2	0.0	103	104	+ 1	34		327a	345	+18	353a	401	+48
155388	D-692	W.F.	9/12/53	4	43.0	43.6	+0.6	12.3	12.1	-0.2	110	107	- 3	34		341a	356	+15	359a	408	+49
155591	D-693	W.F.	9/13/53	4	42.6	43.7	+1.1	12.3	12.2	-0.1	112	106	- 6	32		355a	380	+25	357a	413	+56
155592	D-694	D.F. ^b	9/14/53	4	44.2	43.4	-0.8	12.4	12.2	-0.2	116	107	- 9	36		351a	385	+34	401a	432	+31
155657	D-695	W.F.	9/17/53	4	43.4	43.9	+0.5	12.4	12.1	-0.3	109	106	- 3	34		372a	384	+12	383a	421	+38
155658	D-696	W.F.	9/18/53	4	43.7	43.1	-0.6	12.7	12.5	-0.2	104	103	- 1	35		385a	416	+31	383a	432	+49
155659	D-697	W.F.	9/20/53	4	43.6	43.4	-0.2	12.5	12.6	+0.1	112	104	- 8	32		379a	374	- 5	350a	397	+47
Current Mill Average:					43.1	43.1	0.0	12.3	12.3	0.0	110	105	- 5	34		357	376	+19	372	413	+41

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

^b This identification appeared on the sample received by the Institute. The mill data sheet refers to the finish as "W.F."

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

TABLE XXVI

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 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			Elmendorf Tear, g./sheet					
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	In	Across	IPC
<u>Mill E--42-lb. Linerboard</u>																						
155248	E-28	W.F.	8/31/53	2	43.1	43.8	+0.7	12.8	12.6	-0.2	114	104	-10	28	30	+ 2	317a	301	-16	336a	303	-33
155301	E-29	W.F.	8/ 3/53	2	41.6	42.8	+1.2	13.3	13.2	-0.1	104	100	- 4	30	33	+ 3	358a	361	+ 3	335a	369	+34
155593	E-31	W.F.	9/14/53	2	41.8	41.5	-0.3	13.7	12.3	-1.4	100	98	- 2	32	28	- 4	357	270	-87	355a	272	-83
Current Mill Average:					42.2	42.7	+0.5	13.3	12.7	-0.6	106	101	- 5	30	30	0	344	311	-33	342	315	-27

TABLE XXVII

Mill F--42-lb. Linerboard

155368	F-47	W.F.	8/13/53	--	42.1	41.9	-0.2	13.4	13.0	-0.4	111	107	- 4	38	37	- 1	372a	371	- 1	434a	445	+11
155369	F-48	W.F.	8/19/53	--	42.8	43.4	+0.6	13.6	13.2	-0.4	112	107	- 5	42	44	+ 2	397a	416	+19	453a	466	+13
155370	F-49	W.F.	8/20/53	--	42.5	42.3	-0.2	12.9	12.8	-0.1	115	107	- 8	38	39	+ 1	393a	399	+ 6	449a	475	+26
155371	F-50	W.F.	8/28/53	--	42.6	42.2	-0.4	12.8	12.6	-0.2	116	113	- 3	37	37	0	387a	383	- 4	421a	443	+22
155372	F-51	W.F.	8/28/53	--	42.6	42.7	+0.1	13.3	13.2	-0.1	114	109	- 5	36	39	+ 3	376	425	+49	413a	471	+58
155373	F-52	W.F.	9/ 2/53	--	42.0	42.8	+0.8	12.9	12.9	0.0	107	103	- 4	36	41	+ 5	401	397	- 4	436a	465	+29
155670	F-53	W.F.	9/ 3/53	--	40.5	41.4	+0.9	12.4	12.5	+0.1	108	105	- 3	32	34	+ 2	349a	399	+50	381a	448	+67
155671	F-54	W.F.	9/ 5/53	--	42.0	42.1	+0.1	13.1	12.7	-0.4	116	104	-12	33	37	+ 4	356a	392	+36	402a	424	+22
155672	F-56	W.F.	9/10/53	--	42.2	41.7	-0.5	13.1	12.8	-0.3	112	104	- 8	32	34	+ 2	366	368	+ 2	387a	407	+20
Current Mill Average:					42.2	42.3	+0.1	13.1	12.9	-0.2	113	107	- 6	36	38	+ 2	377	394	+17	419	449	+30

^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--SEPTEMBER 1 THROUGH SEPTEMBER 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			Elmendorf Tear, g./sheet					
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
<u>Mill G--42-lb. Linerboard</u>																						
155233	G-520	W.F.	8/26/53	--	44.3	44.3	0.0	12.9	12.8	-0.1	119	117	- 2	34	33	- 1	353a	331	-22	383a	355	-28
155234	G-521	W.F.	8/26/53	--	44.9	44.7	-0.2	13.1	12.9	-0.2	129	128	- 1	33	30	- 3	320a	317	- 3	381a	359	-22
155267	G-522	W.F.	9/ 2/53	--	46.9	47.3	+0.4	12.8	12.6	-0.2	138	133	- 5	35	34	- 1	347a	351	+ 4	386a	393	+ 7
155268	G-523	W.F.	9/ 2/53	--	44.1	44.0	-0.1	13.2	13.1	-0.1	115	113	- 2	33	32	- 1	333a	324	- 9	377a	354	-23
155616	G-524	W.F.	9/11/53	--	44.0	43.8	-0.2	12.3	12.1	-0.2	127	118	- 9	34	31	- 3	333a	301	-32	385a	346	-39
155617	G-525	W.F.	9/11/53	--	43.6	44.1	+0.5	12.4	12.4	0.0	124	118	- 6	34	32	- 2	344a	321	-23	385a	360	-25
155655	G-526	W.F.	9/16/53	--	45.1	45.4	+0.3	11.9	11.8	-0.1	129	119	-10	34	33	- 1	365a	396	+31	355a	355	0
155656	G-527	W.F.	9/16/53	--	45.4	45.7	+0.3	12.1	12.0	-0.1	136	131	- 5	33	34	+ 1	342a	368	+26	368a	371	+ 3
Current Mill Average:					44.8	44.9	+0.1	12.6	12.5	-0.1	127	122	- 5	34	32	- 2	342	339	- 3	378	362	-16

TABLE XXIX

Mill H--42-lb. Linerboard

155220	H-413	WF1S	8/17/53	2	42.0	42.8	+0.8	11.9	12.0	+0.1	108	105	- 3	30	31	+ 1	310	337	+27	355a	377	+22
155221	H-414	WF1S	8/18/53	2	42.1	43.0	+0.9	12.2	12.1	-0.1	107	104	- 3	32	33	+ 1	325	325	0	375a	384	+ 9
155596	H-415	WF1S	9/ 8/53	2	42.6	42.8	+0.2	12.4	12.3	-0.1	107	104	- 3	33	32	- 1	320a	309	-11	375a	357	-18
155597	H-416	WF1S	9/ 9/53	2	42.8	43.5	+0.7	12.6	12.1	-0.5	108	113	+ 5	33	34	+ 1	371	350	-21	391a	417	+26
155652	H-417	WF1S	9/13/53	2	43.8	42.5	-1.3	12.2	12.2	0.0	115	109	- 6	31	30	- 1	347	318	-29	381a	353	-28
155653	H-418	WF1S	9/14/53	2	42.4	43.1	+0.7	12.1	12.2	+0.1	116	111	- 5	30	32	+ 2	322a	318	- 4	353a	368	+15
Current Mill Average:					42.6	42.9	+0.3	12.2	12.2	0.0	110	108	- 2	32	32	0	332	326	- 6	372	376	+ 4

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

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

TABLE XXX

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 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			Elmendorf Tear, g./sheet					
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
<u>Mill I--42-lb. Linerboard</u>																						
155389	I-327	WFLS	9/ 8/53	1	42.4	42.5	+0.1	13.0	12.9	-0.1	105	108	+ 3	32	33	+ 1	325a	350	+25	366a	429	+63
155390	I-328	WFLS	9/ 9/53	1	42.6	42.3	-0.3	13.0	13.0	0.0	106	108	+ 2	32	33	+ 1	307	355	+48	387a	438	+51
Current Mill Average:					42.5	42.4	-0.1	13.0	13.0	0.0	105	108	+ 3	32	33	+ 1	316	352	+36	376	433	+57

TABLE XXXI

Mill J--42-lb. Linerboard

155222	J-445	B.F.	8/20/53	--	43.3	43.8	+0.5	13.0	13.3	+0.3	112	116	+ 4	30	34	+ 4	328a	307	-21	349a	407	+58
155223	J-446	B.F.	8/20/53	--	42.9	43.7	+0.8	13.3	13.3	0.0	115	116	+ 1	31	35	+ 4	320a	317	- 3	354a	411	+57
155354	J-447	B.F.	9/ 1/53	--	43.2	44.2	+1.0	13.4	13.6	+0.2	109	109	0	32	36	+ 4	353a	353	0	376a	407	+31
155355	J-448	B.F.	9/ 1/53	--	43.6	44.4	+0.8	13.3	13.6	+0.3	111	106	- 5	32	35	+ 3	358a	353	- 5	356a	405	+49
Current Mill Average:					43.3	44.0	+0.7	13.3	13.5	+0.2	112	112	0	31	35	+ 4	340	332	- 8	359	408	+49

TABLE XXXII

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.

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

TABLE XXXIII

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 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			Elmendorf Tear, g./sheet				
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill
<u>Mill L--42-lb. Linerboard</u>																					
155269	L-205		8/16/53	1	43.0	43.4	+0.4	13.8	13.6	-0.2	103	101	- 2	37		357a	394	+37	389a	432	+43
155270	L-206		8/20/53	1	42.7	43.2	+0.5	13.5	13.1	-0.4	104	104	0	34		348a	373	+25	377a	424	+47
155262	L-207		8/25/53	1	43.0	43.3	+0.3	12.4	13.1	+0.7	109	105	- 4	30		338a	401	+63	352a	440	+88
155263	L-208		8/30/53	1	43.2	42.7	-0.5	13.2	12.4	-0.8	107	104	- 3	35		348a	336	-12	398a	383	-15
155393	L-209		9/ 1/53	1	42.8	42.8	0.0	14.2	13.7	-0.5	104	106	+ 2	36		366a	342	-24	384a	374	-10
155394	L-210		9/ 2/53	1	44.3	43.4	-0.9	14.1	13.5	-0.6	103	106	+ 3	37		364a	347	-17	394a	387	- 7
155667	L-211		9/10/53	1	44.3	44.1	-0.2	13.8	13.5	-0.3	105	106	+ 1	36		364a	388	+24	373a	419	+46
155668	L-212		9/11/53	1	44.1	44.2	+0.1	13.9	13.6	-0.3	105	104	- 1	36		354a	382	+28	386a	420	+34
Current Mill Average:					43.4	43.4	0.0	13.6	13.3	-0.3	105	104	- 1	35		355	370	+15	382	410	+28

TABLE XXXIV

Mill M--42-lb. Linerboard

155242	M-192	W.	8/24/53	2	43.3	42.8	-0.5	13.6	12.8	-0.8	116	118	+ 2	32	31	- 1	354	384	+30	407a	446	+39
155243	M-193	W.	8/27/53	4	42.7	42.6	-0.1	13.0	12.3	-0.7	109	114	+ 5	32	32	0	402a	459	+57	379a	445	+66
155387	M-194	W.	9/ 1/53	2	42.3	42.9	+0.6	13.0	12.5	-0.5	111	115	+ 4	36	35	- 1	380a	435	+55	393a	415	+22
Current Mill Average:					42.8	42.8	0.0	13.2	12.5	-0.7	112	116	+ 4	33	33	0	379	426	+47	393	435	+42

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

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

TABLE XXXV

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 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			Elmendorf Tear, g./sheet			
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC
<u>Mill N--42-lb. Linerboard</u>																				
155219	N-18	WFLS	8/16/53	1	43.0	43.0	0.0	12.1	11.8	-0.3	113	106	-7	35	348a	362	+14	397a	458	+61
155224	N-19	---	8/24/53	1	42.4	43.1	+0.7	11.9	11.5	-0.4	113	102	-11	30	325a	339	+14	351a	416	+65
155225	N-20	WFLS	8/26/53	1	42.0	41.8	-0.2	12.0	15.4	+3.4	118	111	-7	28	321	324	+3	370a	399	+29
155240	N-21	WFLS	8/27/53	1	42.0	42.3	+0.3	12.5	12.0	-0.5	100	96	-4	32	358a	349	-9	380a	418	+38
155264	N-22	WFLS	8/31/53	1	42.5	42.1	-0.4	12.5	12.2	-0.3	109	104	-5	30	368a	339	-29	387a	415	+28
155598	N-23	WFLS	9/12/53	1	41.8	41.7	-0.1	11.8	11.6	-0.2	109	102	-7	33	319	317	-2	374a	405	+31
155599	N-24	W.F.	9/ 9/53	1	43.4	42.9	-0.5	12.3	12.1	-0.2	111	103	-8	31	317a	340	+23	362a	422	+60
155669	N-25	----	9/18/53	1	41.8	41.4	-0.4	12.0	11.9	-0.1	108	101	-7	29	323	336	+13	357a	413	+56
Current Mill Average:					42.4	42.3	-0.1	12.1	12.3	+0.2	110	103	-7	31	335	338	+3	372	418	+46

TABLE XXXVI

Mill O--42-lb. Linerboard

155265	O-7	W.F.	8/31/53	3	40.7	41.4	+0.7	12.2	12.4	+0.2	109	102	-7	32	331a	311	-20	365a	376	+11
Current Mill Average:					40.7	41.4	+0.7	12.2	12.4	+0.2	109	102	-7	32	331	311	-20	365	376	+11

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

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

TABLE XXXVII

SUMMARY OF INDIVIDUAL TEST LOTS--SEPTEMBER 1 THROUGH SEPTEMBER 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			Elmendorf Tear, g./sheet					
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
<u>Mill E--44/46-lb. Drum Linerboard</u>																						
155356	E-30	W.F.	9/ 8/53	2	46.3	46.8	+0.5	14.1	13.8	-0.3	98	96	- 2	41	34	- 7	382a	368	-14	422a	419	- 3
155646	E-400 ^b	W.F.	9/17/53	1	47.5	47.7	+0.2	14.1	13.2	-0.9	84	85	+ 1	37	42	+ 5	421a	434	+13	367a	383	+16
Current Mill Average:					46.9	47.3	+0.4	14.1	13.5	-0.6	91	90	- 1	39	38	- 1	402	401	- 1	395	401	+ 6
<u>Mill E--69-lb. Linerboard</u>																						
155654	E-32	W.F.	9/22/53	2	67.3	67.6	+0.3	20.3	19.5	-0.8	149	144	- 5	63	64	+ 1	610a	548	-62	609a	537	-72

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

^b This samples was identified as 47-lb. Linerboard.

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

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