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CONTINUOUS BASELINE STUDY
Project 1106-B
Progress Report 40
to
FOURDRINIER-KRAFT BOARD INSTITUTE
November 1, 1950

THE INSTITUTE OF PAPER CHEMISTRY
APPLETON, WISCONSIN

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APPLETON, WISCONSIN

In conjunction with the F.K.I. Continuous Baseline Study, eighty-three different sample lots of 42-lb. Fourdrinier Kraft linerboard were submitted by nine different F.K.I. mills to The Institute of Paper Chemistry for testing during the period October 1 through October 31. In addition to the 42-lb. kraft linerboard, eight samples of special drum stock and one sample of coreliner 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	7
B	15
C	7
D	22
E	0
F	5
G	8
H	6
I	3
J	<u>10</u>
	83

These sample lots were tested for basis weight, caliper, bursting strength, G. E. puncture, and Elmendorf tear. A comparison of the average strength results for each mill may be seen in Table II and is graphically presented in Figures 1 to 6 inclusive. In addition to a comparison of the mill averages, 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. averages include all the results up to but not including the current period; the current period in the case of this report is October 1 through October 31. The F.K.I. index is obtained as follows:

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

The F.K.I. index provides a ready means of comparing the current quality with previous results. For example, the current F.K.I. average basis weight is 42.9 lb., and the cumulative F.K.I. average basis weight is 43.2 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 slightly lower than the cumulative average, which in this case covered the period from July 25, 1947, through September 30, 1950.

A comparison of the results in Table II and Figure 1 shows that the average basis weight results for all mills conform to the 42-lb. specification set forth in Rule 41. Mill E has the highest average basis weight, it being 43.9 lb. or approximately 4.5% higher than the 42-lb. specification. On the other hand, Mill F has the lowest average basis weight, it being 42.3 lb., approximately 0.7% higher than the 42-lb. specification.

The amount by which the mills exceed the 42-lb. specification is as follows:

Mill Code	Per Cent
A	1.0
B	4.5
C	1.4
D	2.9
E	--
F	0.7
G	2.6
H	1.7
I	1.9
J	2.6

A comparison of the average basis weight data for the previous period with the current F.K.I. average indicates that the basis weight is the same.

A comparison of the average caliper values for the various mills (see Figure 2) shows that the mill averages vary from a low of 12.9 for Mill H to a high of 14.3 for Mill I, the average being 13.8 which is somewhat lower than the cumulative average of 14.4.

The average bursting strength values obtained for each mill are graphically shown in Figure 3. It may be observed that the average bursting strength values for the various mills range from a low of 101 for Mills C and I to a high of 110 for Mill F. The current F.K.I. average bursting strength is 104, slightly lower 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 36 units. The maximum G. E. puncture value for the current period is 38 units and is shared by Mills C, D, and F. The minimum value of 33 units is shared by Mills A and J. The current F.K.I. average for G. E. puncture of 36 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 D has the highest average machine direction tear value and that Mill G has the lowest average machine direction tear value. Mills C and D share the highest average across-machine direction tear value; Mill G has the lowest value. It may be noted that the current F.K.I. average machine and across-machine direction tear results are only slightly lower than the cumulative averages.

A comparison of the F.K.I. indexes indicates that, for the current period, all the current F.K.I. averages are lower than the respective cumulative F.K.I. averages.

In order to compare the variation within a given mill, the test results for each particular mill have been tabulated in Tables III to XIII for Mills A to J, respectively. In addition to the current averages, cumulative averages for each mill, together with 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 will have 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 and core liner stock may be seen in Table XIII.

It may be noted in Tables III through XII 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	7*		
B	15*		
C	7		
D	17	5	
E	--	--	--
F			5**
G	8		
H	6*		
I	3*		
J			10***

- * One side only.
- ** Spray finish.
- *** 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--OCTOBER 1 THROUGH OCTOBER 31, 1950

Code No.	Basis Weight, lb.	Caliper, points	Bursting Strength, points	G. E. Puncture, units	Elmendorf Tear, g./sheet
					In Direction Across Direction
A	42.4	13.4	102	33	361 392
B	43.9	14.2	102	37	408 429
C	42.6	14.0	101	38	394 435
D	43.2	13.6	104	38	417 435
E	No samples submitted.				
F	42.3	14.0	110	38	385 427
G	43.1	14.0	103	35	351 383
H	42.7	12.9	106	35	364 417
I	42.8	14.3	101	34	361 409
J	43.1	13.6	105	33	368 384
Current FKl Average:		13.8	104	36	379 412
Cumulative FKl Average:		14.4	106	37	380 413
FKl Index, %:		99.3	98.1	97.3	99.7 99.8

Figure 1

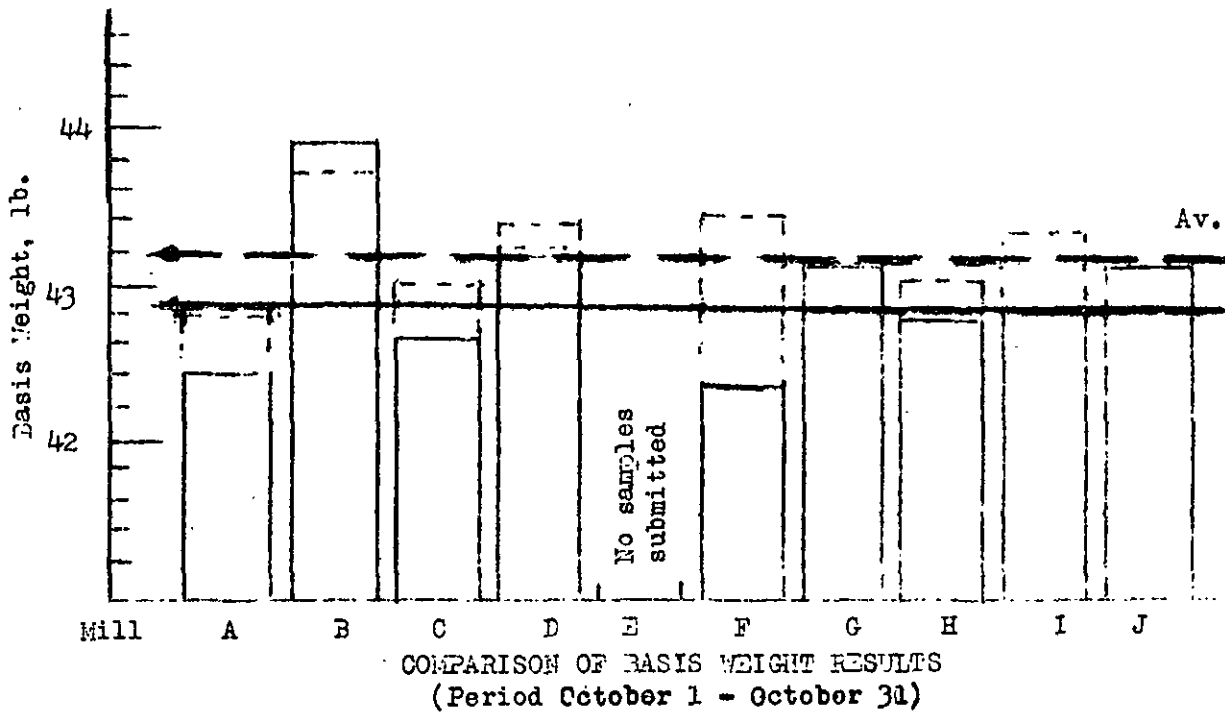
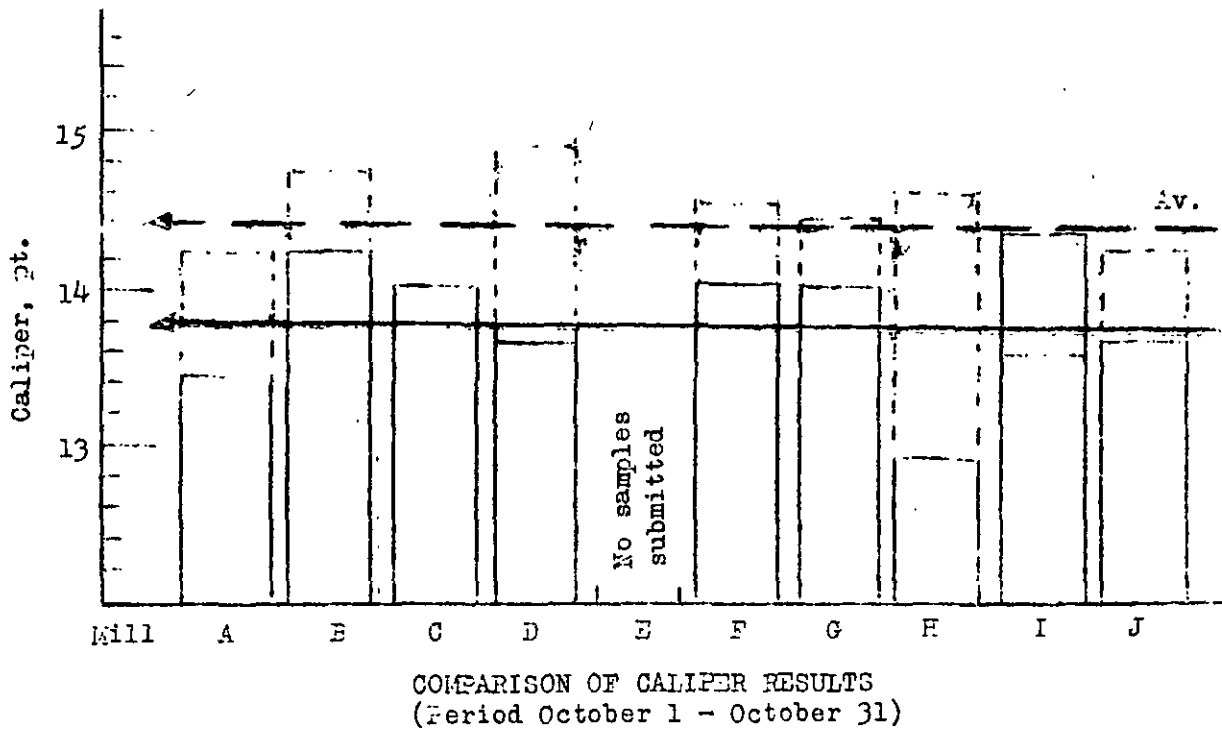
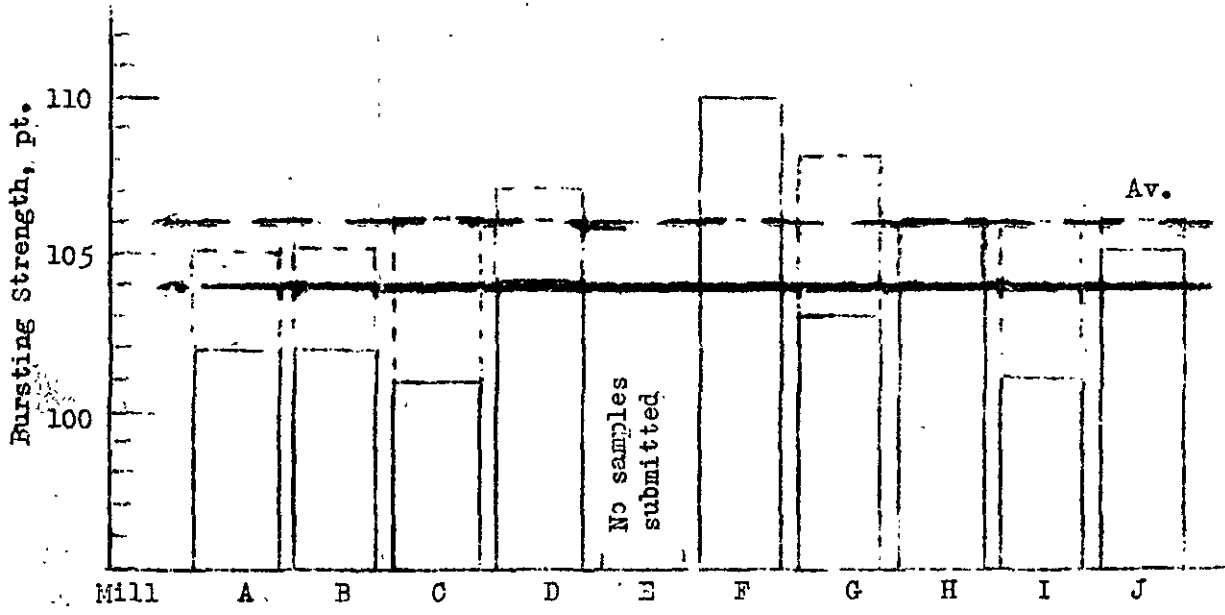


Figure 2



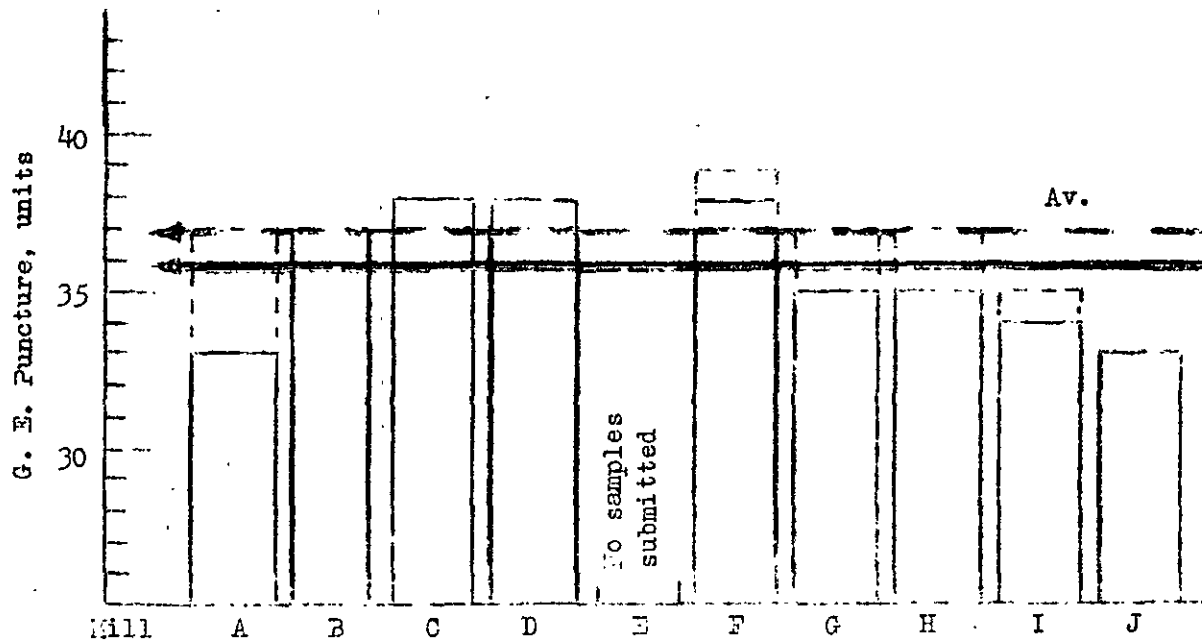
———— Current Mill Average
 - - - - Cumulative Average

Figure 3



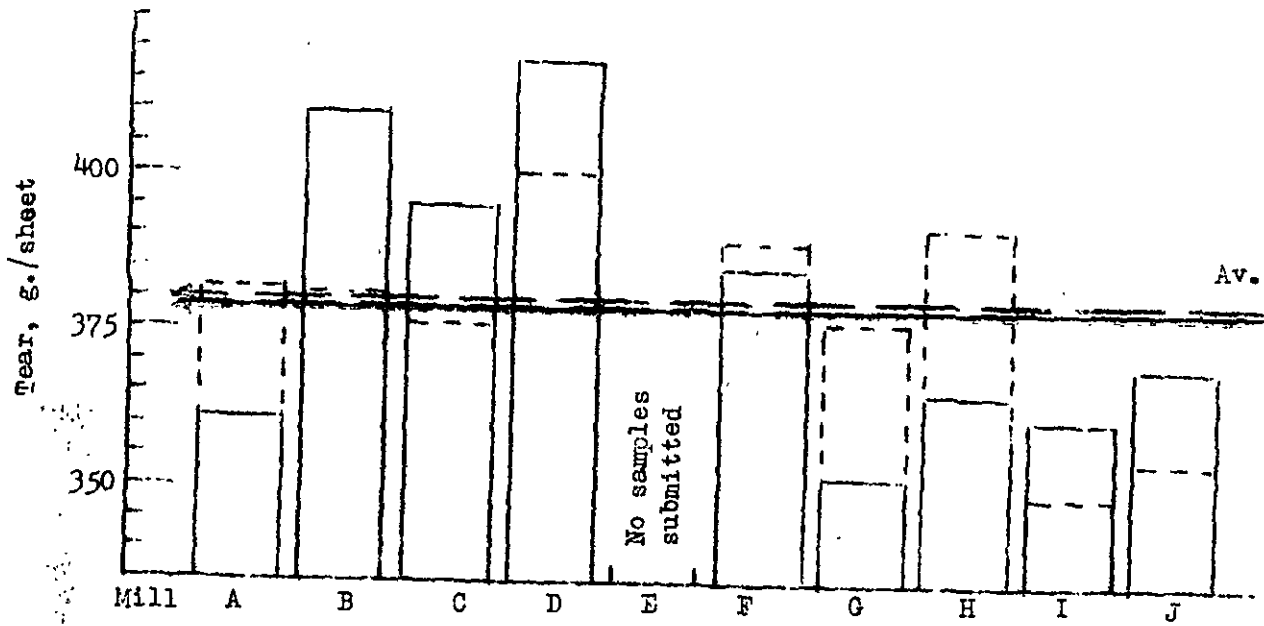
COMPARISON OF BURSTING STRENGTH RESULTS
(Period October 1 - October 31)

Figure 4



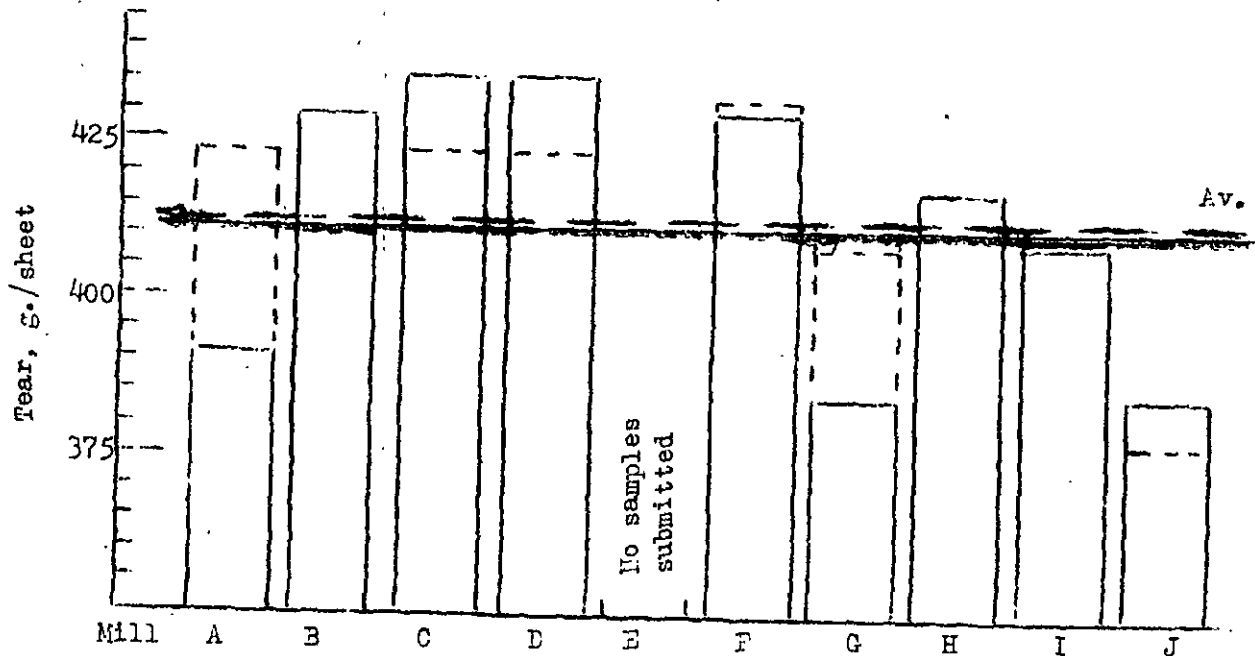
COMPARISON OF G. E. PUNCTURE RESULTS
(Period October 1 - October 31)

Figure 5



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

Figure 6



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

TABLE III
SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950

Mch. NO	Basis Weight, lb.		Caliper, points		Bursting Strength, points		G. E. Puncture, units		Elmendorf Tear, g./sheet		Across							
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.						
	<u>Mill A--42-lb. Linerboard</u>																	
50 2	43.8	42.0	42.5	14.9	13.1	14.1	119	80	96	37	30	33	440	336	375 ^a	512	352	404 ^a
50 2	43.6	41.8	42.8	14.2	13.0	13.6	119	71	96	34	28	31	416	320	361 ^a	456	336	385 ^a
50 1	43.8	41.0	42.4	13.9	12.5	13.2	131	71	102	37	28	32	384	304	344 ^a	448	360	403 ^a
50 1	42.4	40.6	41.9	13.2	11.8	12.6	121	81	105	35	30	33	360	240	316	432	304	379 ^a
50 2	42.2	41.0	41.8	14.0	12.5	13.3	131	82	104	39	31	35	416	328	368 ^a	496	344	393 ^a
50 2	43.6	42.0	42.6	14.0	12.5	13.3	116	79	100	34	29	32	448	304	373 ^a	432	344	385 ^a
50 2	44.0	41.6	42.7	14.3	12.9	13.6	134	71	110	39	31	34	432	328	387	424	344	393 ^a
			42.4			13.4		102				33			361			392
			42.8			14.2		105				37			381			423
			99.1			94.4		97.1				89.2			94.8			92.7
			98.1			93.1		96.2				89.2			95.0			94.9

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

TABLE III

SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950

File No	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. NO	Basis Weight, lb.			Caliper, points			Bursting Strength, points			G. E. Puncture, units			El.	
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.		
144119	A-177	WF1S	10/ 2/50	9/27/50	2	43.8	42.0	42.5	14.9	13.1	14.1	119	80	96	37	30	33	440	336
144199	A-178	WF1S	10/ 6/50	10/ 1/50	2	43.6	41.8	42.8	14.2	13.0	13.6	119	71	96	34	28	31	416	320
144210	A-179	WF1S	10/11/50	10/ 5/50	1	43.8	41.0	42.4	13.9	12.5	13.2	131	71	102	37	28	32	384	304
144233	A-180	WF1S	10/16/50	10/ 9/50	1	42.4	40.6	41.9	13.2	11.8	12.6	121	81	105	35	30	33	360	240
144234	A-181	WF1S	10/16/50	10/11/50	2	42.2	41.0	41.8	14.0	12.5	13.3	131	82	104	39	31	35	416	328
144366	A-182	WF1S	10/21/50	10/15/50	2	43.6	42.0	42.6	14.0	12.5	13.3	116	79	100	34	29	32	448	304
144367	A-183	WF1S	10/21/50	10/16/50	2	44.0	41.6	42.7	14.3	12.9	13.6	134	71	110	39	31	34	432	328

Mill A--42-lb. Linerboard

Current Mill Average:	42.4	13.4	102	33
Cumulative Mill Average:	42.8	14.2	105	37
Mill Factor, %:	99.1	94.4	97.1	89.2
Mill Index, %:	98.1	93.1	96.2	89.2

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

TABLE 1

SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, points		G. E. Puncture, units		Elr		
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.		Av.	Max.
<u>Mill B--42-lb. Linerboard</u>																
144174	B-276	WF1S	10/ 3/50	9/17/50	1	45.8	43.0	44.3	15.2	13.9	14.5	118	72	100	37	480
144175	B-277	WF1S	10/ 3/50	9/18/50	1	44.4	42.0	43.4	15.0	13.7	14.3	112	76	98 ^b	36	456
144176	B-278	WF1S	10/ 3/50	9/18/50	1	46.0	43.6	44.5	15.7	14.1	14.8	122	90	105	37	464
144230	B-279	WF1S	10/16/50	9/25/50	1	46.0	42.6	44.4	15.5	14.0	14.9	132	86	108 ^b	39	456
144224	B-280	WF1S	10/14/50	9/25/50	1	45.6	44.0	44.8	15.5	14.2	14.9	123	71	102	38	496
144225	B-281	WF1S	10/14/50	9/25/50	--	44.4	43.4	43.9	15.0	13.5	14.2	121	90	107 ^c	35	432
144226	B-282	WF1S	10/14/50	9/25/50	1	46.0	44.0	45.1	14.8	13.3	14.1	125	75	105	36	432
144220	B-283	WF1S	10/13/50	10/ 3/50	1	44.4	43.6	44.1	15.0	13.2	14.2	134	80	103	39	432
144221	B-284	WF1S	10/13/50	10/ 3/50	1	44.4	43.6	44.1	15.0	13.6	14.2	127	85	102	38	496
144222	B-285 ^d	WF1S	10/13/50	10/ 3/50	1	44.6	43.2	43.9	15.1	13.6	14.4	120	81	100	36	552
144223	B-286	WF1S	10/13/50	10/ 3/50	1	45.0	42.4	43.8	14.5	13.5	14.0	121	81	103	37	496
144 368	B-287	WF1S	10/23/50	10/ 8/50	1	44.6	41.8	43.1	14.6	13.0	13.8	116	78	100	38	496
144369	B-288	WF1S	10/23/50	10/ 8/50	1	43.8	42.6	43.2	14.8	12.7	13.7	118	75	101	34	488
144370	B-289	WF1S	10/23/50	10/ 8/50	1	44.4	42.2	43.0	14.1	13.1	13.7	116	85	98	35	440
144371	B-290	WF1S	10/23/50	10/ 8/50	1	44.2	42.0	43.6	14.3	12.5	13.7	117	77	101	36	496
Current Mill Average:																
						43.9	43.9		14.2	14.2		102	102		37	488
Cumulative Mill Average:																
						43.7	43.7		14.7	14.7		105	105		37	488
Mill Factor, %:						100.5	100.5		96.6	96.6		97.1	97.1		100.0	488
Mill Index, %:						101.6	101.6		98.6	98.6		96.2	96.2		100.0	488

^a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.
^b Visual examination revealed that there was a shive in the test area of one of the specimens.
^c An "audible multipop" occurred in the testing of one of the specimens.
^d The sample received by the Institute contained an E series of sheets in place of an F series; this E series was tested in place of the F series.

TABLE V
SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

Date	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, points		G. E. Puncture, units		Elmendorf Tear, g./sheet		Across							
		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.						
<u>Mill C--42-lb. Linerboard</u>																			
50	1	44.0	41.8	42.8	15.2	14.0	14.6	126	71	99	40	36	38	456	344	383 ^a	472	400	435 ^a
50	1	43.8	41.0	42.6	14.2	13.0	13.6	118	79	104	40	36	39	408	336	377 ^a	488	376	437 ^a
50	1	43.8	41.6	42.6	14.5	13.1	13.9	140	79	105	41	34	37	464	352	403 ^a	472	384	427 ^a
50	1	44.8	42.0	42.6	14.2	12.6	13.6	125	75	105	40	34	37	448	368	407 ^a	480	384	440 ^a
50	1	45.2	42.0	43.7	15.4	12.1	14.0	125	48 ^c	98 ^c	42	34	38	464	336	407	496	360	439 ^a
50	1	43.0	41.0	41.9	15.3	13.8	14.5	130	72	98	42	36	38	488	336	406	520	416	456 ^a
50	1	43.6	41.0	42.2	14.4	12.5	13.7	126	64	99	42	37	39	432	312	373	464	360	413 ^a
				42.6			14.0		101				38			394			435
				43.0			14.0		106				38			375			422
				99.1			100.0		95.3				100.0			105.1			103.1
				98.6			97.2		95.3				102.7			103.7			105.3

for one or more specimens which tore beyond the 3/8-inch limit. Colored streaks on the felt side of the sheets of this sample; include with these streaks. Information in the area in which the minimum test was obtained.

TABLE V

SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, points			G. E. Puncture, units			El. In	
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.		Max.
<u>Mill C--42-lb. Linerboard</u>																			
144262	C-240	W.F.	10/18/50	9/26/50	1	44.0	41.8	42.8	15.2	14.0	14.6	126	71	99	40	36	38	456	31
144197	C-241	W.F.	10/6/50	9/28/50	1	43.8	41.0	42.6	14.2	13.0	13.6	118	79	104	40	36	39	408	31
144229	C-242	W.F.	10/16/50	10/4/50	1	43.8	41.6	42.6	14.5	13.1	13.9	140	79	105	41	34	37	464	31
144365	C-243	W.F.	10/21/50	10/12/50	1	44.8	42.0	42.6	14.2	12.6	13.6	125	75	105	40	34	37	448	36
144374	C-244 ^a	W.F.	10/23/50	10/16/50	1	45.2	42.0	43.7	15.4	12.1	14.0	125	48 ^c	98 ^c	42	34	38	464	31
144403	C-245 ^b	W.F.	10/28/50	10/19/50	1	43.0	41.0	41.9	15.3	13.8	14.5	130	72	98	42	36	38	488	31
144415	C-246	W.F.	10/30/50	10/23/50	1	43.6	41.0	42.2	14.4	12.5	13.7	126	64	99	42	37	39	432	31
Current Mill Average:						42.6			14.0			101			38				
Cumulative Mill Average:						43.0			14.0			106			38				
Mill Factor, %:						99.1			100.0			95.3			100.0				
Mill Index, %:						98.6			97.2			95.3			102.7				

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

^b Visual examination revealed light-colored streaks on the felt side of the sheets of this sample; thin sheet formation appeared to coincide with these streaks.

^c Visual examination revealed thin formation in the area in which the minimum test was obtained.

TABLE VI
SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, points		Puncture, units							
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.			
144120	D-285	W.F.	10/2/50	9/28/50	4	45.0	43.0	44.0	14.1	12.2	13.4	155	92	118	42	36	39	512	320
144121	D-286	W.F.	10/2/50	9/29/50	4	44.4	43.0	43.8	14.1	12.5	13.3	153	91	111	41	37	39	480	368
144180	D-287	W.F.	10/4/50	9/30/50	4	43.6	42.0	42.8	14.1	12.4	13.4	134	69 ^b	99 ^b	42	35	39	480	368
144181	D-288	W.F.	10/4/50	10/1/50	4	44.6	42.6	43.7	14.9	13.6	14.3	127	72	100	43	33	37	528	352
144182	D-289	W.F.	10/4/50	10/2/50	4	44.6	42.6	43.6	14.4	12.4	13.6	130	85	104	44	33	39	464	384
144195	D-290 ^d	W.F.	10/6/50	10/3/50	4	44.6	42.0	43.3	13.5	12.1	12.9	136	53	103	42	34	37	472	328
144196	D-291	W.F.	10/6/50	10/4/50	4	44.6	43.6	44.0	14.0	12.5	13.4	134	65	97	43	34	39	544	376
144203	D-292	W.F.	10/9/50	10/5/50	4	42.2	41.4	41.8	13.8	12.9	13.4	133	79	102	40	30	35	480	304
144204	D-293	D.F.	10/9/50	10/3/50 ^e	4	43.6	40.8	42.3	14.6	12.8	13.7	131	77	102	44	38	40	480	360
144205	D-294	W.F.	10/11/50	10/6/50	4	47.0	43.6	44.8	14.0	12.4	13.4	139	90	113	44	36	40	512	368
144206	D-295	W.F.	10/11/50	10/7/50	4	44.0	42.2	42.9	13.8	12.7	13.2	138	59	104	40	32	37	464	368
144207	D-296	W.F.	10/11/50	10/8/50	4	43.4	41.0	42.1	13.7	12.4	13.1	124	83	105	40	32	36	480	352
144208	D-297	W.F.	10/11/50	10/9/50	4	43.0	41.2	42.0	13.2	12.0	12.7	135	83	109	41	33	36	448	336
144228	D-298	W.F.	10/16/50	10/12/50	4	46.0	42.6	44.6	15.3	13.5	14.2	135	71	104	45	36	40	520	344
144263	D-299	D.F.	10/18/50	10/13/50	4	46.0	43.4	44.3	15.7	13.9	14.6	129	68	101 ^f	44	32	40	528	360
144264	D-300	D.F.	10/18/50	10/14/50	4	45.0	42.4	43.9	14.6	13.3	13.9	131	72	104	42	37	40	472	384
144265	D-301	D.F.	10/18/50	10/15/50	4	42.8	41.0	41.7	14.3	13.0	13.6	120	70	97	38	32	36	480	360
144266	D-302	D.F.	10/19/50	10/16/50	4	45.0	42.2	43.7	15.1	13.2	14.0	129	82	106	42	36	40	496	352
144375	D-303	W.F.	10/23/50	10/19/50	4	43.0	40.2	42.1	14.3	12.7	13.4	133	72	102	39	35	37	480	320
144378	D-304	W.F.	10/25/50	10/20/50	4	43.8	42.0	42.9	14.8	12.1	13.5	128	80	104	41	36	38	472	384
144387	D-305	W.F.	10/27/50	10/24/50	4	44.8	42.6	43.7	14.4	13.0	13.7	131	59	99	44	36	39	480	352
144388	D-306	W.F.	10/27/50	10/25/50	4	44.6	42.8	43.6	16.3	14.6	15.4	122	70	96	46	36	41	464	400
Current Mill Average:						43.2		43.2	13.6		13.6	104		104	38		38		
Cumulative Mill Average:						43.3		43.3	14.9		14.9	107		107	38		38		
Mill Factor, %:						99.8		99.8	91.3		91.3	97.2		97.2	100.0		100.0		
Mill Index, %:						100.0		100.0	94.4		94.4	98.1		98.1	102.7		102.7		

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

^b Visual examination revealed thin formation in the area in which the minimum test was obtained.

^c This average includes the readings for one or more specimens which rubbed against the sector during the tear test.

^d Visual examination revealed dry streaks on the felt side of the Fl and D1 sheets of this sample.

^e This date appeared on the sample received by the Institute; the mill data sheet gives the date of manufacture as October 5, 1950.

^f Visual examination revealed thin formation in the area in which one of the test readings was obtained. The reading obtained in this area was not the minimum value.

TABLE VII
SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, points		G. E. Puncture, units		Elmendorf Tear, g./sheet					
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.				
/50	44.4	42.0	14.5	12.4	130	100	41	35	424	376	397	480	392	433 ^a
/50	44.2	41.4	15.0	13.0	135	91	40	34	424	328	367 ^a	464	400	426 ^a
/50	42.8	40.8	14.7	13.3	131	86	41	34	400	328	362 ^a	488	400	425 ^a
/50	43.2	41.6	14.7	12.3	122	90	42	35	464	368	411 ^a	464	368	420 ^a
/50	42.4	40.4	15.3	13.5	128	77	40	35	416	360	389	464	384	431 ^a
		42.3		14.0				38		385				427
		43.4		14.5				39		389				431
		97.5		96.6				97.4		99.0				99.1
		97.9		97.2				102.7		101.3				103.4

TABLE VIII

Mill F--42-lb. Linerboard

/50	44.4	42.0	14.5	12.4	13.7	117	41	35	424	376	397	480	392	433 ^a
/50	44.2	41.4	15.0	13.0	14.3	110	40	34	424	328	367 ^a	464	400	426 ^a
/50	42.8	40.8	14.7	13.3	14.1	108	41	34	400	328	362 ^a	488	400	425 ^a
/50	43.2	41.6	14.7	12.3	13.7	108	42	35	464	368	411 ^a	464	368	420 ^a
/50	42.4	40.4	15.3	13.5	14.3	106	40	35	416	360	389	464	384	431 ^a
		42.3		14.0		110		38		385				427
		43.4		14.5		106		39		389				431
		97.5		96.6		103.8		97.4		99.0				99.1
		97.9		97.2		103.8		102.7		101.3				103.4

TABLE IX

Mill G--42-lb. Linerboard

5/50	44.0	40.4	15.1	13.9	14.6	98	40	33	400	312	356 ^a	408	304	379 ^a
5/50	44.0	42.0	15.3	13.1	14.5	102	37	32	408	320	353 ^a	448	320	381 ^a
8/50	43.8	41.8	14.6	13.0	13.9	97	38	31	384	304	349 ^a	424	296	371 ^a
8/50	44.0	42.6	14.9	12.8	14.0	108	37	33	376	304	331	408	344	371 ^a
0/50	44.0	41.8	14.5	12.3	13.5	105	36	32	384	320	355 ^a	440	360	399 ^a
0/50	43.4	42.0	15.9	13.8	15.0	104	39	32	408	328	362 ^a	432	360	395 ^a
2/50	44.2	43.2	13.9	12.0	13.0	107	37	33	392	304	351 ^a	416	344	381 ^a
2/50	43.6	42.4	14.4	12.0	13.4	102	37	31	376	320	351 ^a	432	328	387 ^a
		43.1		14.0		103		35		351				383
		43.1		14.4		108		37		376				408
		100.0		97.2		95.4		94.6		93.4				93.9
		99.8		97.2		97.2		94.6		92.4				92.7

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

TABLE VII
SUMMARY OF INDIVIDUAL TEST LOBS - OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, points		G. E. Puncture, units	
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.

Mill E--42-lb. Linerboard
 No samples submitted.

144177	F-74	S.F.	10/ 4/50	9/22/50	--	44.4	42.0	43.3	14.5	12.4	13.7	130	100	117	41	35	39	424	376
144178	F-75	S.F.	10/ 4/50	9/27/50	--	44.2	41.4	42.7	15.0	13.0	14.3	135	91	110	40	34	38	424	328
144179	F-76	S.F.	10/ 4/50	9/28/50	--	42.8	40.8	41.7	14.7	13.3	14.1	131	86	108	41	34	37	400	328
144200	F-77	S.F.	10/ 6/50	10/2/50	--	43.2	41.6	42.1	14.7	12.3	13.7	122	90	108	42	35	39	464	368
144227	F-78	S.F.	10/14/50	10/3/50	--	42.4	40.4	41.5	15.3	13.5	14.3	128	77	106	40	35	37	416	360
Current Mill Average																			
Cumulative Mill Average:																			
Mill Factor, %:																			
Mill Index, %:																			

TABLE VIII

Mill F--42-lb. Linerboard	
42.3	14.0
43.4	14.5
97.5	96.6
97.9	97.2

TABLE IX

Mill G--42-lb. Linerboard																			
44.0	40.4	43.2	15.1	13.9	14.6	116	72	98	40	33	36	400	312						
44.0	42.0	43.0	15.3	13.1	14.5	140	90	102	37	32	35	408	320						
43.8	41.8	42.5	14.6	13.0	13.9	110	77	97	38	31	35	384	304						
44.0	42.6	43.3	14.9	12.8	14.0	130	93	108	37	33	35	376	304						
44.0	41.8	43.4	14.5	12.3	13.5	127	81	105	36	32	34	384	320						
43.4	42.0	42.6	15.9	13.8	15.0	119	87	104	39	32	35	408	328						
44.2	43.2	43.8	13.9	12.0	13.0	124	89	107	37	33	35	392	304						
43.6	42.4	43.0	14.4	12.0	13.4	121	79	102	37	31	35	376	320						
Current Mill Average:																			
Cumulative Mill Average:																			
Mill Factor, %:																			
Mill Index, %:																			

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

TABLE X
SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

Date	Mch No.	Basis Weight, lb.		Caliper, points		Bursting Strength, points		G. E. Puncture, units		Elmendorf Tear, g./sheet									
		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.								
<u>Mill H--42-lb. Linerboard</u>																			
22/50	3	43.8	42.0	43.0	13.0	11.1	12.1	131	90	112	38	31	34	400	288	363 ^a	464	368	404 ^a
18/50	2	44.2	41.8	42.8	12.9	11.8	12.2	140	83	111	36	30	34	392	312	347 ^a	472	344	410 ^a
25/50	2	44.0	42.0	42.9	14.9	13.2	14.0	127	74	101	40	33	36	376	304	340 ^a	504	352	426 ^a
26/50	3	44.0	41.6	42.7	13.0	11.5	12.2	129	85	109	35	32	34	480	304	375	528	360	435 ^a
11/50	2	43.4	41.4	42.5	14.0	12.9	13.5	125	76	103	37	30	34	448	272	378 ^a	472	368	418 ^a
12/50	2	43.2	40.8	42.3	14.0	12.4	13.6	138	74	102	38	30	35	456	344	381	456	344	408 ^a
				42.7			12.9		106		35					364			417
				43.0			14.6		106		37					391			417
				99.3			88.4		100.0		94.6					93.1			100.0
				98.8			89.6		100.0		94.6					95.8			101.0

TABLE XI
Mill I--42-lb. Linerboard

4/50	1	44.4	43.6	43.9	14.8	13.6	14.3	123	91	106	37	33	36	400	328	361 ^a	480	408	429 ^a
18/50	1	43.2	41.4	42.3	15.1	13.4	14.2	118	86	102	36	30	33	416	312	351	432	336	385 ^a
21/50	1	43.5	41.0	42.2	15.3	13.2	14.3	114	78	96	38	30	34	440	328	370	440	384	413 ^a
				42.8			14.3		101		34					361			409
				43.3			13.5		106		35					348			409
				98.8			105.9		95.3		97.1					103.7			100.0
				99.1			99.3		95.3		91.9					95.0			99.0

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

TABLE X

SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch No.	Basis Weight, lb.		Caliper, points		Purstring Strength, points		G. E. Puncture, units					
						Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.				
<u>Mill H-42-lb. Linerboard</u>																	
144201	H-201	WF1S	10/ 9/50	9/22/50	3	43.8	42.0	43.0	11.1	12.1	131	90	112	38	31	34	400
144202	H-202	WF1S	10/ 9/50	9/18/50	2	44.2	41.8	42.8	11.8	12.2	140	83	111	36	30	34	392
144376	H-203	WF1S	10/23/50	9/25/50	2	44.0	42.0	42.9	13.2	14.0	127	74	101	40	33	36	376
144377	H-204	WF1S	10/23/50	9/26/50	3	44.0	41.6	42.7	11.5	12.2	129	85	109	35	32	34	480
144418	H-205	WF1S	10/30/50	10/11/50	2	43.4	41.4	42.5	12.9	13.5	125	76	103	37	30	34	448
144419	H-206	WF1S	10/30/50	10/12/50	2	43.2	40.8	42.3	12.4	13.6	138	74	102	38	30	35	456
Current Mill Average:								42.7	12.9				106			35	
Cumulative Mill Average:								43.0	14.6				106			37	
Mill Factor, %:								99.3	88.4				100.0			94.6	
Mill Index, %:								98.8	89.6				100.0			94.6	

TABLE XI

<u>Mill I--42-lb. Linerboard</u>																		
144211	I-136	WF1S	10/11/50	10/ 4/50	1	44.4	43.6	43.9	14.8	13.6	14.3	123	91	106	37	33	36	400
144401	I-137	WF1S	10/28/50	10/18/50	1	43.2	41.4	42.3	15.1	13.4	14.2	118	86	102	36	30	33	416
144402	I-138	WF1S	10/28/50	10/21/50	1	43.6	41.0	42.2	15.3	13.2	14.3	114	78	96	38	30	34	440
Current Mill Average:								42.8	14.3				101			34		
Cumulative Mill Average:								43.3	13.5				106			35		
Mill Factor, %:								98.8	105.9				95.3			97.1		
Mill Index, %:								99.1	99.3				95.3			91.9		

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

TABLE XII

SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, points		G. E. Puncture, units		Elmendorf Tear, g./sheet		Av.							
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	In	Across								
	<u>Mill J--42-lb. Linerboard</u>																	
1	45.0	42.6	43.9	14.7	13.4	14.0	126	93	107	40	33	36	440	320	382 ^a	448	344	399 ^a
1	44.4	43.4	43.9	14.9	13.3	14.0	127	73	105	38	33	36	448	304	383 ^a	400	344	383 ^a
1	44.4	42.4	43.6	13.8	12.6	13.3	130	92	110	34	28	32	424	312	364 ^a	472	368	406 ^a
1	43.6	41.4	42.7	13.6	12.6	13.1	127	90	110	34	28	31	448	304	367 ^a	456	336	387 ^{a,b}
1	44.8	42.6	43.5	14.2	13.0	13.7	120	85	103	37	31	34	456	344	380 ^a	480	352	413 ^a
1	44.4	42.0	43.1	14.0	12.7	13.3	121	95	110	32	28	30	400	320	366 ^a	488	336	378 ^a
1	44.0	42.0	42.9	14.3	13.1	13.9	127	80	104	36	30	32	472	328	374 ^a	448	352	391 ^{a,b}
1	44.8	41.6	43.1	14.2	13.2	13.8	119	84	100	35	30	32	512	312	394 ^{a,b}	408	344	373 ^a
1	43.2	41.4	42.7	14.6	12.7	13.5	114	82	99	35	30	33	392	296	335 ^a	432	328	357 ^a
1	42.6	40.8	41.9	13.8	12.8	13.3	126	80	105	35	31	33	392	296	334 ^a	408	320	357 ^a
			43.1			13.6			105			33			368			384
			42.9			14.2			106			33			353			377
			100.5			95.8			99.1			100.0			104.2			101.9
			99.8			94.4			99.1			89.2			96.8			93.0

one or more specimens which tore beyond the 3/8-inch limit.
one or more specimens which rubbed against the sector during the tear test
ad an unidentified sheet in the usual "D-8" position of the D series. The

TABLE XII

SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, points		G. E. Puncture, units		Elme g In					
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.		Av.	Max.	Min.		
<u>Mill J--42-lb. Linerboard</u>																			
144122	J-229	B.F.	10/2/50	9/24/50	1	45.0	42.6	43.9	14.7	13.4	14.0	126	93	107	40	33	36	440	320
144123	J-230	B.F.	10/2/50	9/24/50	1	44.4	43.4	43.9	14.9	13.3	14.0	127	73	105	38	33	36	448	304
144216	J-231	B.F.	10/12/50	10/1/50	1	44.4	42.4	43.6	13.8	12.6	13.3	130	92	110	34	28	32	424	312
144217	J-232	B.F.	10/12/50	10/1/50	1	43.6	41.4	42.7	13.6	12.6	13.1	127	90	110	34	28	31	448	304
144231	J-233	B.F.	10/16/50	10/10/50	1	44.8	42.6	43.5	14.2	13.0	13.7	126	85	103	37	31	34	456	344
144232	J-234 ^c	B.F.	10/16/50	10/10/50	1	44.4	42.0	43.1	14.0	12.7	13.3	121	95	110	32	28	30	400	320
144372	J-235	B.F.	10/23/50	10/16/50	1	44.0	42.0	42.9	14.3	13.1	13.9	127	80	104	36	30	32	472	328
144373	J-236	B.F.	10/23/50	10/16/50	1	44.8	41.6	43.1	14.2	13.2	13.8	119	84	100	35	30	32	512	312
144416	J-237	B.F.	10/30/50	10/23/50	1	43.2	41.4	42.7	14.6	12.7	13.5	114	82	99	35	30	33	392	296
144417	J-238	B.F.	10/30/50	10/25/50	1	42.6	40.8	41.9	13.8	12.8	13.3	126	80	105	35	31	33	392	296
Current Mill Average:								43.1		13.6		105		105			33		
Cumulative Mill Average:								42.9		14.2		106		106			33		
Mill Factor, %:								100.5		95.8		99.1		99.1			100.0		
Mill Index, %:								99.8		94.4		99.1		99.1			89.2		

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

^b This average includes the readings for one or more specimens which rubbed against the sector during the tear test

^c The sample received by the Institute had an unidentified sheet in the usual "D-8" position of the D series. The sheet was treated as if it were D-8.

TABLE XIII

SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

File No.	Mill Code	Date Recd.	Date Made	Mch No	Basis Weight, lb.		Caliper, points		Bursting Strength, points		G. E. Puncture, units		Elmendorf In g./sheet							
					Max	Min.	Max.	Min.	Max.	Min.	Max.	Min.								
<u>Mill E-44/46-lb. Drum Linerboard</u>																				
144118	E-192	10/ 2/50	9/27/50	1	49.8	47.6	48.8	15.2	14.1	14.8	118	87	100	46	40	42	496	400	442 ^a	
144198	E-193	10/ 6/50	10/ 3/50	1	50.6	48.4	49.7	15.3	14.2	14.7	116	60	90	46	39	43	536	424	467 ^a	
144209	E-194	10/11/50	10/ 5/50	1	50.0	47.2	49.0	14.9	13.2	14.1	100	78	91	45	35	41	448	376	416 ^a	
144218	E-195	10/13/50	10/10/50	1	50.0	48.0	48.8	14.7	13.9	14.2	112	82	96	46	40	42	504	416	455 ^a	
144219	E-196	10/13/50	10/11/50	1	48.4	46.4	47.7	14.8	14.0	14.4	105	78	92	45	40	41	512	384	466 ^a	
144364	E-198	10/21/50	10/18/50	1	49.8	48.0	48.7	15.5	14.3	14.9	104	67	90	42	36	39	512	456	485 ^a	
144383	E-199	10/26/50	10/24/50	1	46.0	44.6	45.4	14.1	13.0	13.7	118	89	103	38	34	36	440	384	408 ^a	
144400	E-200	10/28/50	10/25/50	1	48.8	46.0	47.7	16.9	15.3	16.0	93	73	83	44	37	41	504	400	445 ^a	
Current Mill Average:							48.2		14.6			93			41			448		
Cumulative Mill Average:							46.9		14.1			100			41			446		
Mill Factor, %:							102.8		103.5			93.0			100.0			100.4		
<u>Miscellaneous--Core Liner</u>																				
144363	E-197	10/20/50	10/17/50	1	52.4	50.2	51.5	13.4	12.5	13.0	128	95	111	45	41	42	496	448	471 ^a	

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

TABLE XIV

Mill Code	Preconditioning			Conditioning		
	R.H., %	Temp., ° F.	Time, hr.	R.H., %	Temp., ° F.	Time, hr.
A	No preconditioning			48-50	72-74	24
B	57-92	74-90	1/2	50	70	24
C	53-65	74-78	24-72	53-65	74-78	24-48
D	34-35	71	8	50	74	16
E	No preconditioning			49-69	74-88	--
F	No preconditioning			No conditioning		
G	50	73	24-72	50	73	24-72
H	No preconditioning			50	73	24
I	No preconditioning			50-62	76-87	--
J	No preconditioning			49-51	72-74	1/2

A summary of the mill comparisons for the current period as compared with the previous period may be seen in Tables XV and XVI, respectively. The comparisons for the various mills are given in Tables XVII to XXVI, inclusive, for the 42-lb. liner samples. A comparison of the special drum stock is given in Table XXVII. In all the comparisons given in Tables XV to XXVII, inclusive, the Institute's test values have been used as the reference line.

A comparison of the test data in Tables XV and XVI indicates that in the majority of cases there is good agreement between the mill and Institute data. Table XV 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 XVI, the average differences shown in Table XV have been calculated on a percentage basis for each test and 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 XVI that the maximum variation in the average basis weight between the results of the Institute and those of a given mill on corresponding samples is one per cent for the current period. This figure compares favorably with the maximum variation of one per cent for the preceding two periods. Further, it may be noted that the average basis weight results for Mills A, F, H, and I are higher than those for the Institute, whereas the average results for Mills B, C, D, G, and J are lower. 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 all mills are lower. None of these differences appear to be significantly large with the possible exception of the variation for Mill F.

It may be noted in Table XVI that the bursting strength results show a maximum variation of ten per cent for the current period. The results for Mills A, B, C, D, H, and I are higher than those for the Institute, whereas the results for Mills F, G, and J are lower. The agreement in bursting strength results is good for the current period. Only the variations for Mills F and I appear to be excessive.

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

It may be seen in Table XV that the average machine direction tear results for Mills C, F, and I are higher than those for the Institute, whereas the average results for Mills A, B, D, G, and H are lower and the average result for Mill J is the same. The maximum variation for the current period is fourteen per cent. The differences encountered for Mills B, D, F, G, and I appear to be rather large.

With regard to the across-machine direction tear results, it may be noted that the average results for Mills A, C, F, I, and J are higher than those for the Institute, while the average results for Mills B, D, G, and H are lower. A maximum variation of ten per cent is noted for the current period. The differences encountered for Mills B, F, and I appear to be incompatible with the variations for the other mills.

TABLE XV
SUMMARY OF TEST RESULT COMPARISONS

Average Mill and Institute Results	Mills*									
	A	B	C	D	E	F	G	H	I	J
No. Samples Compared	7	15	7	22	0	5	8	6	3	10
Basis Weight										
Institute	42.4	43.9	42.6	43.2	--	42.3	43.1	42.7	42.8	43.1
Mill	42.6	43.3	42.1	43.0	--	42.4	42.6	43.3	43.1	42.9
Av. difference**	+0.2	-0.5	-0.5	-0.2	--	+0.1	-0.5	+0.6	+0.3	-0.2
Max. difference***	+0.6	-1.4	-1.3	+1.2	--	+0.9	-0.9	+0.9	+1.2	-0.9
Caliper										
Institute	13.4	14.2	14.0	13.6	--	14.0	14.0	12.9	14.3	13.6
Mill	13.3	13.8	13.6	13.3	--	13.3	13.6	12.8	13.8	13.5
Av. difference**	-0.1	-0.4	-0.4	-0.3	--	-0.7	-0.4	-0.1	-0.5	-0.1
Max. difference***	+0.5	-0.7	-0.6	-0.7	--	-0.9	-0.7	-0.3	-0.7	-0.4
Bursting Strength										
Institute	102	102	101	104	--	110	103	106	101	105
Mill	107	105	106	107	--	99	100	111	109	103
Av. difference**	+5	+3	+5	+3	--	-11	-3	+5	+8	-2
Max. difference***	+12	+8	+8	+14	--	-19	-8	+6	+11	-8
G. B. Puncture										
Institute	33	37	38	38	--	38	35	35	34	33
Mill	35	39	39	--	--	44	35	33	33	33
Av. difference**	+2	+2	+1	--	--	+6	0	-2	-1	0
Max. difference***	+5	+5	+2	--	--	+7	+2	-3	-3	-3
Tearing Strength, in										
Institute	361	408	394	417	--	385	351	364	361	368
Mill	360	365	399	358	--	423	310	362	392	368
Av. difference**	-1	-43	+5	-59	--	+38	-41	-2	+31	0
Max. difference***	-30	-85	-47	-86	--	+57	-56	+46	+57	+22
Tearing Strength, across										
Institute	392	429	435	435	--	427	383	417	409	384
Mill	393	389	453	409	--	462	360	415	448	388
Av. difference**	+1	-40	+18	-26	--	+35	-23	-2	+39	+4
Max. difference***	+33	-69	+38	-52	--	+57	-51	+27	+61	+32

- * Comparison based on averages involves only those samples on which mill test data were submitted.
- ** Average difference is the difference between the Institute mill average and the mill average based on mill test data.
- *** Maximum difference encountered in comparing the Institute average and the mill average for any sample submitted by that particular mill.

TABLE XVI

SUMMARY OF TEST RESULTS--COMPARISON BY PERIODS

	Average Difference, per cent					
	Basis Weight	Caliper	Bursting Strength	G. E. Puncture	Tearing Strength, in	Tearing Strength, across
Mill A						
Current period	+0.5	-0.7	+5	+6	-0.3	+0.3
39th period	0	+2	+6	+3	+0.6	+0.3
38th period	+0.7	-0.8	+7	+6	+9	+0.8
Mill B						
Current period	-1	-3	+3	+5	-11	-9
39th period	-1	-3	+3	+3	-13	-10
38th period	+0.2	-3	+4	+3	-11	-7
Mill C						
Current period	-1	-3	+5	+3	+1	+4
39th period	-0.9	-2	+3	+3	+11	+13
38th period	-0.7	-0.7	+3	+3	+7	+10
Mill D						
Current period	-0.5	-2	+3	--	-14	-6
39th period	-0.5	-2	0	--	-11	-5
38th period	-0.2	-2	-0.9	--	-8	-4
Mill E						
Current period	--	--	--	--	--	--
39th period	--	--	--	--	--	--
38th period	--	--	--	--	--	--
Mill F						
Current period	+0.2	-5	-10	+16	+10	+8
39th period	0	-4	-4	+14	+5	+7
38th period	-0.7	-4	-3	+10	0	+1
Mill G						
Current period	-1	-3	-3	0	-12	-6
39th period	-0.7	-3	+1	-3	-7	-4
38th period	+0.2	-0.7	0	0	-2	+1
Mill H						
Current period	+1	-0.8	+5	-6	-0.5	-0.5
39th period	+1	-1	+2	-3	-4	-0.5
38th period	+0.5	+2	+2	-3	-10	-6
Mill I						
Current period	+0.7	-3	+8	-3	+9	+10
39th period	-0.5	-2	+5	0	+14	+14
38th period	-0.5	-4	+5	--	+14	+9
Mill J						
Current period	-0.5	-0.7	-2	0	0	+1
39th period	+0.2	+1	-4	0	+7	+8
38th period	-0.9	+2	-6	+6	+3	+10

TABLE XVII

MARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950

Weight, lb.	Caliper, points		Bursting Strength, points		G. E. Puncture, units		Elmendorf Tear, g./sheet		IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.		
	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	In Mill Diff.	Across Mill Diff.						
42.8	+0.3	14.1	13.6	96	105	+9	33	34	+1	375 ^a	395	404 ^a	407	+3
42.6	-0.2	13.6	13.4	96	108	+12	31	35	+4	361 ^a	356	385 ^a	400	+15
42.7	+0.3	13.2	13.2	102	109	+7	32	37	+5	344 ^a	356	403 ^a	415	+12
42.5	+0.6	12.6	13.1	105	104	-1	33	33	0	316	341	379	366	-13
42.2	+0.4	13.3	13.1	104	105	+1	35	35	0	368 ^a	338	393 ^a	372	-21
42.4	-0.2	13.3	13.2	100	105	+5	32	34	+2	373 ^a	347	385 ^a	365	-20
42.8	+0.1	13.6	13.3	110	114	+4	34	37	+3	387	386	393 ^a	426	+33
42.6	+0.2	13.4	13.3	102	107	+5	33	35	+2	361	360	392	393	+1

Mill A--42-lb. Linerboard

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

calculated from the totals of the individual readings.

TABLE XVII

SUMMARY OF INDIVIDUAL TEST LOTS - OCTOBER 1 THROUGH OCTOBER 31, 1950

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		IPC Mill Diff.		Bursting Strength, points		G. E. Puncture, units		IPC Mill Diff.	IPC	In Mill Dif	Elmend. g
					IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.						
144119	A-177	WF1S	9/27/50	2	42.5	42.8	+0.3	14.1	13.6	-0.5	96	105	+9	33	34	375 ^a	395	+20
144199	A-178	WF1S	10/1/50	2	42.8	42.6	-0.2	13.6	13.4	-0.2	96	108	+12	31	35	361 ^a	356	-5
144210	A-179	WF1S	10/5/50	1	42.4	42.7	+0.3	13.2	13.2	0.0	102	109	+7	32	37	344 ^a	356	+12
144233	A-180	WF1S	10/9/50	1	41.9	42.5	+0.6	12.6	13.1	+0.5	105	104	-1	33	33	316	341	+25
144234	A-181	WF1S	10/11/50	2	41.8	42.2	+0.4	13.3	13.1	-0.2	104	105	+1	35	35	368 ^a	338	-30
144366	A-182	WF1S	10/15/50	2	42.6	42.4	-0.2	13.3	13.2	-0.1	100	105	+5	32	34	373 ^a	347	-26
144367	A-183	WF1S	10/16/50	2	42.7	42.8	+0.1	13.6	13.3	-0.3	110	114	+4	34	37	387	386	-1
Current Mill Average.					42.4	42.6	+0.2	13.4	13.3	-0.1	102	107	+5	33	35	361	360	-1

Mill A--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 XVIII
SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

Institute Data versus Mill Data																	
IPC	Basis Weight, lb.	IPC Mill Diff.	Caliper, points	IPC Mill Diff.	Bursting Strength, points	IPC Mill Diff.	G. E. Puncture, units	IPC Mill Diff.	IPC Mill Diff.	In IPC Mill Diff.	Across IPC Mill Diff.	Elmendorf Tear, g./sheet					
													IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	
<u>Mill B--42-lb. Linerboard</u>																	
44.3	43.7	-0.6	14.5	14.1	-0.4	100	103	+3	37	38	+1	393 ^a	344	-49	417 ^a	365	-52
43.4	43.1	-0.3	14.3	13.8	-0.5	98 ^b	102	+4	36	38	+2	396 ^a	347	-49	434 ^a	362	-72
44.5	43.9	-0.6	14.8	14.2	-0.6	105	103	-2	37	35	-2	382 ^a	363	-19	407 ^a	377	-30
44.4	44.4	0.0	14.9	14.8	-0.1	108 ^b	108	0	39	41	+2	400 ^a	397	-3	453 ^a	437	-16
44.8	44.7	-0.1	14.9	14.7	-0.2	102	105	+3	38	42	+4	431 ^a	396	-35	441 ^a	419	-22
43.9	43.5	-0.4	14.2	14.1	-0.1	107 ^c	104	-3	36	39	+3	397 ^a	381	-16	421 ^a	398	-23
45.1	44.4	-0.7	14.1	13.7	-0.4	105	111	+6	39	39	0	398 ^a	385	-13	427 ^a	414	-13
44.1	42.7	-1.4	14.2	13.5	-0.7	103	103	0	38	38	0	430	345	-85	429 ^a	383	-46
44.1	43.4	-0.7	14.2	14.1	-0.1	102	102	0	36	38	+2	424 ^a	360	-64	417 ^a	379	-38
43.9	43.3	-0.6	14.4	13.9	-0.5	100	103	+3	37	39	+2	429 ^a	375	-54	458 ^a	389	-69
43.8	43.3	-0.5	14.0	14.0	0.0	103	102	-1	38	38	0	432 ^a	362	-70	441 ^a	377	-64
43.1	42.4	-0.7	13.8	13.2	-0.6	100	106	+6	34	39	+5	405 ^a	368	-37	399 ^a	405	+6
43.2	42.5	-0.7	13.7	13.2	-0.5	101	104	+3	35	39	+4	381 ^a	355	-26	424 ^a	375	-49
43.0	42.6	-0.4	13.7	13.2	-0.5	98	106	+8	36	38	+2	420 ^a	363	-57	433 ^a	385	-48
43.0	42.6	-0.4	13.7	13.2	-0.5	101	105	+4	36	38	+2	401	342	-59	429 ^a	374	-55
43.9	43.4	-0.5	14.2	13.8	-0.4	102	105	+3	37	39	+2	408	365	-43	429	389	-40

for one or more specimens which tore beyond the 3/8-inch limit. There was a shive in the test area of one of the specimens. The testing of one of the specimens.

ite contained an E series of sheets in place of an F series; this E series

ata are calculated from the totals of the individual readings.

TABLE XVIII

SUMMARY OF INDIVIDUAL TEST LOYS--OCTOBER 1 THROUGH OCTOBER 31, 1950. (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Puncture, units		IPC Mill Dif.	IPC Mill Dif.	IPC Mill Dif.	Elme g In Mill Dif													
					IPC	Mill	Diff.	IPC	Mill	Diff.					IPC	Mill	Diff.										
144174	B-276	WF1S	9/17/50	1	44.3	43.7	-0.6	14.5	14.1	-0.4	100	103	+3	37	38	+1	393 ^a	344	-4								
144175	B-277	WF1S	9/18/50	1	43.4	43.1	-0.3	14.3	13.8	-0.5	98 ^b	102	+4	36	38	+2	396 ^a	347	-4								
144176	B-278	WF1S	9/18/50	1	44.5	43.9	-0.6	14.8	14.2	-0.6	105	103	-2	37	35	-2	382 ^a	363	-1								
144230	B-279	WF1S	9/25/50	1	44.4	44.4	0.0	14.9	14.8	-0.1	108 ^b	108	0	39	41	+2	400 ^a	397	-								
144224	B-280	WF1S	9/25/50	1	44.8	44.7	-0.1	14.9	14.7	-0.2	102	105	+3	38	42	+4	431 ^a	396	-3								
144225	B-281	WF1S	9/25/50	--	43.9	43.5	-0.4	14.2	14.1	-0.1	107 ^c	104	-3	36	39	+3	397 ^a	381	-1								
144226	B-282	WF1S	9/25/50	1	45.1	44.4	-0.7	14.1	13.7	-0.4	105	111	+6	39	39	0	398 ^a	385	-1								
144220	B-283	WF1S	10/3/50	1	44.1	42.7	-1.4	14.2	13.5	-0.7	103	103	0	38	38	0	430	345	-8								
144221	B-284	WF1S	10/3/50	1	44.1	43.4	-0.7	14.2	14.1	-0.1	102	102	0	36	38	+2	424 ^a	360	-6								
144222	B-285 ^d	WF1S	10/3/50	1	43.9	43.3	-0.6	14.4	13.9	-0.5	100	103	+3	37	39	+2	429 ^a	375	-5								
144223	B-286	WF1S	10/3/50	1	43.8	43.3	-0.5	14.0	14.0	0.0	103	102	-1	38	38	0	432 ^a	362	-7								
144368	B-287	WF1S	10/8/50	1	43.1	42.4	-0.7	13.8	13.2	-0.6	100	106	+6	34	39	+5	405 ^a	368	-37								
144369	B-288	WF1S	10/8/50	1	43.2	42.5	-0.7	13.7	13.2	-0.5	101	104	+3	35	39	+4	381 ^a	355	-26								
144370	B-289	WF1S	10/8/50	1	43.0	42.6	-0.4	13.7	13.2	-0.5	98	106	+8	36	38	+2	420 ^a	363	-57								
144371	B-290	WF1S	10/8/50	1	43.0	42.6	-0.4	13.7	13.2	-0.5	101	105	+4	36	38	+2	401	342	-59								
Current Mill Average:													43.9	43.4	-0.5	14.2	13.8	-0.4	102	105	+3	37	39	+2	408	365	-43

Mill B--42-lb. Linerboard

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

^b Visual examination revealed that there was a shive in the test area of one of the specimens.

^c An "audible multipop" occurred in the testing of one of the specimens.

^d The sample received by the Institute contained an E series of sheets in place of an F series; this E series was tested in place of the F series.

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

TABLE XIX

SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)
Institute Data versus Mill Data

Lot	Basis Weight, lb.	IPC Mill Diff.	Caliper, points	IPC Mill Diff.	Eursting Strength, points	G. E.		IPC Mill Diff.	IPC Mill Diff.	In IPC Mill Diff.	Across IPC Mill Diff.	Elmendorf Tear, g./sheet
						Puncture, units	g./sheet					
						Mill C--42-lb. Linerboard						
42.8	42.1	-0.7	14.6	-0.6	99	105	38	+1	383 ^a	409	+26	435 ^a
42.6	42.1	-0.5	13.6	-0.2	104	107	39	0	377 ^a	420	+43	437 ^a
42.6	42.3	-0.3	13.9	-0.4	105	105	37	0	403 ^a	409	+6	427 ^a
42.6	41.9	-0.7	13.6	-0.1	105	108	37	-1	407 ^a	360	-47	440 ^a
43.7	42.4	-1.3	14.0	-0.6	98 ^c	106	38	+2	407	386	-21	439 ^a
41.9	42.0	+0.1	14.5	-0.5	98	106	38	+2	406	428	+22	456 ^a
42.2	41.8	-0.4	13.7	0.0	99	104	39	0	373	381	+8	413 ^a
42.6	42.1	-0.5	14.0	-0.4	101	106	38	+1	394	399	+5	435
												453
												450
												470
												465
												427
												434
												485
												443
												453
												450
												470
												465
												427
												434
												485
												443
												453

gs for one or more specimens which tore beyond the 3/8-inch limit.
t-colored streaks on the felt side of the sheets of this sample; thin sheet
ith these streaks.

formation in the area in which the minimum test was obtained.

ata are calculated from the totals of the individual readings.

TABLE XIX

SUMMARY OF INDIVIDUAL TEST LOTS - OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)
 Institute Data versus Mill Data

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.	IPC	IPC Mill Diff.	Caliper, points	IPC Mill Diff.	Bursting Strength, points	IPC Mill Diff.	G. E. Puncture, units	IPC Mill Diff.	IPC	In Mill Diff.	Elmendorf g./she			
																	IPC	IPC Mill Diff.	IPC
144262	C-240	W.F.	9/26/50	1	42.8	42.1	-0.7	14.6	14.0	-0.6	99	105	+6	38	39	+1	383 ^a	409	+26
144197	C-241	W.F.	9/28/50	1	42.6	42.1	-0.5	13.6	13.4	-0.2	104	107	+3	39	39	0	377 ^a	420	+43
144229	C-242	W.F.	10/4/50	1	42.6	42.3	-0.3	13.9	13.5	-0.4	105	105	0	37	37	0	403 ^a	409	+6
144365	C-243	W.F.	10/12/50	1	42.6	41.9	-0.7	13.6	13.5	-0.1	105	108	+3	37	36	-1	407 ^a	360	-47
144374	C-244 ^b	W.F.	10/16/50	1	43.7	42.4	-1.3	14.0	13.4	-0.6	98 ^c	106	+8	38	40	+2	407	386	-21
144403	C-245 ^b	W.F.	10/19/50	1	41.9	42.0	+0.1	14.5	14.0	-0.5	98	106	+8	38	40	+2	406	428	+22
144415	C-246	W.F.	10/23/50	1	42.2	41.8	-0.4	13.7	13.7	0.0	99	104	+5	39	39	0	373	381	+8
Current Mill Average:																			
					42.6	42.1	-0.5	14.0	13.6	-0.4	101	106	+5	38	39	+1	394	399	+5

Mill C--42-lb. Linerboard

- a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.
- b Visual examination revealed light-colored streaks on the felt side of the sheets of this sample; thin sheet formation appeared to coincide with these streaks.
- c Visual examination revealed thin formation in the area in which the minimum test was obtained.

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

TABLE VI

SUMMARY OF INDIVIDUAL TEST DATA - OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

Institute Data Various Mill Data
 G. E.
 Puncture, mils
 IPC Mill Diff. IPC Mill Diff. IPC Mill Diff.

File No.	Mill Code	Fib- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Strength, points		IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Kiln	
					IPC	Mill	IPC	Mill	IPC	Mill					
144120	D-285	W.F.	9/28/50	4	44.0	43.4	13.2	-0.2	118	112	-6	39	411 ^a	352	
144121	D-286	W.F.	9/29/50	4	43.8	43.5	13.3	0.0	111	109	-2	39	419 ^a	349	
144180	D-287	W.F.	9/30/50	4	42.8	42.8	13.0	-0.4	99 ^b	103	+4	39	417 ^a	368	
144181	D-288	W.F.	10/1/50	4	43.7	42.9	13.6	-0.7	100	105	+5	37	407 ^a	365	
144182	D-289	W.F.	10/2/50	4	43.6	42.9	13.4	-0.2	104	110	+6	39	417 ^a	369	
144195	D-290 ^d	W.F.	10/3/50	4	43.3	42.8	13.0	+0.1	103	108	+5	37	421 ^a	352	
144196	D-291	W.F.	10/4/50	4	44.0	43.3	13.1	-0.3	97	109	+12	39	454 ^a	368	
144203	D-292	W.F.	10/5/50	4	41.8	43.0	13.5	+0.1	102	109	+7	35	389 ^a	336	
144204	D-293	D.F.	10/3/50 ^e	4	42.3	42.1	13.6	-0.1	102	105	+3	40	415 ^a	360	
144205	F-294	W.F.	10/6/50	4	44.8	44.5	13.3	-0.1	113	106	-7	40	428 ^a	352	
144206	D-295	W.F.	10/7/50	4	42.9	42.2	13.1	-0.1	104	105	+1	37	419 ^a	349	
144207	D-296	W.F.	10/8/50	4	42.1	41.6	12.6	-0.5	105	103	-2	36	404 ^a	357	
144208	D-297	W.F.	10/9/50	4	42.0	42.0	12.9	+0.2	109	103	-6	36	396 ^a	355	
144228	D-298	W.F.	10/12/50	4	44.6	43.9	13.6	-0.6	104	105	+1	40	419 ^a , 340	340	
144263	D-299	D.F.	10/13/50	4	44.3	43.7	14.0	-0.6	101 ^f	104	+3	40	437 ^a	358	
144264	D-300	D.F.	10/14/50	4	43.9	44.2	13.4	-0.5	104	114	+10	40	420 ^a	368	
144265	D-301	D.F.	10/15/50	4	41.7	42.5	13.4	-0.2	97	108	+11	36	399	362	
144266	D-302	D.F.	10/16/50	4	43.7	44.0	13.5	-0.5	106	106	0	40	429 ^a	375	
144375	D-303	W.F.	10/19/50	4	42.1	41.6	12.9	-0.5	102	111	+9	37	398 ^a	355	
144378	D-304	W.F.	10/20/50	4	42.9	42.6	12.9	-0.6	104	107	+3	38	423 ^a	356	
144387	D-305	W.F.	10/24/50	4	43.7	44.1	13.2	-0.5	99	113	+14	39	419 ^a	355	
144388	D-306	W.F.	10/25/50	4	43.6	43.3	14.9	-0.5	96	102	+6	41	432 ^a	366	
Current Mill Average:					43.2	43.0	-0.2	13.3	-0.3	104	107	+3	38	417	358

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

^b Visual examination revealed thin formation in the area in which the minimum test was obtained.

^c This average includes the readings for one or more specimens which rubbed against the tear test.

^d Visual examination revealed dry streaks on the felt side of the FI and DI sheets of this sample.

^e This date appeared on the sample received by the Institute; the mill data sheet gives the date of manufacture as October

^f Visual examination revealed thin formation in the area in which one of the test readings was obtained. The reading obtained however, was not the minimum value.

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

TABLE XXI
SUMMARY OF INDIVIDUAL TEST LOTS - OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)
Institute Data versus Mill Data

File No.	Mill Code	Fln-1sh	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, points		G. E. Puncture, units		IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Elmend g.		
					IPC	Mill	IPC	Mill	IPC	Mill	IPC	Mill						
144177	F-74	S.F.	9/22/50	--	43.3	44.2	+0.9	13.7	12.8	-0.9	117	98	-19	39	46	397	452	+7
144178	F-75	S.F.	9/27/50	--	42.7	43.0	+0.3	14.3	13.7	-0.6	110	96	-14	38	45	367 ^a	424	+7
144179	F-76	S.F.	9/28/50	-	41.7	41.6	-0.1	14.1	13.5	-0.6	108	99	-9	37	42	362 ^a	413	+5
144200	F-77	S.F.	10/2/50	-	42.1	41.6	-0.5	13.7	12.8	-0.9	108	100	-8	39	43	411 ^a	428	+4
144227	F-78	S.F.	10/3/50	--	41.5	41.4	-0.1	14.3	13.6	-0.7	106	103	-3	37	42	389	398	+5
No samples submitted.																		
TABLE XXII																		
Mill F--42 lb. Linerboard																		
Current Mill Average:																		
					42.3	42.4	+0.1	14.0	13.3	-0.7	110	99	-11	38	44	385	423	+6

TABLE XXIII																		
Mill G--42-lb. Linerboard																		
Current Mill Average:																		
144212	G-294	WFL	10/5/50	1	43.2	42.5	-0.7	14.6	14.4	-0.2	98	93	-5	36	34	356 ^a	306	-2
144213	G-295	WFL	10/5/50	1	43.0	42.4	-0.6	14.5	14.1	-0.4	102	96	-6	35	33	353 ^a	297	-2
144214	G-296	WFL	10/8/50	1	42.5	42.8	+0.3	13.9	13.2	-0.7	97	102	+5	35	33	349 ^a	300	-2
144215	G-297	WFL	10/8/50	1	43.3	42.9	-0.4	14.0	13.6	-0.4	108	100	-8	35	34	331	323	-1
144379	G-298	WFL	10/20/50	1	43.4	42.5	-0.9	13.5	13.4	-0.1	105	101	-4	34	34	355 ^a	305	0
144380	G-299	WFL	10/20/50	1	42.6	42.0	-0.6	15.0	14.4	-0.6	104	103	-1	35	35	362 ^a	319	0
144381	G-300	WFL	10/22/50	1	43.8	43.2	0.6	13.0	12.7	-0.3	107	105	-2	35	36	351 ^a	318	+1
144382	G-301	WFL	10/22/50	1	43.0	42.7	-0.3	13.4	12.9	-0.5	102	103	+1	35	37	351 ^a	315	+2
Current Mill Average:																		
					43.1	42.6	-0.5	14.0	13.6	-0.4	103	100	-3	35	35	351	310	0

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

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

TABLE XXIV

SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950(continued)
 Institute Data versus Mill Data

Lot No	Basis weight, lb.		Caliper, points		Bursting Strength, points		G. E. Puncture, units		Elmendorf Tear, g./sheet			
	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	In	Across		
	<u>Mill H-42-lb. Linerboard</u>											
3	43.0	+0.2	12.1	12.0 -0.1	112	116 +4	34	31 -3	363 ^a	351 -12	404 ^a	427 +23
2	42.8	+0.7	12.2	11.9 -0.3	111	114 +3	34	31 -3	347 ^a	393 +46	410 ^a	437 +27
2	42.9	+0.9	14.0	13.9 -0.1	101	106 +5	36	35 -1	340 ^a	361 +21	426 ^a	403 -23
3	42.7	+0.2	12.2	11.9 -0.3	109	114 +5	34	34 0	375	364 -11	435 ^a	425 -10
2	42.5	+0.7	13.5	13.5 0.0	103	109 +6	34	33 -1	378 ^a	352 -26	418 ^a	393 -25
2	42.3	+0.7	13.6	13.4 -0.2	102	108 +6	35	32 -3	381	354 -27	408 ^a	405 -3
	42.7	+0.6	12.9	12.8 -0.1	106	111 +5	35	33 -2	364	362 -2	417	415 -2
	<u>Mill I-42-lb. Linerboard</u>											
1	43.9	-0.4	14.3	14.2 -0.1	106	114 +8	36	33 -3	361 ^a	393 +32	429 ^a	445 +16
1	42.3	+0.1	14.2	13.5 -0.7	102	107 +5	33	32 -1	351	357 +6	385 ^a	424 +39
	42.2	+1.2	14.3	13.7 -0.6	96	107 +11	34	34 0	370	427 +57	413 ^a	474 +61
	42.8	+0.3	14.3	13.8 -0.5	101	109 +8	34	33 -1	361	392 +31	409	448 +39

TABLE XXV

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

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

TABLE XXIV

SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950(continued)
 Institute Data versus mill Data

File No.	Mill Code	Fib- ish	Date Made	Mch. No	Basis Weight, lb.		Calliper, points		Bursting Strength, points		G. E. Puncture, units		Elmend In Mill Diff.						
					IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.							
144201	H-201	WFIS	9/22/50	3	43.0	43.2	+0.2	12.1	12.0	-0.1	112	116	+4	34	31	-3	363 ^a	351	-12
144202	H-202	WFIS	9/18/50	2	42.8	43.5	+0.7	12.2	11.9	-0.3	111	114	+3	34	31	-3	347 ^a	393	+46
144376	H-203	WFIS	9/25/50	2	42.9	43.8	+0.9	14.0	13.9	-0.1	101	106	+5	36	35	-1	340 ^a	361	+21
144377	H-204	WFIS	9/26/50	3	42.7	42.9	+0.2	12.2	11.9	-0.3	109	114	+5	34	34	0	375	364	-11
144418	H-205	WFIS	10/11/50	2	42.5	43.2	+0.7	13.5	13.5	0.0	103	109	+6	34	33	-1	378 ^a	352	-26
144419	H-206	WFIS	10/12/50	2	42.3	43.0	+0.7	13.6	13.4	-0.2	102	108	+6	35	32	-3	381	354	-27
Current Mill Average:					42.7	43.3	+0.6	12.9	12.8	-0.1	106	111	+5	35	33	-2	364	362	-2

Mill H-42-lb. Linerboard

TABLE XXV

Mill I--42-lb. Linerboard

144211	I-136	WFIS	10/ 4/50	1	43.9	43.5	-0.4	14.3	14.2	-0.1	106	114	+8	36	33	-3	361 ^a	393	+32
144401	I-137	WFIS	10/18/50	1	42.3	42.4	+0.1	14.2	13.5	-0.7	102	107	+5	33	32	-1	351	357	+6
144402	I-138	WFIS	10/21/50	1	42.2	43.4	+1.2	14.3	13.7	-0.6	96	107	+11	34	34	0	370	427	+57
Current Mill Average:					42.8	43.1	+0.3	14.3	13.8	-0.5	101	109	+8	34	33	-1	361	392	+31

^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 XXVI

RY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

Institute Data versus Mill Data

asis Weight, lb.	IPC Mill Diff.	Caliper, points	IPC Mill Diff.	Bursting Strength, points	IPC Mill Diff.	G. E. Puncture, units	IPC Mill Diff.	IPC	Elmendorf Tear, g./sheet		IPC Mill Diff.				
									In	Across					
43.6	-0.3	14.0	14.0	0.0	107	99	-8	36	36	0	382 ^a	389	399 ^a	404	+5
43.7	-0.2	14.0	13.8	-0.2	105	101	-4	36	36	0	383 ^a	405	383 ^a	415	+32
42.7	-0.9	13.3	13.3	0.0	110	105	-5	32	32	+2	364 ^a	368	406 ^a	383	-23
42.7	0.0	13.1	13.2	+0.1	110	106	-4	31	31	+1	367 ^a	354	387 ^{a, b}	377	-10
43.6	+0.1	13.7	13.5	-0.2	103	102	-1	34	34	0	380 ^a	383	413 ^a	403	-10
43.0	-0.1	13.3	13.2	-0.1	110	108	-2	30	30	+2	366 ^a	355	378 ^a	373	-5
42.9	0.0	13.9	13.5	-0.4	104	103	-1	32	32	+2	374 ^a	367	391 ^{a, b}	393	+2
43.2	+0.1	13.8	13.6	-0.2	100	99	-1	32	32	+2	394 ^{a, b}	379	373 ^a	393	+20
41.9	-0.8	13.5	13.6	+0.1	99	100	+1	33	33	-3	335 ^a	335	357 ^a	363	+6
42.0	+0.1	13.3	13.2	-0.1	105	104	-1	33	33	-1	334 ^a	349	357 ^a	374	+17
42.9	-0.2	13.6	13.5	-0.1	105	103	-2	33	33	0	368	368	384	388	+4

Mill J--42-lb. Linerboard

one or more specimens which tore beyond the 3/8-inch limit.
one or more specimens which rubbed against the sector during the tear test.
an unidentified sheet in the usual "D-8" position of the D series.

calculated from the totals of the individual readings.

TABLE XXVI

SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fish	Fin-	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, points		G. E. Puncture, units		In Mill				
						IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill		Diff.	IPC	Mill	
144122	J-229	B.F.		9/24/50	1	43.9	43.6	-0.3	14.0	14.0	0.0	107	99	-8	36	0	382 ^a	389
144123	J-230	B.F.		9/24/50	1	43.9	43.7	-0.2	14.0	13.8	-0.2	105	101	-4	36	0	383 ^a	405
144216	J-231	B.F.		10/ 1/50	1	43.6	42.7	-0.9	13.3	13.3	0.0	110	105	-5	34	+2	364 ^a	368
144217	J-232	B.F.		10/ 1/50	1	42.7	42.7	0.0	13.1	13.2	+0.1	110	106	-4	31	+1	367 ^a	354
144231	J-233	B.F.		10/10/50	1	43.5	43.6	+0.1	13.7	13.5	-0.2	103	102	-1	34	0	380 ^a	383
144232	J-234 ^c	B.F.		10/10/50	1	43.1	43.0	-0.1	13.3	13.2	-0.1	110	108	-2	30	+2	366 ^a	355
144372	J-235	B.F.		10/16/50	1	42.9	42.9	0.0	13.9	13.5	-0.4	104	103	-1	32	+2	374 ^a	367
144373	J-236	B.F.		10/16/50	1	43.1	43.2	+0.1	13.8	13.6	-0.2	100	99	-1	32	+2	394 ^a	379
144416	J-237	B.F.		10/23/50	1	42.7	41.9	-0.8	13.5	13.6	+0.1	99	100	+1	33	-3	335 ^a	335
144417	J-238	B.F.		10/25/50	1	41.9	42.0	+0.1	13.3	13.2	-0.1	105	104	-1	33	-1	334 ^a	349
Current Mill Average:						43.1	42.9	-0.2	13.6	13.5	-0.1	105	103	-2	33	0	368	368

Mill J--42-lb. Linerboard

a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.
 b This average includes the readings for one or more specimens which rubbed against the sector during the tear test.
 c The sample received by the Institute had an unidentified sheet in the usual "D-8" position of the D series.
 The sheet was treated as if it were D-8.

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

TABLE XXVII

ARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

Institute Data versus Mill Data

Weight.	Caliper, points		Bursting strength, points		G. E. Puncture, units		Elmendorf Tear, g./sheet									
	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	In	Across								
11	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.								
	<u>Mill E--44/46-lb. Drum Linerboard</u>															
3.9	+0.1	14.8	13.4	-1.4	100	96	-4	42	39	-3	442 ^a	379	-63	435 ^a	348	-87
3.8	-0.9	14.7	13.6	-1.1	90	96	+6	43	42	-1	467 ^a	439	-28	436 ^a	452	+16
3.4	-1.5	14.1	13.0	-1.1	91	98	+7	41	39	-2	416 ^a	422	+6	461 ^a	402	-59
3.9	+0.1	14.2	13.3	-0.9	96	100	+4	42	41	-1	455 ^a	441	-14	425 ^a	427	+2
3.6	-1.1	14.4	13.1	-1.3	92	97	+5	41	39	-2	466 ^a	427	-39	410 ^a	400	-10
3.8	+0.1	14.9	13.9	-1.0	90	97	+7	39	40	+1	485 ^a	477	-8	425 ^a	420	-5
3.0	-0.4	13.7	12.3	-1.4	103	108	+5	36	33	-3	408 ^a	366	-42	421 ^a	387	-34
3.3	+0.6	16.0	14.5	-1.5	83	93	+10	41	35	-6	445 ^a	378	-67	408 ^a	361	-47
7.8	-0.4	14.6	13.4	-1.2	93	98	+5	41	38	-3	448	416	-32	428	400	-28
1.2	-0.3	13.0	12.1	-0.9	111	125	+14	42	41	-1	471 ^a	432	-39	457 ^a	416	-21

Miscellaneous
Core Liner

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

TABLE XXVII

SUMMARY OF INDIVIDUAL TEST LOTS--OCTOBER 1 THROUGH OCTOBER 31, 1950 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Date Made	Mch. No.	Basis Weight,		Caliper,		Bursting		G. E.		Elmendorf g./she			
				IPC	lb	IPC	points	Strength, points	Puncture, units	In	Mill Diff.				
				Mill Diff.	IPC	IPC	IPC	IPC	IPC	IPC	IPC	IPC			
<u>Mill E-44/46-lb. Drum Linerboard</u>															
144118	E-192	9/27/50	1	48.8	48.9	+0.1	14.8	13.4	-1.4	100	96	-4	442 ^a	379	-63
144198	E-193	10/3/50	1	49.7	48.8	-0.9	14.7	13.6	-1.1	90	96	+6	467 ^a	439	-28
144209	E-194	10/5/50	1	49.0	47.4	-1.6	14.1	13.0	-1.1	91	98	+7	416 ^a	422	+6
144218	E-195	10/10/50	1	48.8	48.9	+0.1	14.2	13.3	-0.9	96	100	+4	455 ^a	441	-14
144219	E-196	10/11/50	1	47.7	46.6	-1.1	14.4	13.1	-1.3	92	97	+5	466 ^a	427	-39
144364	E-198	10/18/50	1	48.7	48.8	+0.1	14.9	13.9	-1.0	90	97	+7	485 ^a	477	-8
144383	E-199	10/24/50	1	45.4	45.0	-0.4	13.7	12.3	-1.4	103	108	+5	408 ^a	366	-42
144400	E-200	10/25/50	1	47.7	48.3	+0.6	16.0	14.5	-1.5	83	93	+10	445 ^a	378	-67
Current Mill Average:				48.2	47.8	-0.4	14.6	13.4	-1.2	93	98	+5	448	416	-32
<u>Miscellaneous Core Liner</u>															
144363	E-197	10/17/50	1	51.5	51.2	-0.3	13.7	12.1	-0.9	111	125	+14	471 ^a	432	-39

^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.

