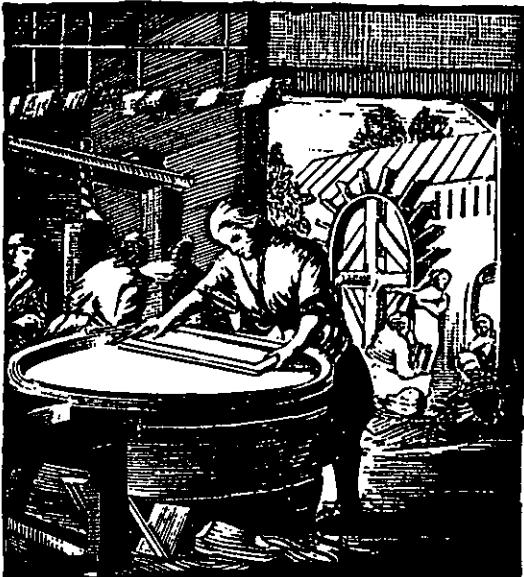


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INSTITUTE OF  
PAPER CHEMISTRY  
*Appleton, Wisconsin*

~~CONTINUOUS BASELINE STUDY~~  
Project 1108-B

Progress Report 20  
to  
Fourdrinier Kraft Board Institute

March 1, 1949

THE INSTITUTE OF PAPER CHEMISTRY  
APPLETON, WISCONSIN

CONTINUOUS BASELINE STUDY

Project 1108-B

Progress Report 20

to  
FOURDRINIER KRAFT BOARD INSTITUTE

March 1, 1949

## THE INSTITUTE OF PAPER CHEMISTRY

APPLETON, WISCONSIN

In conjunction with the F.K.I. Continuous Baseline Study, seventy-six different sample lots of 42-lb. Fourdrinier kraft linerboard were submitted by ten different F.K.I. mills to The Institute of Paper Chemistry for testing during the period February 1 through February 28. In addition to the 42-lb. kraft linerboard, one sample of special drum stock was 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	6
B	13
C	8
D	13
E	0
F	1
G	8
H	8
I	9
J	<u>10</u>
	76

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 February 1 through February 28. 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 43.2 lb., whereas the cumulative F.K.I. average basis weight is 43.1. Hence, the index for basis weight determined in per cent as indicated above is 100.2%. This signifies that the current average basis weight is higher than the cumulative average, which in this case covered the period from July 25, 1947, through January 31, 1949.

A comparison of the results in Table II and Figure I shows that the average basis weight for all mills submitting samples is above the 42-lb. specification set forth in Rule 41. Mill F has the highest average basis weight, it being 44.2 lb. or approximately 5.2% higher than the 42-lb. specification. On the other hand, Mill J has the lowest average basis weight, it being 42.5 lb. or approximately 1.2% 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	3.1
B	3.3
C	3.1
D	2.4
E	--
F	5.2
G	2.1
H	1.4
I	4.0
J	1.2

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 slightly lower.

A comparison of the average calipers for the various mills (see Figure 2) shows that the mill averages vary from a low of 13.1 for Mill C to a high of 14.9 for Mill F, the average being 14.2 which is somewhat lower than the cumulative average of 15.0.

The average bursting strength values obtained for each mill are graphically shown in Figure 3. It may be observed that the average bursting strength for the various mills ranges from a low of 102 for Mill J to a high of 111 for Mill D. The current F.K.I. average bursting strength is 106, slightly higher than the cumulative average of 103.

The data of Table II and Figure 4 show that the average G. E. puncture for all mills is 37 units. It may be noted that Mills C and F have the highest G. E. puncture value and Mill J the lowest. In connection with Mill J, it may be recalled that this mill had the lowest G. E. puncture during the last period. Further, the current F.K.I. average for G. E. puncture is slightly lower than the cumulative F.K.I. average.

A graphic comparison of the Elmendorf tear results for the various mills is given in Figures 5 and 6. The data of Table II show that Mill F has the highest average machine direction tear value, while Mill J has the lowest. Likewise, Mill F has the highest average across-machine direction tear value while Mill J has the lowest. It may be noted that the current F.K.I. average machine direction and across-machine direction tear results are lower than the cumulative averages.

A comparison of the F.K.I. indexes indicates that, for the current period, the test averages for caliper, G. E. puncture, machine and across-machine direction Elmendorf tear are lower than the respective cumulative averages while the test averages for basis weight and bursting strength are higher than the cumulative 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 results obtained on the samples submitted by the

particular mill up to, but not including, the current averages. 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 result for that particular mill or with the cumulative F.K.I. results. As more samples are included and as the test data accumulate, the factors and indexes will have added significance. Since December, 1947, the reports have contained 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 XIII.

TABLE II  
SUMMARY OF COMPOSITE MILL AVERAGES--FEBRUARY 1 THROUGH FEBRUARY 28, 1949

Code No.	Basis Weight, lb.	Caliper, points	Bursting Strength, points	G. E. Puncture, units	In Direction Across Direction g./sheet	Elmendorf Tear, g./sheet
A	43.3	14.7	108	38	387	426
B	43.4	13.7	108	35	363	386
C	43.3	13.1	105	39	359	421
D	43.0	13.9	111	37	395	405
E	No samples submitted.					
F	44.2	14.9	106	39	403	436
G	42.9	14.7	105	37	366	397
H	42.6	14.3	107	36	366	399
I	43.7	14.1	106	38	373	425
J	42.5	14.2	102	32	333	360
Current FKI Average:	43.2	14.2	106	37	372	406
Cumulative FKI Average:	43.1	15.0	103	38	382	414
FKI Index, %:	100.2	94.7	102.9	97.4	97.4	98.1

Figure 1

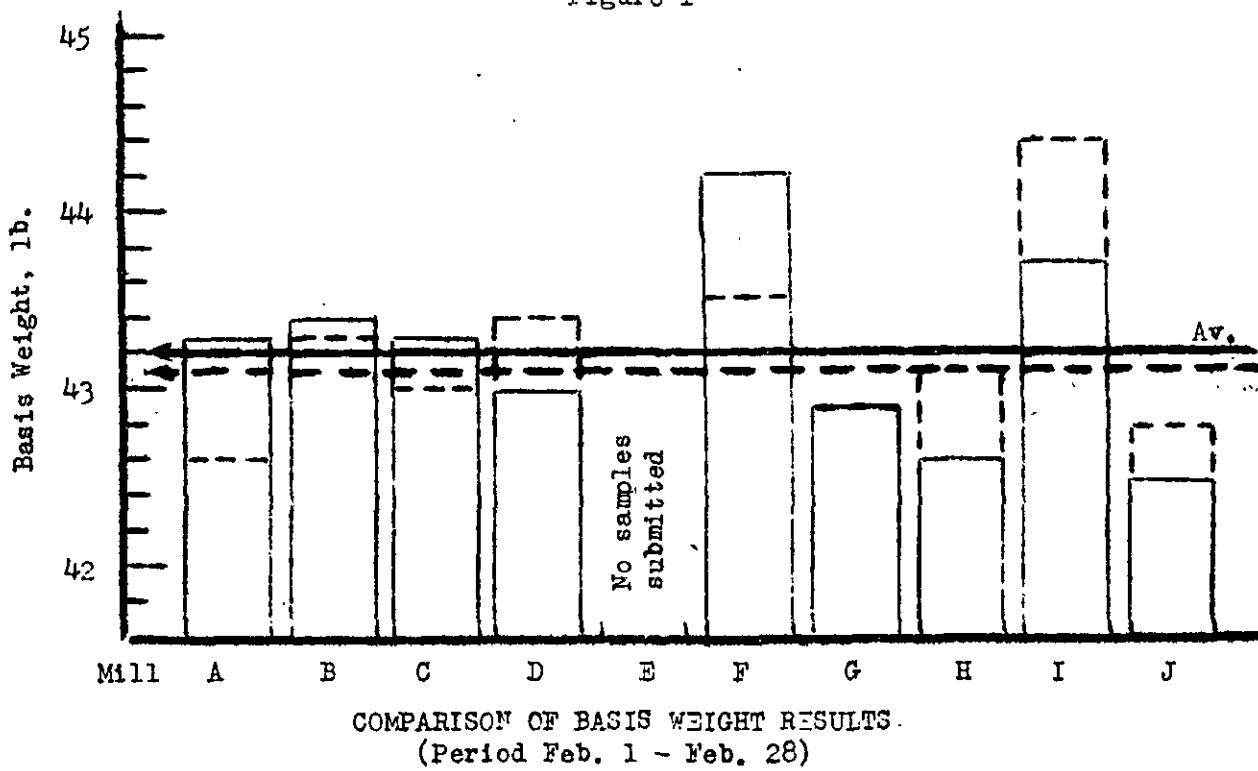
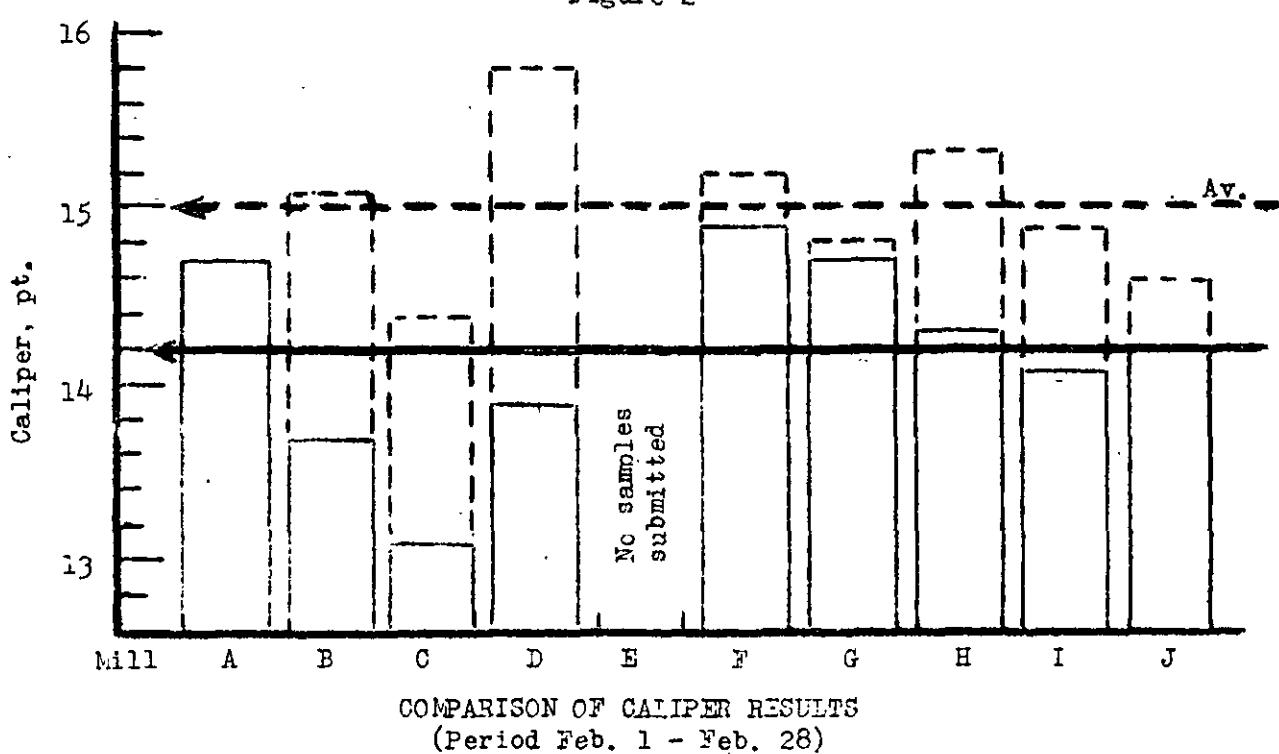


Figure 2



— Current Mill Average

- - - Cumulative Mill Average

Figure 3

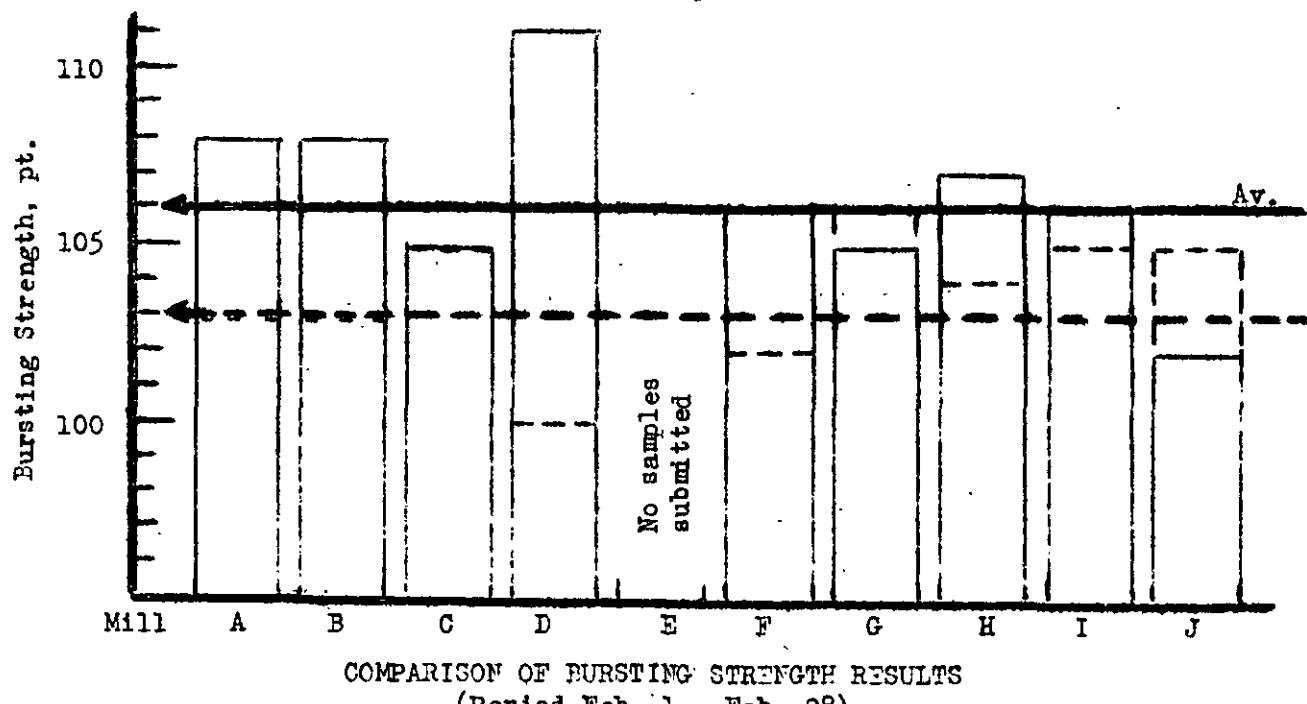


Figure 4

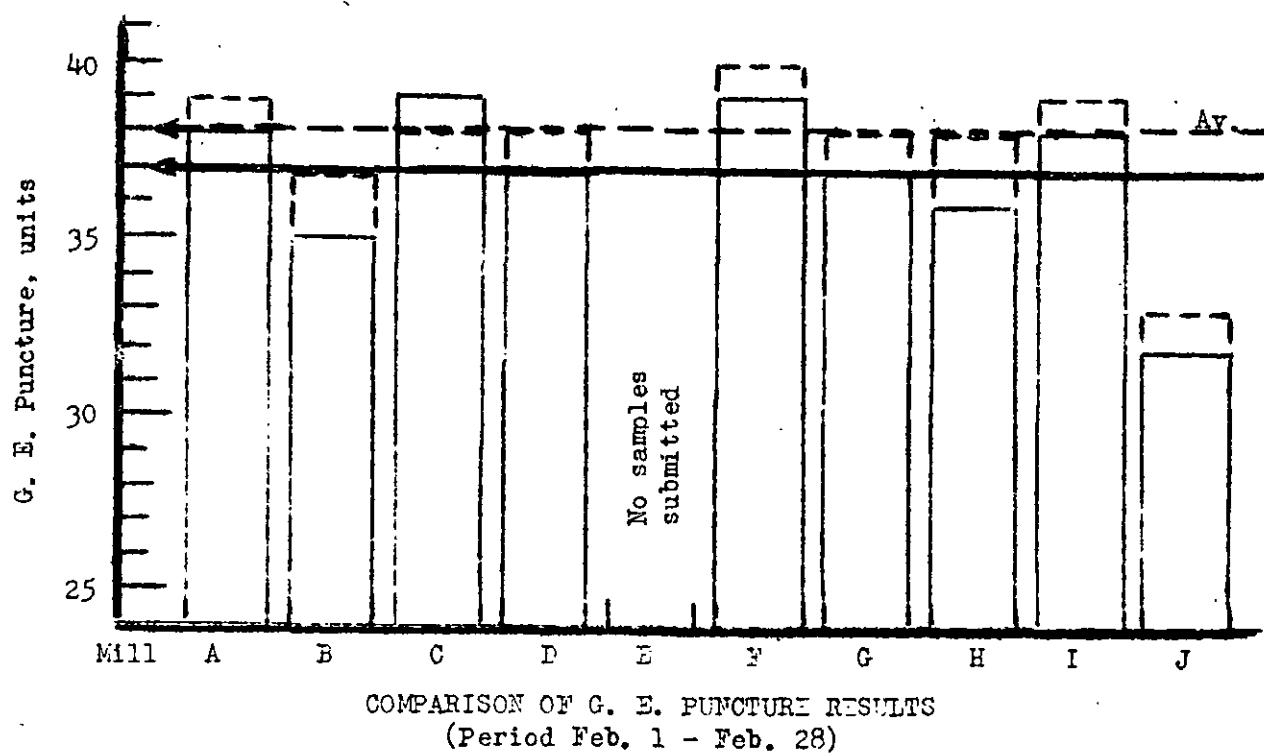
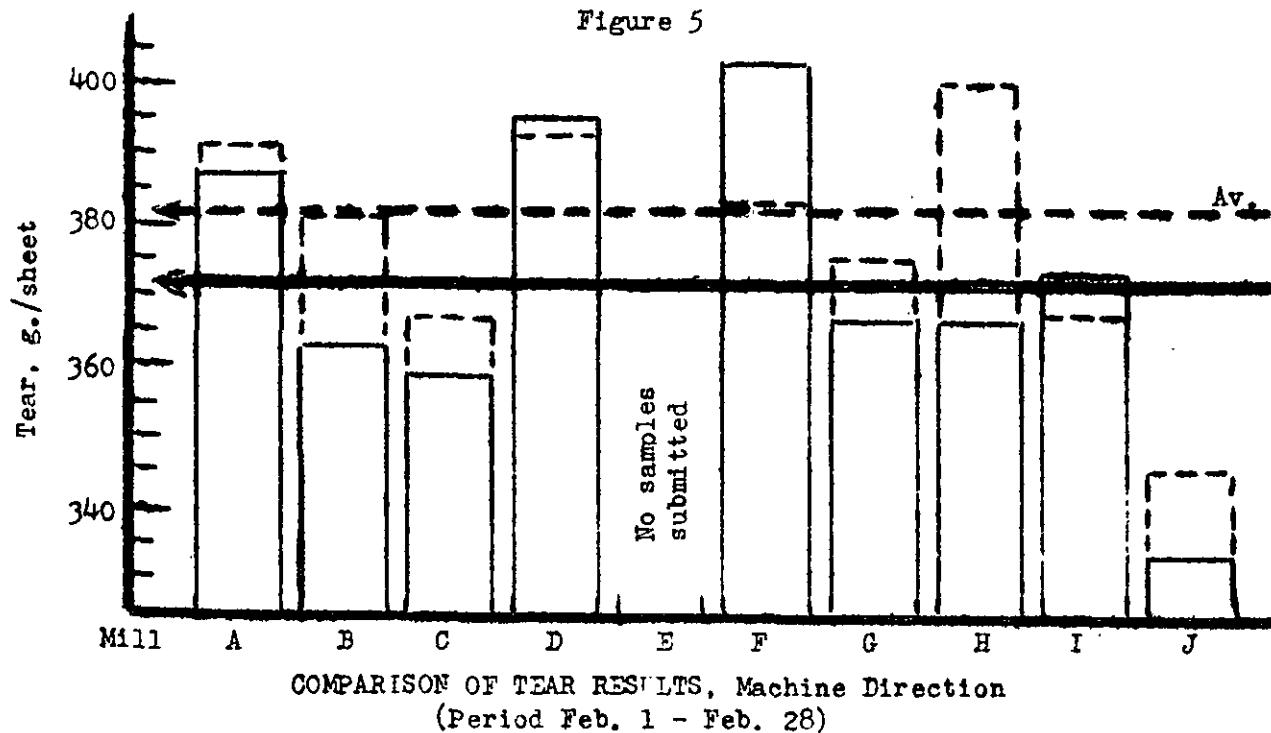
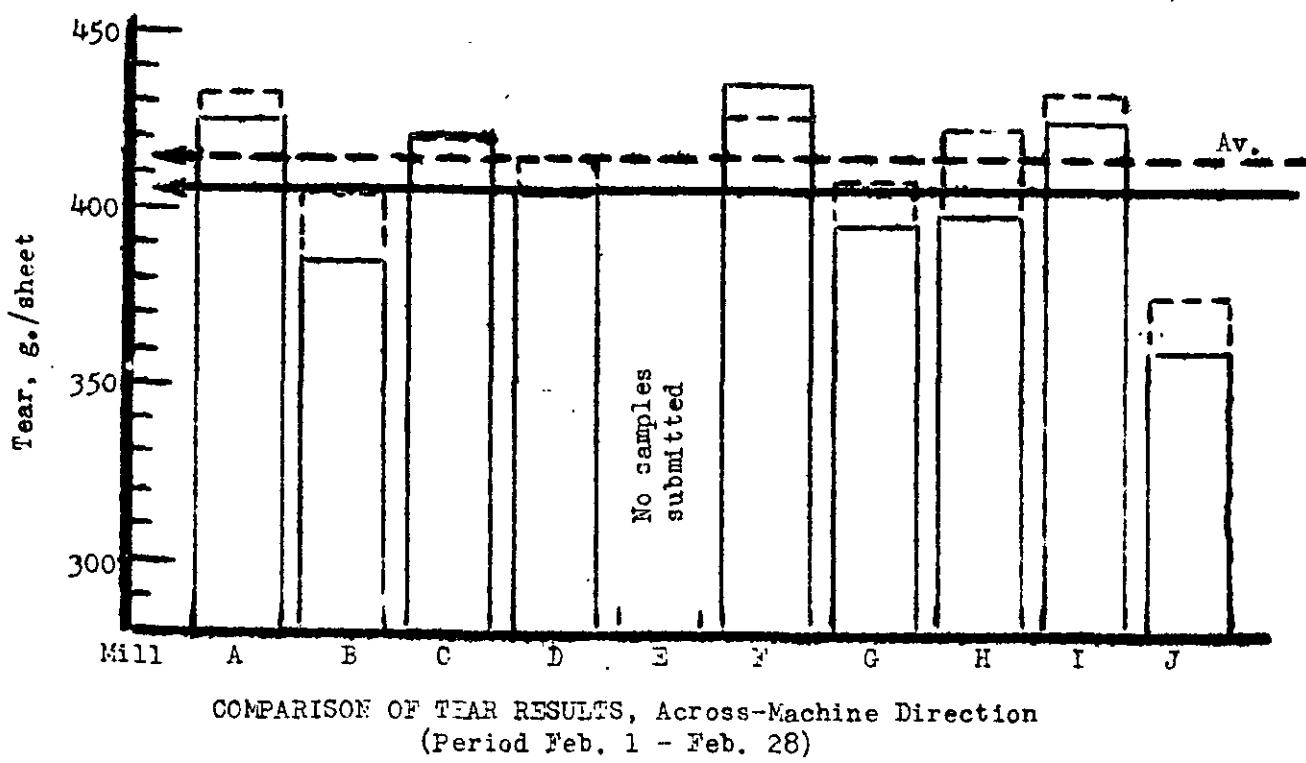


Figure 5



COMPARISON OF TEAR RESULTS, Machine Direction  
(Period Feb. 1 - Feb. 28)

Figure 6



COMPARISON OF TEAR RESULTS, Across-Machine Direction  
(Period Feb. 1 - Feb. 28)

TABLE III  
SUMMARY OF INDIVIDUAL TEST LOTS - FEBRUARY 1 THROUGH FEBRUARY 28, 1948

Mch. No.	Pasis Weight, lb.	Caliper, points	Bursting Strength, points						G. E. Puncture, units						Elmendorf Tear, g./sheet					
			Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	In Across	Max.	Min.	Av.		
<u>Mill A--42-1b. Linerboard</u>																				
) 1	46.0	44.0	44.9	15.3	14.0	14.6	134	84	111	47	37	42	536	336	432 <sup>a</sup>	504	400	451 <sup>a</sup>		
) 1	44.4	42.0	43.4	14.8	12.7	14.0	127	90	108	39	33	36	416	304	368	440	384	407 <sup>a</sup>		
) 1	44.0	40.4	42.8	14.8	13.5	14.2	132	95	111	39	32	36	400	312	361 <sup>a</sup>	464	376	417 <sup>a</sup>		
) 1	44.4	41.8	43.2	16.0	14.0	15.0	124	77	107	43	35	38	456	344	396 <sup>a</sup>	496	384	451 <sup>a</sup>		
) 1	44.2	41.8	43.0	16.8	14.8	15.7	116	86	104	42	32	38	440	320	395 <sup>a</sup>	464	368	419 <sup>a</sup>		
) 1	43.6	42.0	42.5	15.4	12.8	14.3	140	89	108	41	32	37	416	320	373 <sup>a</sup>	432	384	409 <sup>a</sup>		
			43.3		14.7		108			38		38	387			426				
			42.6		14.7		103			39		39	391			432				
			101.6			100.0		104.9		97.4		97.4		99.0		98.6				
			100.5			98.0		104.9		100.0		100.0		101.3		102.9				

<sup>a</sup>edings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE III

## SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949

File No.	Mill Code	Date Made	Date Recd.	Mch. No.	Basis Weight, lb.	Max. Min.	Av.	Caliper, points	Max. Min.	Av.	Bursting Strength, points	Max. Min.	Av.	G. E. Puncture, units	Max. Min.	Av.	In Max. Min.	Av.	Ellendorf g./s.	
								Mill A--42-lb. Linerboard												
135386	A-92	2/ 4/49	1/31/49	1	46.0	44.0	44.9	15.3	14.0	14.6	134	84	111	47	37	42	536	336	432 <sup>a</sup>	
135387	A-93	2/ 4/49	2/ 1/49	1	44.4	42.0	43.4	14.8	12.7	14.0	127	90	108	39	33	36	416	304	368 <sup>a</sup>	
135474	A-94	2/18/49	2/14/49	1	44.0	40.4	42.8	14.8	13.5	14.2	132	96	111	39	32	36	400	312	361 <sup>a</sup>	
135475	A-95	2/18/49	2/15/49	1	44.4	41.8	43.2	16.0	14.0	15.0	124	77	107	43	35	38	456	344	396 <sup>a</sup>	
135550	A-96	2/26/49	2/21/49	1	44.2	41.8	43.0	16.8	14.8	15.7	116	86	104	42	32	38	440	320	395 <sup>a</sup>	
135551	A-97	2/26/49	2/22/49	1	43.6	42.0	42.5	15.4	12.8	14.3	140	89	108	41	32	37	416	320	373 <sup>a</sup>	
Current Mill Average:					43.3			14.7			108			387						
Cumulative Mill Average:					42.6			14.7			103			391						
Mill Factor, %:					101.6			100.0			104.9			99.1						
Mill Index, %:					100.5			98.0			104.9			101.1						

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

Fourdrinier Kraft Board Institute  
Project 1108-B

TABLE IV  
MARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

Mch. No.	Basis Weight, lb.				Caliper, points				Bursting Strength, points				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.	Across Max.	Across Min.	Across Av.
<u>Mill B-42-1b. Linerboard</u>																					
3	45.4	44.0	44.3	13.3	11.8	12.6	120	90	106	37	32	34	328	351 <sup>a</sup>	392	304	359 <sup>a</sup>	320	320	361 <sup>a</sup>	
3	44.4	42.0	43.3	14.4	12.1	13.4	131	81	108	37	31	34	408	343 <sup>a</sup>	416	320	343 <sup>a</sup>	348	348	381 <sup>a</sup>	
3	44.6	42.2	43.6	14.7	12.2	13.4	125	94	107	37	30	33	416	355 <sup>a</sup>	504	344	355 <sup>a</sup>	320	320	368 <sup>a</sup>	
1	44.2	40.2	42.8	14.2	12.0	13.2	132	84	106	37	31	34	400	323	400	336	323	328	352	375 <sup>a</sup>	
3	43.8	41.4	42.8	14.4	12.0	13.4	128	89	109	37	33	35	384	360 <sup>a</sup>	408	352	360 <sup>a</sup>	328	328	375 <sup>a</sup>	
3	43.6	42.2	42.6	14.9	13.0	14.2	129	89	113	36	32	33	368	328	400	320	328	336	336	367 <sup>a</sup>	
1	44.0	41.6	42.8	14.5	12.5	13.9	131	91	109	37	33	35	376	312	448	336	350 <sup>a</sup>	344	344	377 <sup>a</sup>	
3	44.2	41.0	42.7	14.2	12.6	13.5	131	79	105	37	31	34	432	344	472	344	379 <sup>a</sup>	409 <sup>a</sup>	409 <sup>a</sup>	409 <sup>a</sup>	
3	46.0	42.4	44.1	15.1	12.2	14.0	132	88	112	38	35	37	440	352	472	376	398 <sup>a</sup>	472	472	419 <sup>a</sup>	
3	45.6	43.8	44.5	14.8	13.2	14.0	125	87	111	40	35	38	440	344	472	392 <sup>a</sup>	344	448	392 <sup>a</sup>	414 <sup>a</sup>	
3	43.8	41.8	42.6	14.7	13.6	14.2	133	87	108	43	35	38	400	336	448	328	369 <sup>a</sup>	440	440	397 <sup>a</sup>	
3	46.0	42.0	43.4	15.0	12.0	13.7	136	95	111	39	33	36	400	320	440	320	350 <sup>a</sup>	344	344	387 <sup>a</sup>	
1	45.8	42.6	44.3	15.8	13.2	14.6	115	90	106	41	35	38	432	336	440	368	382 <sup>a</sup>	405 <sup>a</sup>	405 <sup>a</sup>	405 <sup>a</sup>	
	43.4		13.7				108			35			363			386			405		
	43.3		15.1				103			37			381			405					
	100.2		90.7				104.9			94.6			95.3			95.3					
	100.7		91.3				104.9			92.1			95.0			95.2					

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

TABLE IV

## SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

File No.	Mill Code	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.	Calliper, points	Bursting Strength, points	G. E. Puncture, units	Elmen. g./in.
<u>Mill B-42-lb. Linerboard</u>									
135330	B-136	2/ 1/49	1/19/49	3	45.4	44.0	13.3	11.8	12.6
135331	B-137	2/ 1/49	1/23/49	3	44.4	42.0	14.3	12.1	13.4
135371	B-138	2/ 3/49	1/24/49	3	44.6	42.2	13.6	12.2	13.4
135372	B-139	2/ 3/49	1/26/49	1	44.2	40.2	14.8	12.0	13.2
135425	B-140	2/10/49	1/30/49	3	43.8	41.4	14.8	12.0	13.4
135426	B-141	2/10/49	1/31/49	3	43.6	42.2	14.6	12.9	12.9
135427	B-142	2/10/49	1/31/49	1	44.0	41.6	14.6	12.5	13.9
135458	B-143	2/15/49	2/ 6/49	3	44.2	41.0	14.7	14.2	12.6
135459	B-144	2/15/49	2/ 7/49	3	46.0	42.4	14.1	15.1	12.2
135460	B-145	2/15/49	2/ 8/49	3	45.6	43.8	14.5	13.2	14.0
135505	B-146	2/21/49	2/14/49	3	43.8	41.8	14.6	13.6	14.2
135506	B-147	2/21/49	2/15/49	3	46.0	42.0	15.4	12.0	13.7
135534	B-148	2/24/49	2/16/49	1	45.8	42.6	14.3	15.8	13.2
Current Mill Average:									
					43.4		13.7	108	35
Cumulative Mill Average:									
					43.3		15.1	103	37
Mill Factor, %:									
					100.2		90.7	104.9	94.6
Mill Index, %:									
					100.7		91.3	104.9	92.1

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-FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

Mch. No.	Basis Weight, lb. Max.	Caliper, points Min.	Bursting Strength, points			G. E. Puncture, units			Elmendorf Tear, g./sheet			
			Av.	Max.	Min.	Max.	Min.	Av.	In Max.	Min.	Av.	
<u>Mill 3-42-1b. Linerboard</u>												
9 1	44.0	42.0	43.1	14.6	13.0	13.9	135	79	106	43	37	424
9 1	44.2	42.2	43.5	14.7	12.6	13.6	134	76	106	43	36	528
9 1	45.6	42.0	44.0	14.6	12.5	13.5	134	80	105	44	37	447 <sup>a</sup>
9 1	44.8	43.4	44.1	13.4	12.0	12.8	125	86	104	43	36	320
9 1	44.0	41.4	42.9	14.0	12.0	13.0	124	80	105	39	34	377
9 1	43.8	42.4	43.1	14.0	12.0	13.1	124	76	103	39	35	488
9 1	42.4	41.0	41.9	13.0	11.7	12.4	124	80	108	38	35	341
9 1	44.2	42.8	43.7	13.9	11.8	12.9	126	80	105	41	35	296
												331
												448
												352
												413 <sup>a</sup>
												421
												420
												367
												97.8
												100.2
												94.0
												101.7

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

TABLE V

SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

File No.	Mill Code	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, points			G. E. Puncture, units			E. In. Max. Min.	
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.		
<u>Mill 3--42-1b. Linerboard</u>																		
135398	C-96	2/5/49	1/27/49	1	44.0	42.0	43.1	14.6	13.0	13.9	135	79	106	43	37	40	432	288
135399	C-97	2/5/49	1/27/49	1	44.2	42.2	43.5	14.7	12.6	13.6	134	76	106	43	36	40	416	320
135413	C-98	2/7/49	1/31/49	1	45.6	42.0	44.0	14.6	12.5	13.5	134	80	105	44	37	41	416	320
135414	C-99	2/7/49	2/3/49	1	44.8	43.4	44.1	13.4	12.0	12.8	125	86	104	43	36	39	424	296
135455	C-100	2/14/49	2/7/49	1	44.0	41.4	42.9	14.0	12.0	13.0	124	80	105	39	34	36	408	336
135456	C-101	2/14/49	2/7/49	1	43.8	42.4	43.1	14.0	12.0	13.1	124	76	103	39	35	37	416	352
135530	C-102	2/23/49	2/14/49	1	42.4	41.0	41.9	13.0	11.7	12.4	124	80	108	38	33	36	392	288
135531	C-103	2/23/49	2/17/49	1	44.2	42.8	43.7	13.9	11.8	12.9	126	80	105	41	35	39	400	296
Current Mill Average:					43.3			13.1			105			39				
Cumulative Mill Average:					43.0			14.4			105			38				
Mill Factor, %:					100.7			91.0			100.0			102.6				
Mill Index, %:					100.5			87.3			101.9			102.6				

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 - FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

Mch. No.	Basis Weight, lb.	Caliper, points	Bursting Strength, points			G. E. Puncture, units			Elmendorf Tear, g./sheet		
			Max.	Min.	Avg.	Max.	Min.	Avg.	In	Max.	Min.
<u>Mill D-42-1b. Linerboard</u>											
4	44.0	41.2	42.5	15.2	12.6	14.2	116	87	100	36	34
4	43.6	41.8	42.2	14.8	12.2	13.6	118	81	101	35	32
4	44.0	42.0	42.9	15.6	12.5	14.3	124	75	97	38	35
4	44.0	42.2	43.0	15.3	12.7	13.9	120	87	105	41	33
4	44.4	42.4	43.5	14.3	11.7	12.8	146	92	122	44	36
4	43.8	42.2	42.7	15.2	13.2	14.3	147	84	112	43	39
4	44.0	42.4	43.5	14.8	13.0	13.8	130	106	117	41	36
4	44.4	42.4	43.6	14.1	13.0	13.4	146	112	131	41	36
4	44.0	42.0	43.3	14.7	13.3	14.0	132	92	116	43	37
4	43.8	42.0	42.9	14.9	13.7	14.4	140	98	114	44	39
4	44.4	42.2	43.0	14.3	12.8	13.8	131	95	118	41	37
4	44.0	41.2	43.0	14.8	13.5	14.2	124	90	110	39	33
4	45.4	41.8	42.8	15.3	13.8	14.6	128	86	106	40	36
										37	35
										395	405
										393	413
										100.5	98.1
										103.4	97.8

TABLE VII

Mill E-42-1b. Linerboard

No samples submitted.

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

TABLE VI

SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

File No.	Mill Code	Date Recd.	Date Made	Mch. No.	Basis Weight, 1lb.	Caliper, points	G. E. Puncture, units	Elmendorf g./sh.
					Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	In Min. Av.
					Mill D-42-1b.	Linerboard		
135532	D-84	2/1/49	1/26/49	4	44.0	41.2	42.5	375 <sup>e</sup>
135533	D-85	2/1/49	1/27/49	4	43.6	41.8	42.2	341 <sup>e</sup>
135535	D-86	2/2/49	1/28/49	4	44.0	42.0	42.9	381 <sup>e</sup>
135537	D-87	2/2/49	1/29/49	4	44.0	42.2	43.0	369 <sup>e</sup>
135538	D-88	2/19/49	2/16/49	4	44.4	42.4	43.5	320
135546	D-89	2/21/49	2/17/49	4	43.8	42.2	42.7	36
135550	D-90	2/25/49	2/18/49	4	44.0	42.4	43.5	39
135527	D-91	2/23/49	2/19/49	4	44.4	42.4	43.6	39
135528	D-92	2/23/49	2/20/49	4	44.0	42.0	43.3	39
135529	D-93	2/24/49	2/21/49	4	43.8	42.0	42.9	39
135532	D-94	2/24/49	2/22/49	4	44.4	42.2	43.0	39
135533	D-95	2/26/49	2/23/49	4	44.0	41.2	43.0	39
135548	D-96	2/26/49	2/24/49	4	45.4	41.8	42.8	36
Current Mill Average:								
43.0								
Cumulative Mill Average:								
43.4								
Mill Factor, %:								
99.1								
Mill Index, %:								
99.8								
92.7								
107.8								
97.4								
105.								

TABLE VII

Mill E-42-1b. Linerboard

No samples submitted.

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



TABLE VIII

SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

File No.	Mill Code	Date Recd.	Date Made	Date	Mch. No.	Basis Weight, 1lb.			Caliper, points			Bursting Strength, points			G. E. Puncture, units			Ellipsoid g./shc		
						Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	In	Mn.	Av.
<u>Mill F--42-1b. Linerboard</u>																				
135432	F-7	2/11/49	2/ 7/49	--		45.8	43.4	44.2	15.8	14.0	14.9	120	87	106	41	37	39	472	336	403 <sup>e</sup>
Current Mill Average:																			403	
Cumulative Mill Average:																			383	
Mill Factor, %:																			105.	
Mill Index, %:																			105.	

TABLE IX

<u>Mill G--42-1b. Linerboard</u>																			
135396	G-124	2/ 5/49	2/ 2/49	1	43.8	41.8	42.3	16.8	14.8	15.8	119	87	102	39	33	37	432	320	389 <sup>a</sup>
135397	G-125	2/ 5/49	2/ 2/49	1	43.6	41.6	42.3	16.8	14.7	15.6	113	78	98	40	35	37	432	312	366 <sup>a</sup>
135433	G-126	2/11/49	2/ 9/49	1	43.6	41.8	42.4	14.9	14.0	14.5	131	91	113	41	37	39	400	344	372
135434	G-127	2/11/49	2/ 9/49	1	43.6	42.0	42.6	15.0	13.2	14.4	124	90	110	40	36	38	424	320	367 <sup>a</sup>
135476	G-128	2/18/49	2/15/49	1	43.6	41.8	42.5	15.7	13.9	14.7	122	96	108	39	35	37	408	320	367
135477	G-129	2/18/49	2/15/49	1	44.0	41.8	42.7	15.0	13.5	14.6	125	87	102	40	35	37	392	304	346 <sup>a</sup>
135539	G-130	2/25/49	2/21/49	1	45.0	43.6	44.2	14.8	13.0	13.9	126	82	105	38	32	36	408	320	357 <sup>a</sup>
135540	G-131	2/25/49	2/21/49	1	44.6	42.4	43.8	14.8	12.7	13.9	118	79	101	38	33	36	400	312	365 <sup>a</sup>
Current Mill Average:																			366
Cumulative Mill Average:																			375
Mill Factor, %:																			97.1
Mill Index, %:																			95.1

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

TABLE X

INDIVIDUAL TEST LOTS - FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

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

TABLE X

## SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

File No.	Mill Code	Date Recd.	Date Made	Mch. No.	Basis Weight, 1b.	Caliper, points	Bursting Strength, points	G. E. Puncture, units	Element g./
					Max.	Min.	Max.	Min.	In
					Av.	Av.	Av.	Av.	Max.
Mill H-42-1b. Linerboard									
135336	H-106	2/ 1/49	1/24/49	2	44.0	42.1	14.8	13.3	14.2
135337	H-107	2/ 1/49	1/25/49	2	44.8	43.0	15.8	14.2	15.0
135408	H-108	2/ 7/49	1/30/49	2	43.6	41.8	14.2	13.1	14.0
135409	H-109	2/ 7/49	1/31/49	3	43.8	42.0	14.7	13.1	14.6
135451	H-110	2/14/49	2/ 7/49	2	42.4	41.8	15.4	13.7	14.8
135452	H-111	2/14/49	2/ 8/49	2	44.0	41.8	14.8	13.0	14.1
135507	H-112	2/21/49	2/14/49	2	43.6	41.6	42.6	14.8	14.1
135508	H-113	2/21/49	2/15/49	2	43.6	42.0	42.8	15.0	13.5
Current Mill Average:									
					42.6		14.3	107	36
Cumulative Mill Average:									
					43.1		15.3	104	38
Mill Factor, %:									
					98.8		93.5	102.9	400
Mill Index, %:									
					98.8		95.3	103.9	91
								94.7	95
								94.7	

<sup>a</sup> 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--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

Mch. No.	Basis Weight, lb.	Caliper, points	Bursting Strength, points			G. E. Puncture, units			Elmendorf Tear, g./sheet			
			Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	
<u>Mill I--42-lb. Linerboard</u>												
1	45.8	43.0	44.3	12.8	13.4	14.9	112	75	94	41	35	39
1	44.4	42.0	43.4	16.1	14.8	15.4	130	92	106	41	36	39
1	44.0	42.8	43.8	13.8	12.2	13.1	123	86	110	38	35	36
1	46.0	44.0	44.9	15.2	12.3	13.7	127	97	110	42	35	39
1	44.2	43.0	43.7	14.2	12.8	13.5	122	85	104	38	34	36
1	44.0	42.4	43.6	15.8	13.8	14.6	118	95	104	42	36	39
1	43.8	43.0	43.5	14.4	11.8	13.3	121	92	110	39	35	37
1	44.0	42.0	43.0	14.8	13.8	14.4	132	87	104	40	35	38
1	44.2	42.0	43.5	15.0	13.4	14.3	126	89	107	40	35	37
	43.7		14.1			106				38	373	425
	44.4		14.9			105				39	367	432
	98.4		94.6			101.0				97.4	101.6	98.4
	101.4		94.0			102.9				100.0	97.6	102.7

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

ple; the mill data sheet gives the date of manufacture as February 22, 1949.

TABLE XI

## SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

File No.	Mill Code	Date Recd.	Date Made	Mo. No.	Basis Weight, lb.	Caliper, points	Bursting Strength, points	G. E. Puncture, units	Element G./In.
					Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	
<u>Mill I--42-lb. Linerboard</u>									
135343	I-16	2/ 1/49	1/26/49	1	45.8	43.0	44.3	15.8	14.9
135355	I-17	2/ 2/49	1/29/49	1	44.4	42.0	43.4	16.1	14.8
135356	I-18	2/ 2/49	1/31/49	1	44.0	42.8	43.8	15.8	12.2
135410	I-19	2/ 7/49	2/ 4/49	1	46.0	44.0	44.9	15.2	12.5
135450	I-20	2/14/49	2/ 9/49	1	44.2	43.0	43.7	14.2	12.8
135470	I-21	2/17/49	2/11/49	1	44.0	42.4	43.6	15.8	13.8
135471	I-22	2/17/49	2/14/49	1	43.8	43.0	43.5	14.4	11.8
135495	I-23	2/19/49	2/16/49	1	44.0	42.0	43.0	14.8	13.8
135538	I-24	2/25/49	2/21/49 <sup>b</sup>	1	44.2	42.0	43.5	15.0	13.4
Current Mill Average:									
					43.7	41.1	43.7	14.1	106
Cumulative Mill Average:									
					44.4	44.9	44.4	14.9	105
Mill Factor, %:									
					98.4	94.6	98.4	94.6	101.0
Mill Index, %:									
					101.4	94.0	101.4	102.9	100.0
									97.6

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

<sup>b</sup> This date appeared on the sample; the mill data sheet gives the date of manufacture as February 22, 1949.

TABLE XII  
SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

inch. ch. o.	Basis Weight, 1lb. Max. Min. Av.	Caliper, points Max. Min. Av.	Strength, points Max. Min. Av.	G. E. Puncture, units Max. Min. Av.	Elmendorf Tear, g./sheet In Max. Min. Av.			Across Max. Min. Av.	
					34	32	384		
<u>Mill J-42-1b. Linerboard</u>									
1	42.0	41.0	15.0	13.3	14.0	117	90	103	34
1	42.4	40.2	15.2	12.8	13.8	115	80	99	37
1	43.6	42.0	15.8	13.4	14.5	125	94	105	35
1	43.6	42.6	15.0	13.2	14.1	130	82	104	35
1	42.2	41.0	14.8	14.6	13.6	112	78	99	33
1	44.0	42.0	43.3	15.8	14.1	14.7	115	80	96
1	44.2	42.0	43.2	15.3	13.2	14.1	129	84	109
1	43.8	41.8	42.4	15.0	13.2	14.2	127	86	104
1	44.4	42.6	43.4	15.8	13.7	14.5	115	78	100
1	44.0	41.8	42.8	15.3	13.6	14.4	119	81	102
					42.5	14.2	102		32
					42.8	14.6	105		33
					99.3	97.3	97.1		97.0
					98.6	94.7	99.0		84.2
									333
									360
									375
									96.5
									96.0
									87.2
									87.0

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

; the mill data sheet gives the date of manufacture as February 15, 1949.

; the mill data sheet gives the date of manufacture as February 21, 1949.

TABLE XII

SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

File No.	Mill Code	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, points			G. E. Puncture, units			Elmend g.		
					Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.
<u>Mill J-42-1b. Linerboard</u>																			
135334	J-109	2/ 1/49	1/28/49	1	42.0	40.0	41.0	15.0	13.3	14.0	117	90	103	34	32	384	272	3338	
135335	J-110	2/ 1/49	1/28/49	1	42.4	40.2	41.9	15.2	12.8	13.8	115	80	99	37	32	352	264	3178	
135411	J-111	2/ 7/49	2/ 4/49	1	43.6	42.0	42.6	15.8	13.4	14.5	125	84	105	35	30	456	280	3538	
135412	J-112	2/ 7/49	2/ 4/49	1	43.6	41.6	42.3	15.0	13.2	14.1	130	82	104	35	30	416	280	3498	
135453	J-113	2/14/49	2/10/49	1	42.2	41.0	41.8	14.6	13.6	14.1	112	78	99	33	29	336	272	2998	
135454	J-114	2/14/49	2/10/49	1	44.0	42.0	43.3	15.8	14.1	14.7	115	80	96	35	30	392	288	3428	
135509	J-115	2/21/49	2/17/49 <sup>b</sup>	1	44.2	42.0	43.2	15.3	13.2	14.1	129	84	109	38	31	34	424	272	3228
135510	J-116	2/21/49	2/17/49 <sup>b</sup>	1	43.8	41.8	42.4	15.0	13.2	14.2	127	86	104	35	31	33	400	280	3168
135552	J-117	2/26/49	2/22/49 <sup>c</sup>	1	44.4	42.6	43.4	15.8	13.7	14.5	115	78	100	35	30	33	456	280	3478
135553	J-118	2/26/49	2/22/49	1	44.0	41.8	42.8	15.3	13.6	14.4	119	81	102	35	32	408	280	3558	
Current Mill Average					42.5			14.2			102			32			333		
Cumulative Mill Average:					42.8			14.6			105			33			345		
Mill Factor, %:					99.3			97.3			97.1			97.0			96.		
Mill Index, %:					98.6			94.7			99.0			84.2			87		

<sup>a</sup> This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.<sup>b</sup> This date appeared on the sample; the mill data sheet gives the date of manufacture as February 15, 1949.<sup>c</sup> This date appeared on the sample; the mill data sheet gives the date of manufacture as February 21, 1949.

TABLE XIII  
SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

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

TABLE XIII

SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

File No.	Mill Code	Date Made	Date Recd.	Mch. No.	Basis Weight, lb.	Calliper, points	Bursting Strength, points	G. E. Puncture, units	Elmendorf g./sh
					Max.	Min.	Av.	Max.	In
					Max.	Min.	Av.	Min.	Max.
<u>Mill E-44/46-1b. Drum Linerboard</u>									
135472	E-57	2/17/49	2/14/49	1	49.6	46.2	47.9	13.8	469
					49.6	46.2	47.9	13.8	
Current Mill Average:					47.9		13.4	108	43
Cumulative Mill Average:					46.9		14.1	96	42
Mill Factor, %:					102.1		95.0	112.5	106
								102.4	

<sup>a</sup> 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			63-85	65-84	--
B	40-68	64-80	1/2	50	70	24
C	50	73	24-72	50	73	5-72
D	35	72-76	8-24	47-56	74-76	8-24
E	No samples submitted.					
F	No preconditioning			No conditioning		
G	No preconditioning			No conditioning		
H	No preconditioning			50	73	24
I	No preconditioning			40-85	65-81.5	--
J	No preconditioning			50	73	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 comparison for the various mills is 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 data and Institute data. As may be seen in Table XVI, the maximum variation in the average basis weight between the results of the Institute and those of a given mill on corresponding samples is  $2\frac{1}{2}$  for the current period. The results for all the mills are lower than those for the Institute with the exception of Mill F whose results are the same. In regard to caliper for the current period, the results for Mills A, C, D, F, H, and I are lower than those for the Institute while the results for Mills B and J are higher and those for Mill G are the same. None of the differences appear to be significantly large. It may be observed on reviewing the bursting strength results that the results for all mills are lower than those for the Institute with the exception of Mill C whose results are higher. The difference for Mill F appears to be significantly large. However, Mill F submitted only one sample during the current period. It may be noted in Table XV that the G. E. puncture results for Mill J are higher than those for the Institute while those for Mills B, C, and H are lower and those for Mills A, F, and G are the same. The average differences encountered for Mills C and H appear to be significantly large. It may be seen in Table XV that the average differences between Institute and mill data encountered in connection with the machine direction tear results are negative for Mills B, C, D, F, G, H, and J and positive for Mill I. No variation was encountered

for Mill A. The variations for Mills B, D, and F are rather large. With regard to the across-machine direction tear results, it may be noted that the average differences for Mills A, D, and J are positive and those for Mills B, C, F, G, H, and I are negative. The variations obtained for Mills B and F are rather large.

The data in Table XVI also show the comparison of the average per cent differences between mill and Institute test results for the past three periods. It may be noted that the maximum variation in basis weight during this time amounts to approximately 3%. The maximum average variation in the basis weight results for the current period is commensurate with the variations for the preceding periods. It may also be noted that the variations encountered in the caliper, bursting strength, G. E. puncture and Elmendorf tear values for each mill for the current period are approximately the same as for the previous period.

TABLE XV  
SUMMARY OF TEST RESULT COMPARISONS

Average Mill and Institute Results	A	B	C	D	E	F	G	H	I	J
No. Samples Compared	6	13	8	13	0	1	8	8	9	10
<b>Basis Weight</b>										
Institute	43.3	43.4	43.3	43.0	--	44.2	42.9	42.6	43.7	42.5
Mill	42.7	42.9	42.4	42.8	--	44.2	42.6	42.4	42.9	42.0
Av. difference**	-0.6	-0.5	-0.9	-0.2	--	0.0	-0.3	-0.2	-0.8	-0.5
Max. difference***	-1.8	-0.6	-1.2	-1.0	--	0.0	-1.5	-0.7	-2.0	-0.9
<b>Caliper</b>										
Institute	14.7	13.7	13.1	13.9	--	14.9	14.7	14.3	14.1	14.2
Mill	14.4	13.8	13.0	13.7	--	14.5	14.7	14.0	14.0	14.5
Av. difference**	-0.3	+0.1	-0.1	-0.2	--	-0.4	0.0	-0.3	-0.1	+0.3
Max. difference***	-0.6	+0.6	-0.5	-0.7	--	-0.4	+0.6	-0.6	+0.5	+0.3
<b>Bursting Strength</b>										
Institute	108	108	105	111	--	106	105	107	106	102
Mill	104	106	107	110	--	98	102	105	104	98
Av. difference**	-4	-2	+2	-1	--	-8	-3	-2	-2	-4
Max. difference***	-7	-4	+7	-8	--	-8	-16	-6	-7	-7
<b>G. E. Puncture</b>										
Institute	38	35	39	37	--	39	37	36	38	32
Mill	38	34	36	--	--	39	37	34	--	33
Av. difference**	0	-1	-3	--	--	0	0	-2	--	+1
Max. difference***	+2	-4	-4	--	--	0	+2	-4	--	+2
<b>Tearing Strength, in</b>										
Institute	387	363	359	395	--	403	366	366	373	333
Mill	387	316	347	368	--	358	365	356	380	318
Av. difference**	0	-47	-12	-27	--	-45	-1	-10	+7	-15
Max. difference***	-52	-81	-44	-78	--	-45	-49	-42	-101	-42
<b>Tearing Strength, across</b>										
Institute	426	386	421	405	--	436	397	399	425	360
Mill	438	360	410	407	--	404	393	396	417	366
Av. difference**	+12	-26	-11	+2	--	-32	-4	-3	-8	+6
Max. difference***	+34	-64	-41	+47	--	-32	-35	-28	-115	+37

\* 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	Tearing Strength, in	Tearing Strength, across
	Basis Weight	Caliper	Bursting Strength	G. E. Puncture		
Mill A						
Current period	-1	-2	-4	0	0	+3
19th period	-0.9	-3	-1	+3	+4	+9
18th period	-2	-2	-2	+14	+5	+6
Mill B						
Current period	-1	+0.7	-2	-3	-13	-7
19th period	-1	0	-2	-3	-13	-7
18th period	-0.9	0	0	0	-9	-8
Mill C						
Current period	-2	-0.8	+2	-8	-3	-3
19th period	-1	-2	+5	-8	+0.3	+5
18th period	-2	-2	+2	0	+3	+3
Mill D						
Current period	-0.5	-1	-0.9	--	-7	-0.5
19th period	+0.2	-1	+2	--	-4	+2
18th period	-0.7	-2	+1	--	-10	-4
Mill E						
Current period	---	--	--	--	--	--
19th period	---	--	--	--	--	--
18th period	-1	0	+3	-9	-5	-6
Mill F						
Current period	0	-3	-8	0	-11	-7
19th period	-0.2	-4	-4	0	+8	+7
18th period	0	-4	-2	+5	-1	+2
Mill G						
Current period	-0.7	0	-3	0	-0.3	-1
19th period	-0.2	-3	-2	-5	-6	-7
18th period	-1	-4	-4	0	-4	-5
Mill H						
Current period	-0.5	-2	-2	-6	-3	-0.8
19th period	+0.2	-0.7	-5	0	0	+3
18th period	+0.7	-1	+1	+3	-3	+2
Mill I						
Current period	-2	-0.7	-2	--	+2	-2
19th period	-3	-2	+1	--	+11	+5
18th period	-2	0	-3	--	+20	+21
Mill J						
Current period	-1	+2	-4	+3	-5	+2
19th period	+0.2	+2	-1	+6	+10	+10
18th period	-0.9	+1	0	+3	+0.9	+4

TABLE XVII

SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949

axis Weight, lb. Mill Diff.	Institute Date versus Mill Data			Bursting Strength, G.E.Puncture, points IPC Mill Diff.			Elmendorf Tear, g./sheet			Across IPC Mill Diff.		
	Caliper, points	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	In Mill Diff.	IPC Mill Diff.	In Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	
<u>Mill A--42-1b. Linerboard</u>												
9 43.1 -1.8	14.6	14.3	-0.3	111	108	-3	42	41	-1	432 <sup>a</sup>	416	-16
4 42.4 -1.0	14.0	14.2	+0.2	108	104	-4	36	36	0	368 <sup>a</sup>	358	0
8 42.8 0.0	14.2	13.7	-0.5	111	104	-7	36	36	0	361 <sup>a</sup>	401	+40
2 42.8 -0.4	15.0	14.8	-0.2	107	103	-4	38	38	0	396 <sup>a</sup>	416	+20
0 42.7 -0.3	15.7	15.1	-0.6	104	101	-3	38	36	-2	395 <sup>a</sup>	343	-52
5 42.3 -0.2	14.3	14.0	-0.3	108	103	-5	37	39	+2	373 <sup>a</sup>	379	+6
3 42.7 -0.6	14.7	14.4	-0.3	108	104	-4	38	38	0	409 <sup>a</sup>	421	+12

TABLE XVIII

axis Weight, lb. Mill Diff.	Institute Date versus Mill Data			Bursting Strength, G.E.Puncture, points IPC Mill Diff.			Elmendorf Tear, g./sheet			Across IPC Mill Diff.		
	Caliper, points	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	In Mill Diff.	IPC Mill Diff.	In Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	
<u>Mill B--42-1b. Linerboard</u>												
3 43.9 -0.4	12.6	13.2	+0.6	106	103	-3	34	33	-1	351 <sup>a</sup>	323	-28
3 43.1 -0.2	13.4	13.6	+0.2	108	106	-2	34	32	-2	343 <sup>a</sup>	293	-50
6 43.0 -0.6	13.4	13.7	+0.3	107	103	-4	33	31	-2	355 <sup>a</sup>	310	-45
8 42.3 -0.5	13.2	13.5	+0.3	106	106	0	34	34	0	353 <sup>a</sup>	313	-40
8 42.2 -0.6	13.4	13.5	+0.1	109	105	-4	35	35	0	360 <sup>a</sup>	321	-39
6 42.1 -0.5	14.0	14.0	-0.2	113	110	-3	33	32	-1	336 <sup>a</sup>	315	-21
8 42.5 -0.3	13.9	13.9	0.0	109	108	-1	35	32	-3	350 <sup>a</sup>	323	-27
7 42.2 -0.5	13.5	13.6	+0.1	105	105	0	34	34	0	379 <sup>a</sup>	311	-68
1 43.5 -0.6	14.0	14.3	+0.3	112	108	-4	37	36	-1	398 <sup>a</sup>	317	-81
5 44.2 -0.3	14.0	14.2	+0.2	111	108	-3	38	34	-4	392 <sup>a</sup>	326	-66
6 42.5 -0.1	14.2	14.0	-0.2	108	105	-3	38	35	-3	369 <sup>a</sup>	315	-54
4 42.9 -0.5	13.7	13.8	+0.1	111	109	-2	36	36	0	350 <sup>a</sup>	318	-32
3 43.7 -0.6	14.6	14.4	-0.2	106	105	-1	38	34	-4	382 <sup>a</sup>	325	-57
4 42.9 -0.5	13.7	13.8	+0.1	108	106	-2	35	34	-1	363	316	-47

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

data are calculated from the totals of the individual readings.

TABLE XVII

## SUMMARY OF INDIVIDUAL TEST LOTS - FEBRUARY 1 THROUGH FEBRUARY 28, 1949

File No.	Mill Code	Date Made	Mch. No.	Basis Weight, lb.				Caliper, points				Bursting Strength, G.E.Puncture, units				In 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.		
<u>Mill A-42-1b. Linerboard</u>																			
1355386	A-92	1/31/49	1	44.9	43.1	-1.8	14.6	14.3	-0.3	111	108	-3	42	41	-1	432 <sup>a</sup>	416	-16	45
1355387	A-93	2/1/49	1	43.4	42.4	-1.0	14.0	14.2	+0.2	108	104	-4	36	36	0	368 <sup>a</sup>	358	0	44
135474	A-94	2/14/49	1	42.8	42.8	0.0	14.2	13.7	-0.5	111	104	-7	36	36	0	361 <sup>a</sup>	401	440	41
135475	A-95	2/15/49	1	43.2	42.8	-0.4	15.0	14.8	-0.2	107	103	-4	38	38	0	396 <sup>a</sup>	416	+20	45
135550	A-96	2/21/49	1	43.0	42.7	-0.3	15.7	15.1	-0.6	104	101	-3	38	36	-2	395 <sup>a</sup>	343	-52	41
135551	A-97	2/22/49	1	42.5	42.3	-0.2	14.3	14.0	-0.3	108	103	-5	37	39	+2	373 <sup>a</sup>	379	+6	40
Current Mill Average:				43.3	42.7	-0.6	14.7	14.4	-0.3	108	104	-4	38	38	0	387	337	0	42

TABLE XVIII

File No.	Mill Code	Date Made	Mch. No.	Basis Weight, lb.				Caliper, points				Bursting Strength, G.E.Puncture, units				In 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.		
<u>Mill B-42-1b. Linerboard</u>																			
135330	B-136	1/19/49	3	44.3	43.9	-0.4	12.6	13.2	+0.6	106	103	-3	34	33	-1	351 <sup>a</sup>	323	-28	35
135331	B-137	1/23/49	3	43.3	43.1	-0.2	13.4	13.6	+0.2	108	106	-2	34	32	-2	343 <sup>a</sup>	293	-50	36
135371	B-138	1/24/49	3	43.6	43.0	-0.6	13.4	13.7	+0.3	107	103	-4	33	31	-2	355 <sup>a</sup>	310	-45	38
135372	B-139	1/26/49	1	42.8	42.5	-0.5	13.2	13.5	+0.3	106	106	0	34	34	0	353 <sup>a</sup>	313	-40	36
135425	B-140	1/30/49	3	42.8	42.2	-0.6	13.4	13.5	+0.1	109	105	-4	35	35	0	360 <sup>a</sup>	321	-39	37
135426	B-141	1/31/49	3	42.6	42.1	-0.5	14.2	14.0	-0.2	113	110	-3	33	32	-1	336	315	-21	36
135427	B-142	1/31/49	1	42.8	42.5	-0.3	13.9	13.9	0.0	109	108	-1	35	32	-3	350 <sup>a</sup>	323	-27	37
135458	B-143	2/6/49	3	42.7	42.2	-0.5	13.5	13.6	+0.1	105	105	0	34	34	0	379 <sup>a</sup>	311	-68	40
135459	B-144	2/7/49	3	44.1	43.5	-0.6	14.0	14.3	+0.3	112	108	-4	37	36	-1	398 <sup>a</sup>	317	-81	41
135460	B-145	2/8/49	3	44.5	44.2	-0.3	14.9	14.2	+0.2	111	108	-3	38	34	-4	392 <sup>a</sup>	326	-66	41
135505	B-146	2/14/49	3	42.6	42.5	-0.1	14.2	14.0	-0.2	108	105	-3	38	35	-3	369 <sup>a</sup>	315	-54	39
135506	B-147	2/15/49	3	43.4	42.9	-0.5	13.7	13.8	+0.1	111	109	-2	36	36	0	350 <sup>a</sup>	318	-32	38
135534	B-148	2/16/49	1	44.3	43.7	-0.6	14.6	14.4	-0.2	106	105	-1	38	34	-4	382 <sup>a</sup>	325	-57	40
Current Mill Average:				43.4	42.9	-0.5	13.7	13.8	+0.1	108	106	-2	35	34	-1	363	316	-47	38

<sup>a</sup> 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 XIX

MARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (Continued)  
Institute Data versus Mill Data

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.
<u>Mill C--42-lb. Linerboard</u>										
3.1	42.3	-0.8	13.9	13.4	-0.5	106	113	*7	40	37
3.5	42.4	-1.1	13.6	13.2	-0.4	106	110	*4	40	36
4.0	43.1	-0.9	13.5	13.3	-0.2	105	105	0	41	37
4.1	42.9	-1.2	12.8	12.7	-0.1	104	107	*3	39	35
2.9	42.3	-0.6	13.0	13.0	0.0	105	105	0	36	35
3.1	42.4	-0.7	13.1	13.1	0.0	105	105	*2	37	35
1.9	40.9	-1.0	12.4	12.1	-0.3	108	107	-1	36	32
3.7	42.6	-1.1	12.9	12.9	0.0	105	106	+1	39	37
3.3	42.4	-0.9	13.1	13.0	-0.1	105	107	+2	39	36

TABLE XX

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.
<u>Mill D--42-lb. Linerboard</u>										
2.5	42.6	+0.1	14.2	14.3	+0.1	100	97	-3	34	323
2.2	42.4	+0.2	13.6	13.1	-0.5	101	100	-1	32	322
2.9	43.0	+0.1	14.3	13.9	-0.4	97	101	+4	35	381a
3.0	43.3	+0.3	13.9	13.7	-0.2	103	100	-3	36	369a
3.5	43.5	0.0	12.8	12.9	+0.1	122	114	-8	39	413a
2.7	43.0	+0.2	14.3	14.3	0.0	112	111	-1	39	379a
3.5	43.3	-0.2	13.8	13.4	-0.4	117	117	0	39	430a
3.6	43.2	-0.4	13.4	12.9	-0.5	131	127	-4	39	446a
3.3	42.9	-0.4	14.0	14.1	+0.1	116	112	-4	40	396a
2.9	42.1	-0.8	14.4	14.4	0.0	114	111	-3	41	421a
3.0	42.0	-1.0	13.8	13.6	-0.2	118	120	+2	39	383a
3.0	42.6	-0.4	14.2	13.8	-0.4	110	109	-1	36	391a
2.8	42.7	-0.1	14.6	13.9	-0.7	106	105	-1	36	413a
3.0	42.8	-0.2	13.9	13.7	-0.2	111	110	-1	37	395
										-27
										405
										407
										+ 2

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

TABLE XIX

SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (Continued)

Institute Data versus Mill Data

File No.	Mill Code	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, points			G. E. Puncture, units			Elmendorf g./she.		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
135398	C-96	1/27/49	1	43.1	42.3	-0.8	13.9	13.4	-0.5	106	113	+7	40	37	-3	362	350	-12
135399	C-97	1/27/49	1	43.5	42.4	-1.1	13.6	13.2	-0.4	106	110	+4	40	36	-4	355 <sup>a</sup>	352	-23
135413	C-98	1/31/49	1	44.0	43.1	-0.9	13.5	13.3	-0.2	105	105	0	41	37	-4	377	365	-12
135414	C-99	2/3/49	1	44.1	42.9	-1.2	12.8	12.7	-0.1	104	107	+3	39	35	-4	341	340	-1
135455	C-100	2/7/49	1	42.9	42.3	-0.6	13.0	13.0	0.0	105	105	0	36	35	-1	371	340	-31
135456	C-101	2/7/49	1	43.1	42.4	-0.7	13.1	13.1	0.0	103	105	+2	37	35	-2	385 <sup>a</sup>	341	-44
135530	C-102	2/14/49	1	41.9	40.9	-1.0	12.4	12.1	-0.3	108	107	-1	36	32	-4	331	334	+3
135531	C-103	2/17/49	1	43.7	42.6	-1.1	12.9	12.9	0.0	105	106	+1	39	37	-2	349	375	+26
Current Mill Average				43.3	42.4	-0.9	13.1	13.0	-0.1	105	107	+2	39	36	-3	359	347	-12

TABLE XX

File No.	Mill Code	Date Made	Mch. No.	Mill C--42-lb. Linerboard			Mill D--42-lb. Linerboard			Mill C--42-lb. Linerboard			Mill D--42-lb. Linerboard			Mill C--42-lb. Linerboard			Mill D--42-lb. Linerboard		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
135532	D-84	1/26/49	4	42.5	42.6	+0.1	14.2	14.3	+0.1	100	97	-3	34	375 <sup>a</sup>	323	-52	341 <sup>a</sup>	322	-19		
135333	D-85	1/27/49	4	42.2	42.4	+0.2	13.6	13.1	-0.5	101	100	-1	32	381 <sup>a</sup>	340	-41	381 <sup>a</sup>	340	-41		
135357	D-86	1/28/49	4	42.9	43.0	+0.1	14.3	13.9	-0.4	97	101	+4	35	369 <sup>a</sup>	350	-19	413 <sup>a</sup>	359	-54		
135358	D-87	1/29/49	4	43.0	43.3	+0.3	13.9	13.7	-0.2	103	100	-3	36	379 <sup>a</sup>	363	-16	430 <sup>a</sup>	383	-47		
135496	D-88	2/16/49	4	43.5	43.5	0.0	12.8	12.9	+0.1	122	114	-8	39	446 <sup>a</sup>	368	-78	396 <sup>a</sup>	402	+6		
135504	D-89	2/17/49	4	42.7	43.0	+0.3	14.3	14.3	0.0	112	111	-1	39	421 <sup>a</sup>	390	-31	421 <sup>a</sup>	390	-31		
135527	D-90	2/18/49	4	43.5	43.3	-0.2	13.8	13.4	-0.4	117	117	0	39	383 <sup>a</sup>	368	-73	383 <sup>a</sup>	368	-73		
135523	D-91	2/19/49	4	43.6	43.2	-0.4	13.4	12.9	-0.5	131	127	-4	39	383 <sup>a</sup>	368	-73	383 <sup>a</sup>	368	-73		
135529	D-92	2/20/49	4	43.3	42.9	-0.4	14.0	14.1	+0.1	116	112	-4	40	413 <sup>a</sup>	396 <sup>a</sup>	-54	421 <sup>a</sup>	390	-31		
135532	D-93	2/21/49	4	42.9	42.1	-0.8	14.4	14.4	0.0	114	111	-3	41	391 <sup>a</sup>	385	-6	413 <sup>a</sup>	380	-33		
135533	D-94	2/22/49	4	43.0	42.0	-1.0	13.8	13.6	-0.2	113	120	+2	39	383 <sup>a</sup>	418	+35	383 <sup>a</sup>	418	+35		
135548	D-95	2/23/49	4	43.0	42.6	-0.4	14.2	13.8	-0.4	110	109	-1	36	391 <sup>a</sup>	385	-6	391 <sup>a</sup>	385	-6		
135549	D-96	2/24/49	4	42.8	42.7	-0.1	14.6	13.9	-0.7	106	105	-1	36	413 <sup>a</sup>	380	-33	413 <sup>a</sup>	380	-33		
Current Mill Average:				43.0	42.8	-0.2	13.9	13.7	-0.2	111	110	-1	37	395	368	-27	395	368	-27		

<sup>a</sup> 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 XXI  
SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)  
Institute Data versus Mill Data

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 Mill Diff.
<u>Mill E-42-1b. Linerboard</u>										
No samples submitted.										

TABLE XXII

<u>Mill F-42-1b. Linerboard</u>									
44.2	44.2	0.0	14.9	14.5	-0.4	106	98	-8	39
44.2	44.2	0.0	14.9	14.5	-0.4	106	98	-8	39

TABLE XXIII

<u>Mill G-42-1b. Linerboard</u>									
42.3	41.5	-0.8	15.8	15.3	-0.5	102	101	-1	37
42.3	41.6	-0.7	15.6	15.3	-0.3	98	100	+2	37
42.4	43.4	+1.0	14.5	14.7	+0.2	113	97	-16	39
42.6	43.0	+0.4	14.4	14.5	+0.1	110	99	-11	38
42.5	43.1	+0.6	14.7	14.4	-0.3	108	101	-7	37
42.7	43.2	+0.5	14.6	14.4	-0.2	102	103	+1	37
44.2	42.7	-1.5	13.9	14.2	+0.3	105	107	+2	36
43.8	42.6	-1.2	13.9	14.5	+0.6	101	107	+6	36
42.9	42.6	-0.3	14.7	14.7	0.0	105	102	-3	37

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

<sup>a</sup>" data are calculated from the totals of the individual readings.

TABLE XXI

SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

## Institute Data versus Mill Data

File No.	Mill Code	Date Made	Mch. No.	Basis Weight, lb.	Caliper, points	Bursting Strength, points	G. E. Puncture, units	Elmendorf g./sheet
				IPC	Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	In Mill Diff.
<u>Mill E-42-lb. Linerboard</u>								

No samples submitted.

TABLE XXII

Mill F-42-lb. Linerboard

135432	F-7	2/ 7/49	--	44.2	44.2	0.0	14.9	14.5 -0.4
Current Mill Average				44.2	44.2	0.0	14.9	14.5 -0.4

TABLE XXIII

Mill G-42-lb. Linerboard

135396	G-124	2/ 2/49	1	42.3	41.5	-0.8	15.8	15.3 -0.5
135397	G-125	2/ 2/49	1	42.3	41.6	-0.7	15.6	15.3 -0.3
135433	G-126	2/ 9/49	1	42.4	43.4	+1.0	14.5	14.7 +0.2
135434	G-127	2/ 9/49	1	42.6	43.0	+0.4	14.4	14.5 +0.1
135476	G-128	2/15/49	1	42.5	43.1	+0.6	14.7	14.4 -0.3
135477	G-129	2/15/49	1	42.7	43.2	+0.5	14.6	14.4 -0.2
135539	G-130	2/21/49	1	44.2	42.7	-1.5	13.9	14.2 +0.3
135540	G-131	2/21/49	1	43.8	42.6	-1.2	13.9	14.5 +0.6
Current Mill Average:				42.9	42.6	-0.3	14.7	14.7 0.0

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.

SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

TABLE XXIV

Institute Date versus Mill Data						
Basis Weight, lb.	IPC	Mill Diff.	Calliper, points	Bursting Strength, points	G. E. Puncture, units	Elmendorf Tear, g./sheet
				IPC	Mill Diff.	IPC
<u>MILL H--42-1b. Linerboard</u>						
42.1	42.1	0.0	14.2	13.6	-0.6	105
44.0	45.3	-0.7	15.0	15.0	0.0	107
42.2	42.1	-0.1	14.0	13.8	-0.2	106
42.5	43.0	+0.5	14.6	14.6	0.0	109
42.1	42.0	-0.1	14.1	13.6	-0.5	108
42.6	42.3	-0.3	14.1	13.9	-0.2	106
42.6	42.2	-0.4	14.3	13.9	-0.4	106
42.8	42.4	-0.4	14.3	13.9	-0.4	106
42.6	42.4	-0.2	14.3	14.0	-0.3	107
44.3	43.6	-0.7	14.9	14.7	-0.2	104
43.4	41.9	-1.5	15.4	14.9	-0.5	105
43.8	42.3	-1.5	13.1	12.8	-0.3	109
44.9	42.9	-2.0	13.7	14.2	+0.5	110
43.7	42.5	-1.2	13.5	13.5	0.0	104
43.6	42.5	-1.1	14.6	14.5	-0.1	104
43.5	43.3	-0.2	13.3	13.3	0.0	110
43.0	43.3	+0.3	14.4	14.4	0.0	104
43.5	43.4	-0.1	14.3	13.9	-0.4	107
43.7	42.9	-0.8	14.1	14.0	-0.1	106

TABLE XXV

Institute Date versus Mill Data						
Basis Weight, lb.	IPC	Mill Diff.	Calliper, points	Bursting Strength, points	G. E. Puncture, units	Elmendorf Tear, g./sheet
				IPC	Mill Diff.	IPC
<u>MILL I--42-1b. Linerboard</u>						
44.3	43.6	-0.7	14.9	14.7	-0.2	94
43.4	41.9	-1.5	15.4	14.9	-0.5	100
43.8	42.3	-1.5	13.1	12.8	-0.3	106
44.9	42.9	-2.0	13.7	14.2	+0.5	109
43.7	42.5	-1.2	13.5	13.5	0.0	108
43.6	42.5	-1.1	14.6	14.5	-0.1	101
43.5	43.3	-0.2	13.3	13.3	0.0	104
43.0	43.3	+0.3	14.4	14.4	0.0	102
43.5	43.4	-0.1	14.3	13.9	-0.4	108
43.7	42.9	-0.8	14.1	14.0	-0.1	106

dings for one or more specimens which tore beyond the 3/8-inch limit.  
ple; the mill data sheet gives the date of manufacture as February 22, 1949.

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

TABLE XXIV

## SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

File No.	Mill Code	Date Made	Mch. No.	Basis Weight, 1lb.				Caliper, points				Institute Date versus Mill Data				G. E. Puncture, units	IPC Mill Diff.	In Mill Diff.	Elmendorf g./sh.	
				IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.					
Mill H--42-1b. Linerboard																				
135336	H-106	1/24/49	2	42.1	0.0	14.2	-0.6	105	104	-1	36	36	0	364	357	-7				
135337	H-107	1/25/49	2	44.0	43.3	-0.7	15.0	0.0	107	105	-2	398	391	-7						
135408	H-108	1/30/49	2	42.2	42.1	-0.1	14.0	13.8	-0.2	106	104	-2	35	33	-2	369 <sup>a</sup>	350	-19		
135409	H-109	1/31/49	3	42.5	43.0	+0.5	14.6	14.6	0.0	109	106	-3	36	35	-1	349 <sup>a</sup>	373	+24		
135451	H-110	2/7/49	2	42.1	42.0	-0.1	14.1	13.6	-0.5	108	102	-6	37	34	-3	363	359	-4		
135452	H-111	2/8/49	2	42.6	42.3	-0.3	14.1	13.9	-0.2	106	105	-1	35	33	-2	356 <sup>a</sup>	342	-14		
135507	H-112	2/14/49	2	42.6	42.2	-0.4	14.3	13.9	-0.4	106	105	-1	35	33	-2	357	344	-13		
135508	H-113	2/15/49	2	42.8	42.4	-0.4	14.3	13.9	-0.4	106	107	+1	38	34	-4	375 <sup>a</sup>	333	-42		
Current Mill Average:				42.6	42.4	-0.2	14.3	14.0	-0.3	107	105	-2	36	34	-2	366	356	-10		

TABLE XXV

File No.	Mill Code	Date Made	Mch. No.	Basis Weight, 1lb.				Caliper, points				Institute Date versus Mill Data				G. E. Puncture, units	IPC Mill Diff.	In Mill Diff.	Elmendorf g./sh.	
				IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.					
Mill I--42-1b. Linerboard																				
135343	I-16	1/26/49	1	44.3	43.6	-0.7	14.9	14.7	-0.2	94	100	+6	39	39		351 <sup>a</sup>	433	+82		
135355	I-17	1/29/49	1	43.4	41.9	-1.5	15.4	14.9	-0.5	106	100	-6	39	39		388 <sup>a</sup>	287	-101		
135356	I-18	1/31/49	1	43.8	42.3	-1.5	13.1	12.8	-0.3	110	109	-1	36	36		364	273	-91		
135410	I-19	2/4/49	1	44.9	42.9	-2.0	13.7	14.2	+0.5	110	108	-2	39	39		369 <sup>a</sup>	437	+68		
135450	I-20	2/9/49	1	43.7	42.5	-1.2	13.5	13.5	0.0	104	101	-3	36	36		368 <sup>a</sup>	449	+81		
135470	I-21	2/11/49	1	43.6	42.5	-1.1	14.6	14.5	-0.1	104	102	-2	39	39		387	365	-22		
135471	I-22	2/14/49	1	43.5	43.3	-0.2	13.3	13.3	0.0	110	103	-7	37	37		365	410	+45		
135495	I-23	2/16/49 <sup>b</sup>	1	43.0	43.3	+0.3	14.4	14.4	0.0	104	102	-2	38	38		381 <sup>a</sup>	444	+63		
135538	I-24	2/21/49 <sup>b</sup>	1	43.5	43.4	-0.1	14.3	13.9	-0.4	107	108	+1	37	37		384 <sup>a</sup>	323	-61		
Current Mill Average:				43.7	42.9	-0.8	14.1	14.0	-0.1	106	104	-2	38	38		373	380	+7		

<sup>a</sup> This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.<sup>b</sup> This date appeared on the sample; the mill date sheet gives the date of manufacture as February 22, 1949.

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

TABLE XXVI  
SUMMARY OF INDIVIDUAL TEST LOSSES—FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

readings for one or more specimens which tore beyond the  $\frac{3}{8}$ -inch limit. The mill data sheet gives the date of manufacture as February 15, 1949. The mill data sheet gives the date of manufacture as February 21, 1949.

TABLE XXVI

SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

## Institute Data versus Mill Data

File No.	Mill Code	Date Made	Mch. No.	Basis Weight, 1b.				Caliper, points				Bursting Strength, points				G. E. Puncture, units				Mill Diff.				In g./sheet			
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	In g./sheet		
<u>MILL J--42-lb. Linerboard</u>																											
135334	J-109	1/28/49	1	41.0	41.1	+0.1	14.0	14.3	+0.3	103	98	-5	32	32	0	333 <sup>a</sup>	291	-42									
135335	J-110	1/28/49	1	41.9	41.8	-0.1	13.8	14.1	+0.3	99	96	-3	32	34	+2	317 <sup>a</sup>	327	+10									
135411	J-111	2/4/49	1	42.6	42.1	-0.5	14.5	14.7	+0.2	105	99	-6	32	32	0	353 <sup>a</sup>	323	-30									
135412	J-112	2/4/49	1	42.3	42.1	-0.2	14.1	14.3	+0.2	104	100	-4	32	32	0	349 <sup>a</sup>	311	-38									
135453	J-113	2/10/49	1	41.8	41.3	-0.5	14.1	14.3	+0.2	99	94	-5	31	29	-2	299 <sup>a</sup>	284	-15									
135454	J-114	2/10/49	1	43.3	42.4	-0.9	14.7	15.0	+0.3	96	94	-2	32	32	0	342 <sup>a</sup>	311	-31									
135509	J-115	2/17/49 <sup>b</sup>	1	43.2	42.3	-0.9	14.1	14.4	+0.3	109	102	-7	34	34	0	323 <sup>a</sup>	338	+15									
135510	J-116	2/17/49 <sup>b</sup>	1	42.4	42.1	-0.3	14.2	14.4	+0.2	104	101	-3	33	33	0	316 <sup>a</sup>	287	-29									
135552	J-117	2/22/49 <sup>c</sup>	1	43.4	42.9	-0.5	14.5	14.6	+0.1	100	97	-3	34	34	+1	347 <sup>a</sup>	361	+14									
135553	J-118	2/22/49	1	42.8	42.1	-0.7	14.4	14.7	+0.3	102	95	-7	32	34	#2	355 <sup>a</sup>	343	-12									
Current Mill Average:				42.5	42.0	-0.5	14.2	14.5	+0.3	102	98	-4	32	33	+1	333	318	-15									

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

b This date appeared on the sample; the mill data sheet gives the date of manufacture as February 15, 1949.

c This date appeared on the sample; the mill data sheet gives the date of manufacture as February 21, 1949.

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

TABLE XXVII  
SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)  
Institute Data versus Mill Data

Basis Weight, lb.	Culiper, 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
<u>Mill E-44/46-lb. Drum Linerboard</u>										
47.9	47.6	-0.3	13.4	13.4	0.0	108	99	-9	43	40
									-3	469 <sup>a</sup>
										420
										-49
										451 <sup>a</sup>
										429
										-22
47.9	47.6	-0.3	13.4	13.4	0.0	108	99	-9	43	40
									-3	469
										420
										-49
										451
										429
										-22

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

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

TABLE XVII

SUMMARY OF INDIVIDUAL TEST LOTS--FEBRUARY 1 THROUGH FEBRUARY 28, 1949 (continued)

## Institute Data versus Mill Data

File No.	Mill Code	Date Made	Mch. No.	Basis Weight, lb.	Cullpor, points	Bursting Strength, points	G. E.	Elmendo g./sheet
				IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Puncture, units	In Mill Diff.
<u>Mill E-44/46-1b. Drum Linerboard</u>								
135472	E-57	2/14/49	1	47.9	47.6 -0.3	13.4 0.0	108 99 -9	43 40 -3 469 <sup>a</sup> 420 -49
Current Mill Average:				47.9	47.6 -0.3	13.4 0.0	108 99 -9	43 40 -3 469 420 -49

<sup>a</sup> 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.

