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**CONTINUOUS BASELINE STUDY**  
✓ Project 1108-13  
Progress Report 126  
to  
**FOURDRINIER, KRAFT BOARD INSTITUTE, INC.**  
January 1, 1958

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

CONTINUOUS BASELINE STUDY

Project 1108-13

Progress Report 126

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

January 1, 1958

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

In conjunction with the F.K.I. Continuous Baseline Study, The Institute of Paper Chemistry has been directed to identify the participating mills by means of a scrambled system of code letters. Under this system, which was initiated in Progress Report 105, each mill is identified by a code letter different from that used for the previous month.

During the month of December, ninety-six different sample lots of 42-lb. Fourdrinier kraft linerboard from sixteen different F.K.I. mills were processed at The Institute of Paper Chemistry. 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	1
B	3
C	8
D	8
E	0
F	7
G	7
H	3
I	3
J	3
K	12
L	8
M	11
N	10
O	0
P	4
Q	4
S	<u>4</u>
Total	96

These sample lots were tested for basis weight, caliper, bursting strength, and Elmendorf tear. The average strength results for each mill may be seen in Table II and are graphically presented in Figures 1 to 5. In addition to a comparison of the mill averages for the various tests, Table II also shows the current F.K.I. averages, the cumulative F.K.I. averages, and the F.K.I. indexes. The cumulative F.K.I. averages is based on the results for the previous twelve months excluding the current period. Hence, in the case of the current report, it covers the period from December 1, 1956 to November 30, 1957. The F.K.I. indexes are obtained as follows:

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

The F.K.I. index provides a ready means of comparing the current quality with previous results. For example, the current F.K.I. average basis weight is 43.4 lb., and the cumulative F.K.I. average basis weight is 43.0 lb. Hence, the F.K.I. index for basis weight determined in percent as indicated above is 100.9% and signifies that the current average basis weight is slightly higher than the cumulative average.

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 K had the highest average basis weight, 44.3 lb. or approximately 5.5% higher than the 42-lb. specification. Mills P and S had the lowest average basis weight of 42.7 lb., which was approximately 1.7% higher than the 42-lb. specification.

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

Mill Code	Per Cent
A	+4.0
B	+2.6
C	+2.4
D	+4.0
E	--
F	+4.8
G	+2.9
H	+1.9
I	+4.3
J	+2.4
K	+5.5
L	+3.1
M	+3.6
N	+4.3
O	--
P	+1.7
Q	+3.6
S	+1.7

A comparison of the average basis weight data for the previous period with the current F.K.I. average indicated that the basis weight results have increased slightly from 43.2 lb. to 43.4 lb.

A comparison of the average caliper values for the various mills (see Figure 2) shows that the mill average varied from a low of 12.0 points for Mill L to a high of 13.5 points for Mill G. The current F.K.I. average is 12.8 points, slightly higher than the cumulative F.K.I. average of 12.7 points, as indicated by the F.K.I. index of 100.8%.

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

range from a low of 101 for Mill A to a high of 119 for Mill Q. The current F.K.I. average bursting strength is 112 p.s.i. g., slightly higher than the cumulative F.K.I. average of 111 p.s.i. g. as indicated by the F.K.I. index of 100.9%.

A graphic comparison of the Elmendorf tear results for the various mills is given in Figures 4 and 5. The data of Table II show that Mill P had the highest average machine direction tear value of 379 g./sheet, and that Mill J had the lowest value of 282 g./sheet. It may be further noted in Table II that Mill N had the highest cross-machine direction tear value of 400 g./sheet and that Mill J had the lowest value of 343 g./sheet. It may be noted further that the current F.K.I. machine direction tear average is slightly lower than the cumulative F.K.I. average and that the current F.K.I. cross-machine direction tear average is the same as the cumulative F.K.I. average.

A comparison of the F.K.I. index indicates that, for the current period, the current F.K.I. averages for basis weight, caliper, and bursting strength are slightly higher than the corresponding cumulative F.K.I. averages, the current F.K.I. average for machine direction Elmendorf tear is slightly lower than the cumulative F.K.I. average, and the current F.K.I. average for cross-machine direction Elmendorf tear is the same as the cumulative F.K.I. average.

In order to compare the variation within a given mill, the test results for each particular mill have been tabulated in Tables III to XX for Mills A and S, respectively.

The results obtained on special drum stock are presented in Table XXI.

In addition to the current and cumulative average, 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 for the previous twelve months excluding the current period. 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 are a convenient means for comparing the current mill results either with the previous results for that particular mill or with the cumulative F.K.I. results. The reports also present a comparison of the test data obtained at the mills with test data obtained at The Institute of Paper Chemistry. These test data are presented and discussed on subsequent pages of this report.

It may be noted in Tables III through XXI that the test data include information about the sheet finish. The summarized results for the mills which submitted sample lots during the current period are as follows:

Mill Code	No. of Sample Lots		
	W.F.	D.F.	Misc.
A		1	
B		1 <sup>a</sup> , 2 <sup>b</sup>	
C		8	
D		8	
E		No samples submitted.	

(Continued on the following page)

Mill Code	No. of Sample Lots		
	W.F.	D.F.	Misc.
F	7		
G	7 <sup>a</sup>		
H	3 <sup>a</sup>		
I	2 <sup>a</sup> , 1 <sup>b</sup>		
J	3		
K	12		
L	8		
M	3 <sup>a</sup> , 8		
N	10		
O	No samples submitted.		
P	4		
Q	4 <sup>a</sup>		
S	4		
R <sup>c</sup>	No samples submitted.		

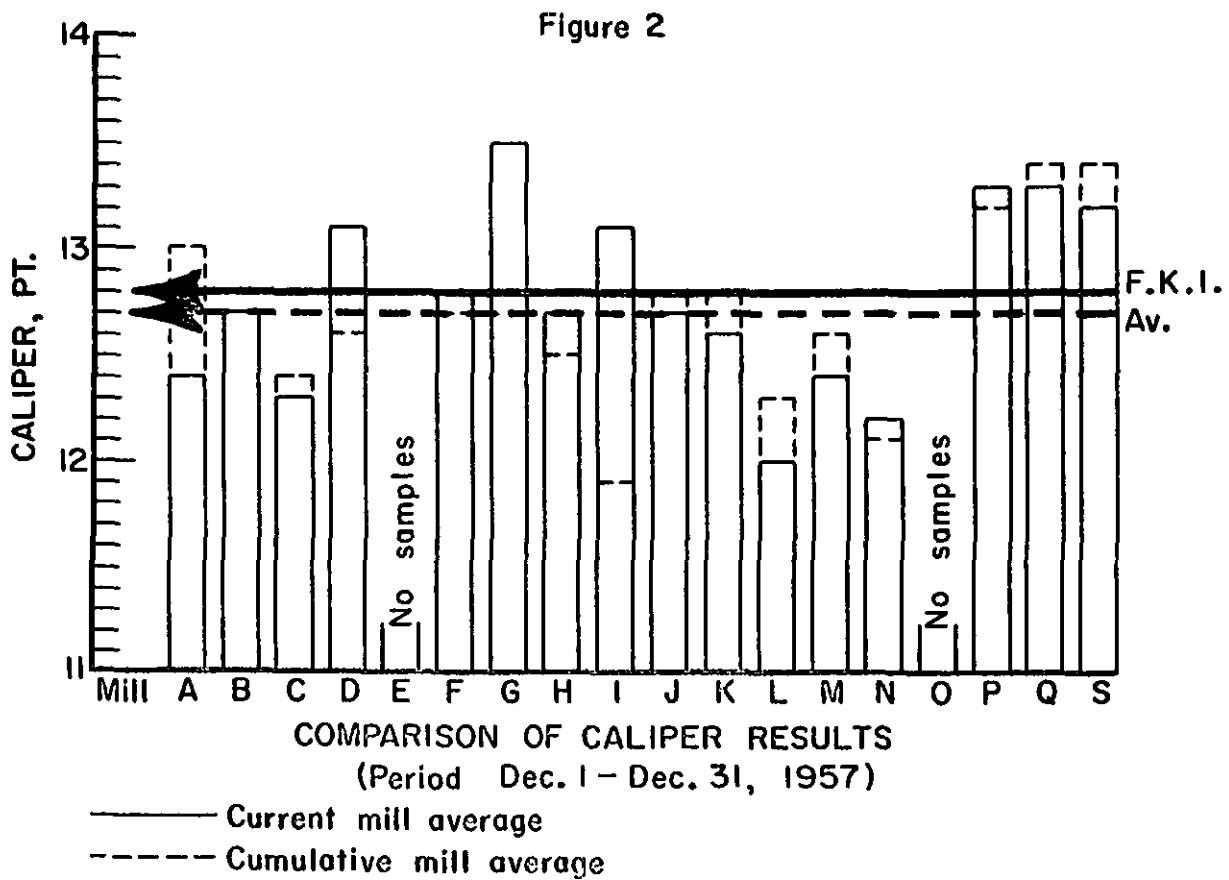
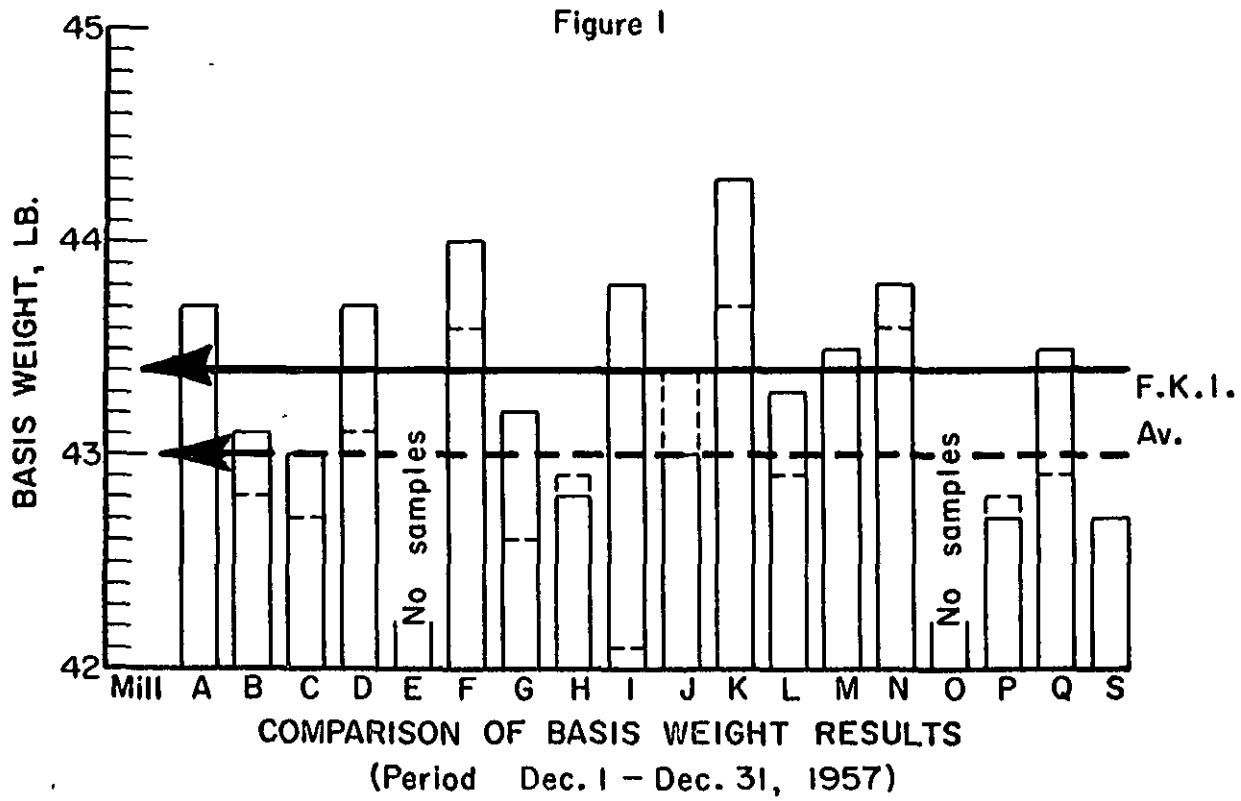
- <sup>a</sup> One side only.
- <sup>b</sup> Unidentified as to finish.
- <sup>c</sup> Drum linerboard.

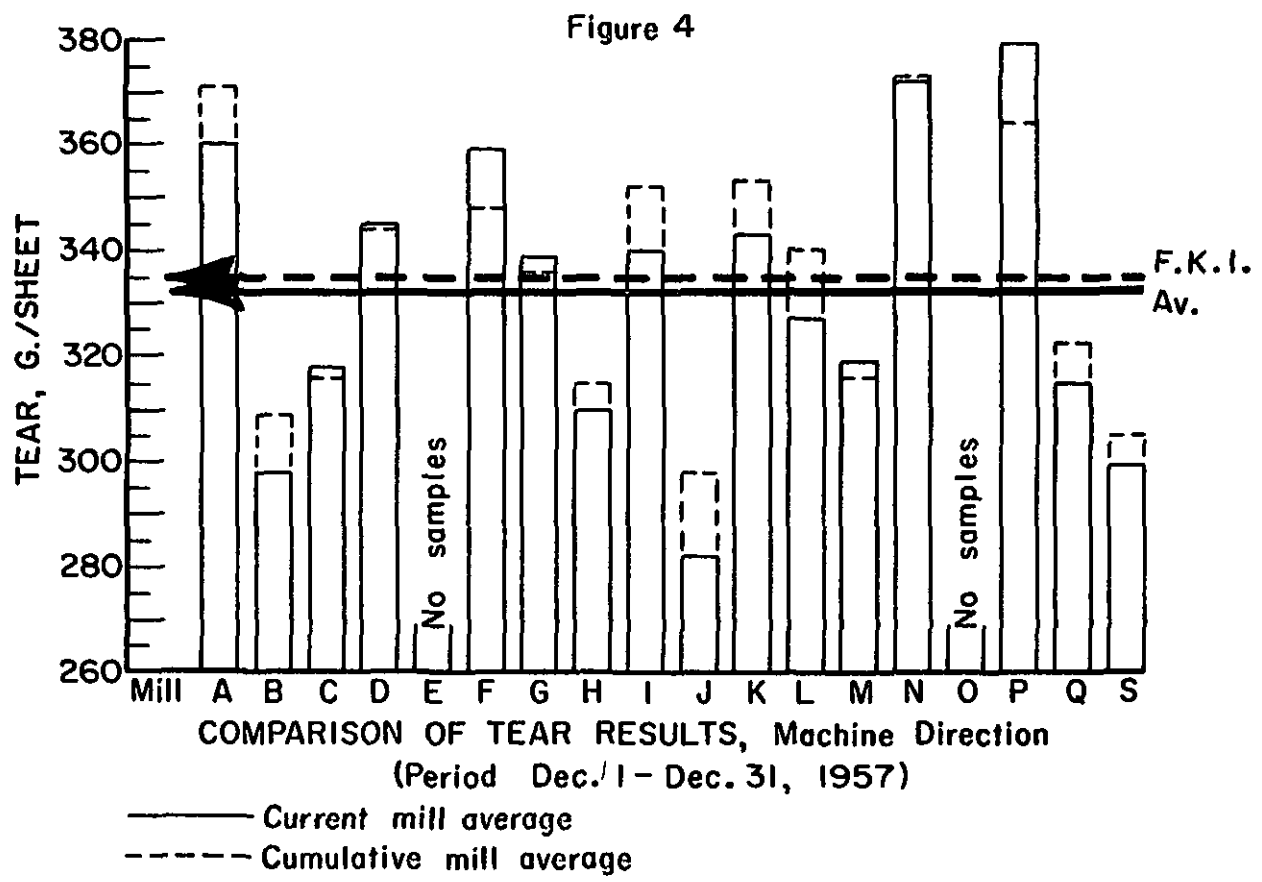
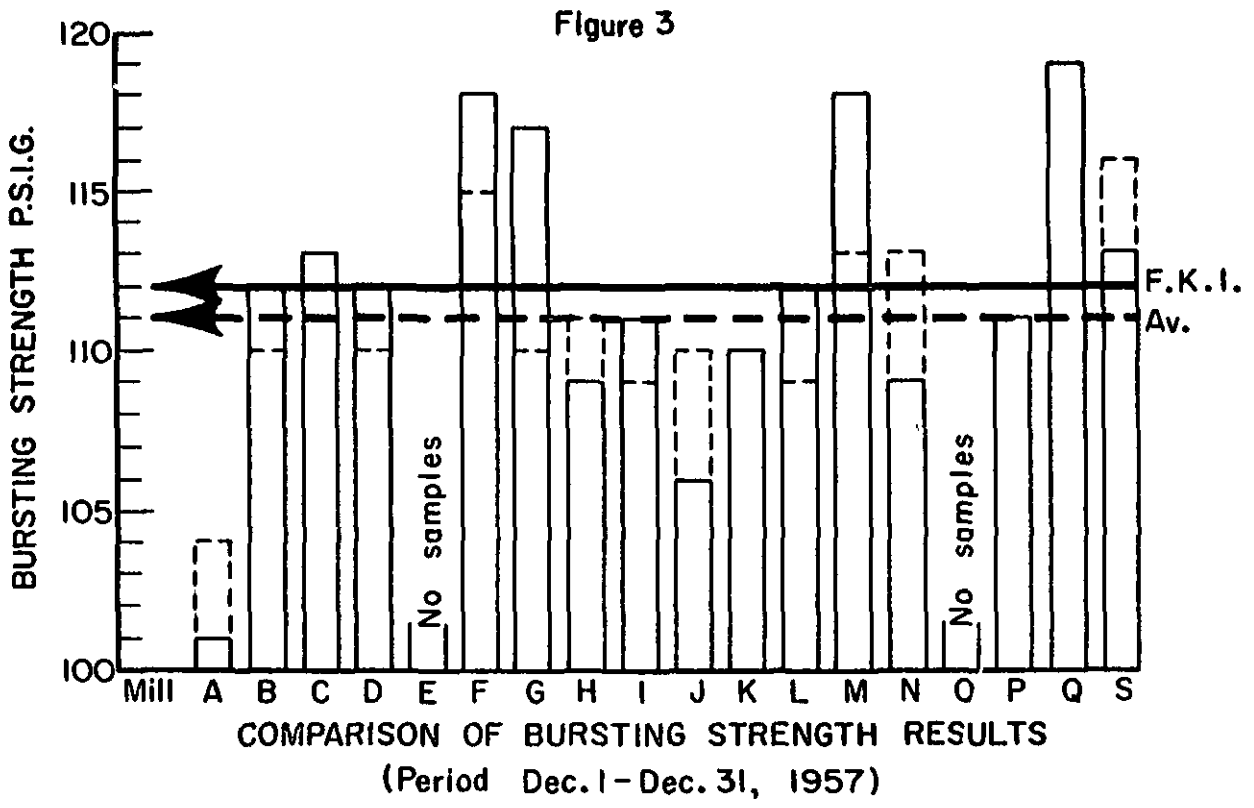
The results indicate that all participating mills are using a water finish on their 42-lb. linerboard.

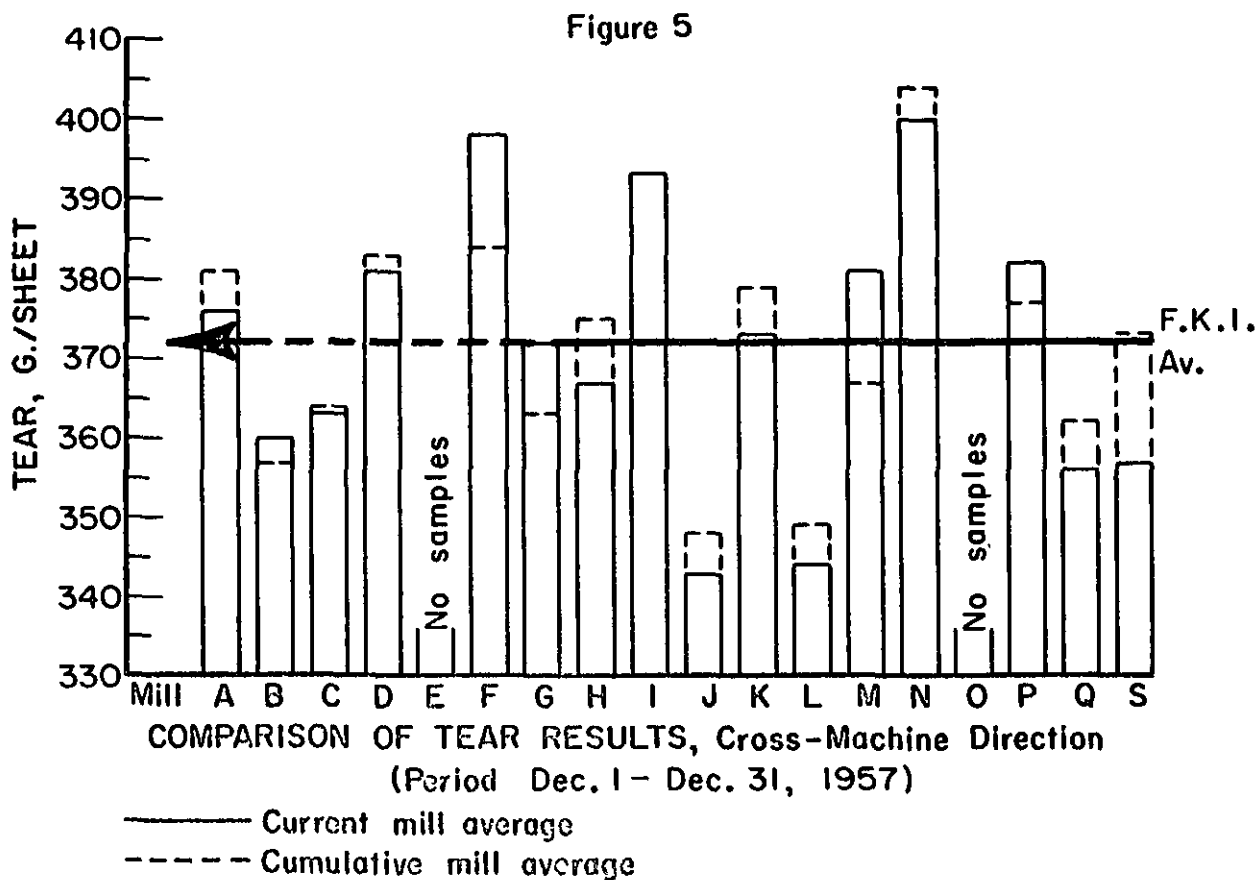
TABLE II

SUMMARY OF COMPOSITE MILL AVERAGES--DECEMBER 1 THROUGH DECEMBER 31, 1957

Mill	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	In Machine	Elmendorf Tear, g./sheet	Cross Machine
A	43.7	12.4	101	360	376	
B	43.1	12.7	112	298	360	
C	43.0	12.3	113	318	363	
D	43.7	13.1	112	345	381	
E	No samples submitted.					
F	44.0	12.8	118	359	398	
G	43.2	13.5	117	339	372	
H	42.8	12.7	109	310	367	
I	43.8	13.1	111	340	393	
J	43.0	12.7	106	282	343	
K	44.3	12.6	110	343	373	
L	43.3	12.0	112	327	344	
M	43.5	12.4	118	319	381	
N	43.8	12.2	109	372	400	
O	No samples submitted.					
P	42.7	13.3	111	379	382	
Q	43.5	13.3	119	315	356	
S	42.7	13.2	113	299	357	
Current FKI Average:	43.4	12.8	112	332	372	
Cumulative FKI Average:	43.0	12.7	111	335	372	
FKI Index, %	100.9	100.8	100.9	99.1	100.0	







SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957

TABLE III

MILL A -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I. gage		Elmendorf Tear, g./sheet								
					Max.	Av.	Max.	Av.	Max.	Min.	Max.	Min.	Max.	Min.	Av.				
176289	S.F.	12/17/57	12/ 5/57	7	44.2	43.0	43.7	13.2	11.4	12.4	131	68	101	440	288	360	432	320	376 <sup>a</sup>
Current Mill Average.							43.7			12.4			101			360			376
Cumulative Mill Average.							43.4			13.0			104			371			381
Mill Factor, %							100.7			95.4			97.1			97.0			98.7
Mill Index, %							101.6			97.6			91.0			107.5			101.1

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

SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE IV

MILL B -- 42-LB. LINERBOARD

File No	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I. gage		Elmendorf Tear, g./sheet								
					Max.	Av.	Max.	Av.	Max.	Av.	In	Across	Max.	Min.	Av.				
176249	----	12/13/57	12/ 2/57	1	44.0	42.2	43.2	13.1	12.3	12.8	140	80	110	384	272	319 <sup>a</sup>	416	336	369 <sup>a</sup>
176250	----	12/13/57	12/ 3/57	1	44.0	42.4	43.4	13.3	12.5	13.0	140	70	108	336	240	299	416	336	363 <sup>a</sup>
176390	WFLS	12/26/57	12/16/57	1	43.6	41.8	42.5	13.1	11.6	12.2	135	93	117	320	224	277 <sup>a</sup>	384	320	349 <sup>a</sup>
Current Mill Average:							43.1			12.7			112		298				360
Cumulative Mill Average:							42.8			12.7			110		309				357
Mill Factor, %							100.7			100.0			101.8		96.4				100.8
Mill Index, %							100.2			100.0			100.9		99.0				96.8

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

SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE V  
MILL C -- 42-LB. LINERBOARD

File No	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i., Page			Elmendorf Tear, g./sneet					
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
176089	W.F.	12/ 2/57	11/19/57	1	43.8	42.0	42.7	12.9	11.6	12.2	142	87	112	416	296	347 <sup>a</sup>	392	320	361 <sup>a</sup>
176090	W.F.	12/ 2/57	11/19/57	1	44.2	42.8	43.6	12.2	11.9	12.0	141	88	112	360	304	344 <sup>a</sup>	408	360	384 <sup>a</sup>
176135	W.F.	12/ 6/57	11/21/57	1	43.6	42.2	42.8	12.5	11.6	12.2	134	86	111	400	296	339	400	328	369 <sup>a</sup>
176136	W.F.	12/ 6/57	11/23/57	1	43.0	42.2	42.7	12.7	11.8	12.2	128	94	107	352	298	332 <sup>a</sup>	424	320	367 <sup>a</sup>
176287	W.F.	12/17/57	11/25/57	2	45.6	41.8	43.5	13.2	12.1	12.6	144	90	115	368	298	321 <sup>a</sup>	384	352	365 <sup>a</sup>
176288	W.F.	12/17/57	11/26/57	2	43.8	42.0	42.8	12.8	11.0	12.4	131	100	115	336	264	300 <sup>a</sup>	400	320	353 <sup>a</sup>
176291	W.F.	12/16/57	12/ 2/57	2	44.6	43.2	43.9	13.1	11.7	12.3	146	91	115	336	272	300	408	328	353 <sup>a</sup>
176282	W.F.	12/16/57	12/ 4/57	2	43.0	42.0	42.3	12.9	12.0	12.4	139	96	116	336	240	281	368	320	353 <sup>a</sup>
Current Mill Average					43.0			12.3			113			318			363		
Cumulative Mill Average:					42.7			12.4			113			316			364		
Mill Factor, %					100.7			99.2			100.0			100.6			99.7		
Mill Index, %					100.0			96.9			101.8			94.9			97.6		

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

SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE VI

MILL D -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, P.S.I. gage			Elmendorf Tear, g./sheet					
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
176069	I.F.	12/2/57	11/18/57	2	43.8	42.0	42.8	13.8	13.1	13.4	132	66	107	440	320	377	416	344	377 <sup>a</sup>
176070	I.F.	12/2/57	11/19/57	2	43.8	42.0	42.8	13.8	12.9	13.4	130	80	103	480	312	377	408	344	375 <sup>a</sup>
176279	W.F.	12/16/57	11/24/57	2	45.0	43.2	43.9	13.5	13.0	13.1	135	86	113	368	320	335 <sup>a</sup>	432	344	387 <sup>a</sup>
176280	W.F.	12/16/57	11/30/57	2	44.4	44.0	44.1	13.3	12.5	13.0	137	88	114	400	304	344	400	352	375 <sup>a</sup>
176290	W.F.	12/17/57	12/2/57	2	44.4	43.8	44.0	13.3	13.0	13.1	151	93	116	384	288	333 <sup>a</sup>	432	336	377 <sup>a</sup>
176291	W.F.	12/17/57	12/3/57	2	44.0	43.0	43.8	13.6	13.0	13.2	146	95	116	352	304	335	432	352	380 <sup>a</sup>
176388	W.F.	12/26/57	12/13/57	2	45.0	43.8	44.3	13.3	12.0	12.6	135	92	115	368	304	340	416	352	392 <sup>a</sup>
176389	W.F.	12/26/57	12/14/57	2	44.4	44.0	44.0	13.2	12.5	12.9	127	95	113	352	272	319	416	368	384 <sup>a</sup>
Current Mill Average:					43.7			13.1			112			345			381		
Cumulative Mill Average:					43.1			12.6			110			344			383		
Mill Factor, %					101.4			104.0			101.8			100.3			99.5		
Mill Index, %					101.6			103.1			100.9			103.0			102.4		

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

SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE VII

MILL E -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Tch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i., gage		Elmendorf Tear, g./sheet	
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.

No samples submitted.

TABLE VIII

MILL F -- 42-LB. LINERBOARD

176079	W.F.	12/2/57	11/14/57	-	44.2	42.0	42.8	13.5	12.3	12.8	127	84	109	392	320	348 <sup>a</sup>	424	328	385 <sup>a</sup>
176080	W.F.	12/2/57	11/26/57	-	45.6	44.0	44.6	13.8	12.8	13.2	142	102	119	464	344	389 <sup>a</sup>	430	368	429 <sup>a</sup>
176081	W.F.	12/2/57	11/26/57	-	45.8	43.8	44.4	13.8	12.1	13.1	138	102	120	440	336	376 <sup>a</sup>	448	360	414 <sup>a</sup>
176156	W.F.	12/10/57	11/29/57	-	44.2	43.2	43.9	13.6	12.0	12.7	133	108	120	336	304	324 <sup>a</sup>	392	352	374 <sup>a</sup>
176157	W.F.	12/10/57	11/29/57	-	44.8	43.8	44.2	13.2	12.3	12.8	130	97	114	384	320	353	408	344	380 <sup>a</sup>
176333	W.F.	12/20/57	12/10/57	-	44.0	42.0	43.3	13.0	11.8	12.2	144	96	118	368	288	345 <sup>a</sup>	416	360	384 <sup>a</sup>
176334	W.F.	12/20/57	12/10/57	-	46.0	43.6	44.7	13.3	12.0	12.5	140	105	124	488	336	379 <sup>a</sup>	512	368	418 <sup>a</sup>
Current Mill Average:					44.0		42.8	12.8		12.8	118		118		359		398		
Cumulative All Average:					43.6		42.7	12.7		12.7	115		115		348		384		
Mill Factor, %					100.9		100.8	100.8		102.6	103.2		103.2		103.6		103.6		
All Index, %					102.3		100.8	100.8		106.3	107.2		107.2		107.2		107.0		

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

SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE IX

MILL G -- 42-Lb. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet		In	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.			
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.					Max.	Min.	Max.
176082	WFLS	12/ 2/57	11/24/57	2	44.2	42.4	43.4	13.5	12.8	13.2	136	96	119	392	272	324 <sup>a</sup>	416	328	373 <sup>a</sup>
176083	WFLS	12/ 2/57	11/25/57	2	44.4	42.4	43.4	14.0	13.1	13.5	135	94	115	368	296	337 <sup>a</sup>	448	344	381 <sup>a</sup>
176094	WFLS	12/ 2/57	11/26/57	2	44.0	41.2	42.4	13.3	12.5	12.9	140	97	117	416	288	343 <sup>a</sup>	400	352	369 <sup>a</sup>
176085	WFLS	12/ 2/57	11/27/57	2	44.0	40.6	42.4	13.5	12.7	13.0	127	90	111	376	280	324 <sup>a</sup>	392	336	369 <sup>a</sup>
176262	WFLS	12/16/57	12/ 3/57	2	44.0	42.0	43.4	14.7	13.0	13.8	146	34	118	368	256	319	416	336	383
176263	WFLS	12/16/57	12/10/57	2	44.0	42.2	43.2	14.4	13.0	13.7	149	100	120	408	288	338 <sup>a</sup>	448	320	363 <sup>a</sup>
176337	WFLS	12/26/57	12/13/57	2	45.6	43.6	44.3	14.8	13.0	14.0	140	102	119	448	336	385 <sup>a</sup>	400	336	369 <sup>a</sup>
Current Mill Average:							43.2			13.5			117			339			372
Cumulative Mill Average:							42.6			13.5			110			336			363
Mill Factor, %							101.4			100.0			106.4			100.9			102.5
Mill Index, %							100.5			106.3			105.4			101.2			100.0

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

SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE X

MILL H -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, P.S.I., gage			Elmendorf Tear, g./sheet					
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
176097	WFLS	12/ 2/57	11/22/57	1	43.2	42.0	42.6	13.5	12.4	12.8	128	88	115	328	264	303	400	360	379 <sup>a</sup>
176176	WFLS	12/11/57	12/ 3/57	1	43.4	42.2	42.5	13.3	12.1	12.8	131	90	107	368	256	311 <sup>a</sup>	400	320	365 <sup>a</sup>
176152	WFLS	12/10/57	12/ 4/57	1	44.0	42.4	43.4	13.0	12.1	12.5	133	85	106	368	272	317	384	320	355 <sup>a</sup>
Current Mill Average:							42.8			12.7		109			310				367
Cumulative Mill Average:							42.9			12.5		111			315				375
Mill Factor, %							99.8			101.6		98.2			98.4				97.9
Mill Index, %							99.5			100.0		98.2			92.5				98.7

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

SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XI

MILL I -- 42-LB. LINERBOARD

File No	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. Edge		Elmendorf Tear, g./sheet								
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.					
176145	WF1S	12/9/57	12/4/57	2	44.4	43.8	44.1	14.0	12.0	13.2	125	88	107	384	288	336	400	336	369 <sup>a</sup>
176153	WF1S	12/10/57	11/29/57	2	44.0	42.2	43.2	13.2	12.2	12.9	124	94	112	268	288	321	416	352	374 <sup>a</sup>
176335	----	12/20/57	12/10/57	2	45.0	43.6	44.0	13.7	12.7	13.2	134	95	115	400	336	364	464	408	435 <sup>a</sup>
Current Mill Average:							43.8		13.1				111		340				393
Cumulative Mill Average:							42.1		11.9				109		352				393
Mill Factor, %							104.0		110.1				101.8		96.6				100.0
Mill Index, %							101.9		103.1				100.0		101.5				105.6

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

SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XII  
 MILL J -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet							
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.				
176057	H.F.	12/ 2/57	11/12/57	1	44.2	42.2	13.2	12.7	13.0	131	86	107	336	240	291	376	320	349 <sup>a</sup>
176058	H.F.	12/ 2/57	11/15/57	1	43.8	42.0	13.3	12.8	13.0	131	89	107	344	248	277 <sup>a</sup>	376	320	343 <sup>a</sup>
176086	H.F.	12/ 2/57	11/21/57	1	44.0	41.6	12.6	11.8	12.2	120	90	102	352	248	278 <sup>a</sup>	408	304	336 <sup>a</sup>
Current Mill Average:						43.0				12.7		106			282		343	
Cumulative Mill Average:						43.4				12.8		110			298		348	
Mill Factor, %						99.1				99.2		96.4			94.6		98.6	
Mill Index, %						100.0				100.0		95.5			84.2		92.2	

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

SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XIII  
MILL K -- 42-LB. LINERBOARD

File No.	Finish	Date Recd	Date Made	Mch. No.	Basis Weight, lb.		Caliper points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet							
					Max.	Av.	Max.	Av.	Max.	Av.	Max.	Av.	Max.	Av.				
176064	W.F.	12/2/57	11/20/57	-	45.0	44.0	13.2	11.9	12.6	144	95	113	392	336	365	448	344	391 <sup>a</sup>
176065	W.F.	12/2/57	11/21/57	-	44.6	44.0	13.5	12.5	12.9	143	100	114	392	312	357 <sup>a</sup>	440	344	393 <sup>a</sup>
176066	W.F.	12/2/57	11/22/57	-	45.8	44.6	13.6	12.4	13.0	139	90	109	416	328	361	392	368	377 <sup>a</sup>
176146	W.F.	12/10/57	11/27/57	-	44.2	43.2	13.3	12.7	13.0	120	83	104	360	304	331 <sup>a</sup>	400	352	369 <sup>a</sup>
176147	W.F.	12/10/57	11/28/57	-	46.0	45.2	13.3	12.5	12.9	142	100	117	408	336	355 <sup>a</sup>	432	352	397 <sup>a</sup>
176148	W.F.	12/10/57	11/29/57	-	46.0	44.2	12.9	12.0	12.4	137	95	109	432	320	363	440	344	386 <sup>a</sup>
176149	W.F.	12/10/57	12/4/57	-	44.0	42.0	12.6	11.8	12.1	151	82	108	384	256	324 <sup>a</sup>	384	320	341 <sup>a</sup>
176150	W.F.	12/10/57	12/5/57	-	44.2	43.4	12.2	11.5	11.9	132	100	116	368	288	319	416	352	384 <sup>a</sup>
176151	W.F.	12/10/57	12/6/57	-	44.2	43.4	13.5	12.8	13.1	120	79	103	432	288	352 <sup>a</sup>	368	320	339 <sup>a</sup>
176276	W.F.	12/16/57	12/11/57	-	45.0	44.0	13.1	12.0	12.5	130	95	109	360	288	330 <sup>a</sup>	408	336	372 <sup>a</sup>
176277	W.F.	12/16/57	12/12/57	-	46.0	45.6	13.6	13.0	13.2	133	95	112	408	320	361	432	320	392 <sup>a</sup>
176278	W.F.	12/16/57	12/13/57	-	43.2	42.0	12.3	11.3	12.0	124	97	111	336	240	295 <sup>a</sup>	384	328	347 <sup>a</sup>
Current Mill Average:					44.3		12.6		12.6		110		343		373			
Cumulative Mill Average:					43.7		12.8		12.8		110		353		379			
Mill Factor, %					101.4		98.4		100.0		97.2		98.4					
Mill Index, %					103.0		99.2		99.1		102.4		100.3					

Current mill average:

Cumulative mill average:

Mill Factor, %

Mill Index, %

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

SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XIV  
MILL 1 -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I. gage		Elmendorf Tear, g./sheet								
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			
176098	W.F.	12/ 2/57	11/18/57	-	45.0	42.0	43.2	12.3	11.5	12.0	127	97	110	400	296	341 <sup>a</sup>	384	336	358 <sup>a</sup>
176099	W.F.	12/ 2/57	11/18/57	-	44.0	41.0	42.4	12.1	11.2	11.6	133	85	108	368	288	333	384	320	343 <sup>a</sup>
176177	W.F.	12/11/57	11/27/57	-	44.0	42.0	43.0	12.1	11.3	11.6	136	95	114	384	304	340	432	320	359 <sup>a</sup>
176178	W.F.	12/11/57	11/26/57	-	44.0	42.2	43.1	12.3	11.9	12.0	130	85	111	384	304	332	384	320	352 <sup>a</sup>
176179	W.F.	12/11/57	12/ 2/57	-	44.2	43.0	43.8	13.1	11.9	12.3	130	101	116	352	272	317	360	288	327 <sup>a</sup>
176180	W.F.	12/11/57	12/ 2/57	-	44.2	43.2	43.9	12.3	11.3	11.9	128	94	109	336	272	301	352	288	321
176349	W.F.	12/23/57	12/ 9/57	-	44.0	42.6	43.7	12.8	12.0	12.3	135	91	113	368	288	327 <sup>a</sup>	368	304	336 <sup>a</sup>
176350	W.F.	12/23/57	12/ 9/57	-	44.0	42.6	43.4	12.3	11.8	12.0	133	95	115	368	272	325 <sup>a</sup>	400	320	360 <sup>a</sup>
Current Mill Average							43.3			12.0			112			327			344
Cumulative Mill Average							42.9			12.3			109			340			349
Mill Factor, %							100.9			97.6			102.8			96.2			98.6
Mill Index, %							100.7			94.5			100.9			97.6			92.5

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

SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XV  
 MILL M -- 42-LB. LINERBOARD

File No	Finish	Date Recd	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet							
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
176071	W.F.L.	12/ 2/57	11/21/57	2	44.0	43.0	13.2	11.9	12.7	145	87	119	360	304	331	440	368	399 <sup>a</sup>
176072	W.F.L.	12/ 2/57	11/21/57	2	43.8	42.9	13.1	11.9	12.5	133	100	118	360	248	313	400	344	373 <sup>a</sup>
176073	W.F.L.	12/ 2/57	11/21/57	2	44.0	42.4	12.6	11.6	12.2	137	100	119	336	248	307 <sup>a</sup>	416	328	378 <sup>a</sup>
176074	W.F.	12/ 2/57	11/22/57	2	44.0	42.2	12.5	11.4	12.1	132	97	115	368	288	325 <sup>a</sup>	384	312	366 <sup>a</sup>
176075	W.F.	12/ 2/57	11/24/57	2	43.4	42.0	12.8	11.3	12.2	140	106	121	336	264	298 <sup>a</sup>	424	376	395 <sup>a</sup>
176076	W.F.	12/ 2/57	11/24/57	2	44.2	42.4	12.7	12.0	12.3	137	88	117	368	264	319 <sup>a</sup>	400	344	377 <sup>a</sup>
176283	W.F.	12/17/57	12/ 6/57	2	44.0	43.8	12.9	12.0	12.3	135	96	115	320	288	316	400	352	376 <sup>a</sup>
176284	W.F.	12/17/57	12/ 6/57	2	45.0	43.0	13.6	12.6	13.2	141	85	116	432	304	345 <sup>a</sup>	448	336	391 <sup>a</sup>
176285	W.F.	12/17/57	12/ 8/57	2	44.2	43.0	12.9	12.0	12.4	137	104	118	336	272	303	400	336	367 <sup>a</sup>
176286	W.F.	12/17/57	12/ 8/57	2	44.0	43.4	12.5	12.0	12.2	134	102	118	336	272	295	384	320	352 <sup>a</sup>
176348	W.F.	12/23/57	12/16/57	2	45.0	43.6	13.1	11.6	12.6	131	100	116	432	304	356	464	384	422 <sup>a</sup>
Current Mill Average:						43.5		12.4		118		118		319		381		
Cumulative Mill Average:						43.5		12.6		113		113		316		367		
Mill Factor, %						100.0		98.4		104.4		104.4		100.9		103.8		
Mill Index, %						101.2		97.6		106.3		106.3		95.2		102.4		

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

SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XVI

MILL N -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet		Across Min. Av.					
					Max.	Min. Av.	Max.	Min. Av.	Max.	Min. Av.	In Max.	Min. Av.						
176077	W.B.	12/ 2/57	11/19/57	-	44.4	41.8	13.0	11.7	12.3	130	90	105	432	328	378	464	384	423
176078	W.B.	12/ 2/57	11/20/57	-	45.0	42.0	12.6	12.0	12.4	130	77	104	424	344	379 <sup>a</sup>	488	344	419 <sup>a</sup>
176139	W.B.	12/ 9/57	11/22/57	-	45.4	42.8	13.0	11.8	12.2	130	94	112	400	288	351	432	336	390 <sup>a</sup>
176140	W.B.	12/ 9/57	11/25/57	-	44.6	42.4	13.0	11.8	12.5	126	92	110	400	304	372	464	392	417
176141	W.B.	12/ 9/57	11/26/57	-	44.6	43.8	13.2	12.3	12.9	122	87	106	400	320	381	440	384	410 <sup>a</sup>
176142	W.B.	12/ 9/57	11/27/57	-	44.6	42.0	12.9	11.3	12.1	136	98	111	400	336	371	432	352	401 <sup>a</sup>
176208	W.B.	12/12/57	11/28/57	-	44.2	43.2	12.5	11.2	11.8	120	90	107	416	304	332 <sup>a</sup>	408	336	375 <sup>a</sup>
176209	W.B.	12/12/57	12/ 3/57	-	44.2	42.2	12.5	11.5	12.0	128	84	111	392	320	363	440	336	383
176210	W.B.	12/12/57	12/ 3/57	-	45.4	42.6	12.3	11.6	12.0	127	90	108	424	320	379 <sup>a</sup>	496	336	385 <sup>a</sup>
176303	W.B.	12/18/57	12/ 6/57	-	46.0	43.8	12.3	11.7	12.0	126	79	111	480	368	409 <sup>a</sup>	448	352	395 <sup>a</sup>
Current Mill Average.					43.8		12.2		109		372		400					
Cumulative Mill Average:					43.6		12.1		113		373		404					
Mill Factor, %					100.5		100.8		96.5		99.7		99.0					
Mill Index, %					101.9		96.1		98.2		111.0		107.5					

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

SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XVII

MILL O -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, Points		Bursting Strength, p.s.i., Base		Elmendorf Tear, g./sheet	
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.

No samples submitted.

TABLE XVIII

MILL P -- 42-LB LINERBOARD

175095	W	12/2/57	11/7/57	4	43.8	42.0	42.8	13.9	13.0	13.5	125	87	108	408	344	375	392	312	355 <sup>a</sup>		
176096	W	12/2/57	11/12/57	4	42.2	41.0	41.8	13.8	12.7	13.1	128	97	114	424	328	369 <sup>a</sup>	424	328	373 <sup>a</sup>		
176351	W	12/23/57	11/14/57	4	44.0	42.0	43.0	13.9	13.0	13.3	124	95	108	400	336	375 <sup>a</sup>	448	368	401 <sup>a</sup>		
176352	W	12/23/57	12/7/57	4	44.0	42.0	43.1	13.9	13.0	13.4	131	100	115	456	344	396 <sup>a</sup>	448	352	399 <sup>a</sup>		
Current Mill Average:							42.7			13.3			111			379			382		
Cumulative Mill Average:							42.8			13.2			111			364			377		
Mill Factor, %							99.8			100.8			100.0			104.1			101.3		
Mill Index, %							99.3			104.7			100.0			113.1			102.7		

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

SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XIX  
MILL Q -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i.		Elmendorf Tear, g./sheet							
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
176087	WFLS	12/2/57	11/25/57	1	44.0	42.0	13.8	12.5	13.2	141	90	114	368	264	325	384	328	361 <sup>a</sup>
176088	WFLS	12/2/57	11/25/57	1	44.2	42.0	13.7	12.8	13.2	133	100	117	344	272	307	392	320	352 <sup>a</sup>
176154	WFLS	12/10/57	11/29/57	1	44.2	43.2	14.0	13.0	13.4	142	108	122	352	288	319	400	320	351 <sup>a</sup>
176155	WFLS	12/10/57	11/29/57	1	44.2	42.8	14.0	13.0	13.3	144	102	123	344	256	307 <sup>a</sup>	392	328	361 <sup>a</sup>
Current Mill Average:					43.5		13.3		119		315		356					
Cumulative Mill Average:					42.9		13.4		112		322		362					
Mill Factor, %					101.4		99.3		106.2		97.8		98.3					
Wall Index, %					101.2		104.7		107.2		94.0		95.7					

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

SUMMARY OF INSTITUTE DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XX

MILL S -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis weight, lb.		Caliper, points		Bursting Strength, P.S.I., Edge		Elmendorf Tear, g./sheet								
					Max.	Av.	Max.	Av.	Max.	Av.	Max.	Av.	Max.	Av.					
176091	W.F.	12/ 2/57	10/14/57	1	44.0	42.4	43.3	13.4	12.6	13.1	134	100	118	352	272	317	400	344	377 <sup>a</sup>
176092	W.F.	12/ 2/57	10/19/57	1	42.2	41.8	42.0	13.3	12.8	13.0	132	98	111	312	240	275	352	320	338 <sup>a</sup>
176093	W.F.	12/ 2/57	10/23/57	1	43.0	41.0	42.0	14.0	12.7	13.4	126	92	110	320	248	289 <sup>a</sup>	384	320	351 <sup>a</sup>
176094	W.F.	12/ 2/57	10/27/57	1	44.2	42.8	43.5	14.0	12.5	13.3	142	95	113	352	272	313	440	328	362 <sup>a</sup>
Current Mill Average:							42.7	13.2		113		299		357					
Cumulative Mill Average							42.7	13.4		116		305		373					
Mill Factor, %							100.0	98.5		97.4		98.0		95.7					
Mill Index, %							99.3	103.9		101.8		89.3		96.0					

TABLE XXI

MILL R -- 47-LB. DRUM 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.

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 XXII, the atmospheric conditions used prior to and during the testing period were relatively uniform for the mills which reported this information. However, the conditioning periods varied considerably.

TABLE XXII

Mill Code	Preconditioning			Conditioning		
	R.H., %	Temp., °F.	Time, hr.	R.H., %	Temp., °F.	Time, hr.
A	50	73	24	--	--	--
B	40-50	73-74	24	40-50	73-74	2
C	50	73	24	50	73	24
D		None		50	73	24
E			No samples submitted.			
F	34	76	48	50	73	48
G	50-53	72-78	24	--	--	--
H		None		48-52	65-68	--
I	50-51	72	3-36	50	72-73	3-36
J	54-95	75-78	0.5	50	73	24-48
K	36-38	78-79	8	51-52	73-74	16
L		None		50	73	0.5
M		None		50	73	24
N		None		46-50	71-72	48
O			No samples submitted.			
P		None		52	72	--
Q		None		35-56	60-88	--
S		None		61-72	82-83	--

A summary of the Institute and mill test results for the current period is shown in Table XXIII, and a comparison of differences between Institute and mill test results is given in Table XXIV for the current

period and the two previous periods. The comparisons are given in Tables XXV to XLII, for the 42-lb. liner samples. A comparison of the special drum stock is given in Table XLIII. In all the comparisons given in Tables XXV to XLIII, the Institute's test values have been used as the reference line.

A comparison of the test data in Tables XXIII and XXIV reveals the level of agreement between mill and Institute data for basis weight, caliper, bursting strength, and Elmendorf tear. Table XXIII shows the average difference between Institute and mill test results for all sample lots submitted by each mill for the current period. In addition, the maximum difference encountered in comparing the Institute and mill test results for a given sample lot is shown. In Table XXIV, the average differences shown for each test in Table XXIII have been calculated on a percentage basis for each mill. In addition, for purposes of comparison, the average percentage differences for the preceding two periods are shown.

It may be noted in Table XXIV that the maximum variation between the average basis weight results of the Institute and those of a given mill on corresponding samples is two per cent for the current period. By comparison, the maximum percentage variation noted for the previous two periods was three per cent. Further, it may be noted that the average basis weight results for Mills D and G are higher than those for the Institute, the average results for Mills C and J are the same and the average results for the other mills are lower. None of the variations for the current period appear to be excessive.

The maximum variation in caliper for the current period is five per cent. The maximum variation for the previous two periods was six per cent. Compared with the Institute's test results, the test results for Mills A and J are higher than those for the Institute and the test results for the rest of the mills are lower. None of the variations appear to be excessive.

It may be noted in Table XXIV that the bursting strength results exhibited a maximum variation of eight per cent for the current period. The average results for Mills A, C, J, and N are higher than those for the Institute, the average results for Mills D, K and L are the same, and the results for the other mills are lower. Only the variation for Mill G appears to be excessive.

It may be seen in Tables XXIII and XXIV that the average machine direction tear results for Mills A, D, G, H, J, L, and N are higher than those for the Institute, the result for Mill M is the same, and the results for the other mills are lower. The maximum variation for the current period is eleven per cent. For the current period only the variation of eleven per cent noted for Mills F and I appears to be excessive.

With regard to the cross-machine direction tear results, it may be noted that the average results for Mills A, B, D, G, H, J, K, L, N, and S are higher than those for the Institute, and the average results for the other mills are lower. The maximum variation for the current period is seventeen per cent. The variations associated with the results for Mills A, D, and G appear to be excessive.

TABLE XXIII

SUMMARY OF TEST RESULT COMPARISONS (AVERAGE MILL AND INSTITUTE RESULTS)

Mills*	No. Samples Compared	Basis Weight													S				
		A	B	C	D	E	F	G	H	I	J	K	L	M		N	O	P	Q
Institute	43.7	43.1	43.0	43.7	44.0	43.2	42.8	43.8	43.0	44.3	44.3	43.3	43.5	43.8	42.7	42.7	43.5	42.7	
Mill	42.9	42.4	43.0	43.9	43.6	43.9	42.3	43.2	43.0	44.1	44.1	42.5	42.7	43.0	42.4	42.4	42.5	42.0	
Av. Diff.**	-0.8	-0.7	0.0	+0.2	-0.4	+0.7	-0.5	-0.6	0.0	-0.2	-0.2	-0.8	-0.8	-0.8	-0.3	-0.3	-1.0	-0.7	
Max. Diff.***	-0.8	-0.9	-0.7	+0.4	-1.1	+1.6	-1.3	-0.7	+0.2	-1.8	-1.8	-1.1	-1.2	-1.8	-1.1	-1.1	-1.2	-1.4	
<u>Caliper</u>																			
Institute	12.4	12.7	12.3	13.1	12.8	13.5	12.7	13.1	12.7	12.6	12.6	12.0	12.4	12.2	13.3	12.7	13.3	13.2	
Mill	12.7	12.1	11.9	12.9	12.7	13.4	12.5	12.5	12.8	12.3	12.3	11.7	12.2	11.6	12.7	12.7	12.8	12.9	
Av. Diff.**	+0.3	-0.6	-0.4	-0.2	-0.1	-0.1	-0.2	-0.6	+0.1	-0.3	-0.3	-0.3	-0.2	-0.6	-0.6	-0.6	-0.5	-0.3	
Max. Diff.***	+0.3	-0.8	-0.7	-0.4	-0.2	-0.5	-0.4	-0.7	+0.4	-0.8	-0.8	-0.6	-0.5	-0.9	-0.8	-0.8	-0.6	-0.4	
<u>Bursting Strength</u>																			
Institute	101	112	113	112	118	117	109	111	106	110	110	112	118	109	111	109	119	113	
Mill	104	109	116	112	116	108	106	109	107	110	110	112	114	110	109	110	115	111	
Av. Diff.**	+3	-3	+3	0	-2	-9	-3	-2	+1	0	0	0	-4	+1	-2	+1	-4	-2	
Max. Diff.***	+3	-6	+7	+4	-6	-16	-7	-3	+2	+11	+11	-8	-6	+9	-4	+9	-7	-7	
<u>Tearing Strength, in</u>																			
Institute	360	298	318	345	359	339	310	340	282	343	343	327	319	372	379	315	315	299	
Mill	362	295	310	374	321	359	324	303	302	331	331	348	319	378	343	299	299	290	
Av. Diff.**	+2	-3	-8	+29	-38	+20	+14	-37	+20	-12	-12	+21	0	+6	-36	-16	-16	-9	
Max. Diff.***	+2	-33	-23	+62	-59	+55	+28	-49	+30	-40	-40	+31	-25	+41	-63	-49	-49	-44	
<u>Tearing Strength, across</u>																			
Institute	376	360	363	381	398	372	367	393	343	373	373	344	381	400	382	356	356	357	
Mill	418	378	351	444	378	419	402	365	350	377	377	374	379	411	373	368	368	364	
Av. Diff.**	+42	+18	-12	+63	-20	+47	+35	-28	+7	+4	+4	+30	-2	+11	-9	-12	-12	+7	
Max. Diff.***	+42	+30	-36	+73	-37	+85	+42	-69	+10	-32	-32	+47	-55	+51	-28	+38	+38	+30	

\* Comparison based on averages involved 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 XXIV  
COMPARISON OF INSTITUTE-MILL DIFFERENCES BY PERIODS  
Average Differences, per cent

Mill	Period	Basis Weight	Caliper	Burst	Tear, in.	Tear, across	Mill	Period	Basis Weight	Caliper	Burst	Tear, in.	Tear, across
A	Current	-2	+2	+3	+0.6	+11	J	Current	0	+0.8	+0.9	+7	+2
	125th	0	-4	+1	-2	+4		125th	-0.7	-2	0	+5	+4
	124th	-0.5	-3	+6	-7	+2		124th	--	--	--	--	--
B	Current	-2	-5	-3	-1	+5	K	Current	-0.5	-2	0	-3	+1
	125th	-0.5	-6	-3	+4	+11		125th	+0.5	-2	0	-1	+0.8
	124th	0	-3	-7	-8	+6		124th	+0.5	-4	0	-3	+2
C	Current	0	-3	+3	-3	-3	L	Current	-2	-2	0	+6	+9
	125th	+0.5	-2	+0.9	+2	+2		125th	-0.5	-2	-2	-6	+11
	124th	+1	-2	+0.9	+5	+2		124th	-0.7	-2	0	0	+7
D	Current	+0.5	-2	0	+8	+17	M	Current	-2	-2	-3	0	-0.5
	125th	+0.2	-0.8	-0.9	+9	+20		125th	-1	-2	-3	-1	+5
	124th	+0.7	-4	+4	+9	+9		124th	-1	-2	0	+2	+4
E	Current	--	--	--	--	--	N	Current	-2	-5	+0.9	+2	+3
	125th	--	--	--	--	--		125th	-0.9	-3	+3	-1	+3
	124th	--	--	--	--	--		124th	-0.7	-3	+0.9	-3	-1
F	Current	-0.9	-0.8	-2	-11	-5	O	Current	--	--	--	--	--
	125th	+0.2	-2	-0.9	-4	-1		125th	--	--	--	--	--
	124th	+2	+0.8	-0.9	-6	-0.5		124th	--	--	--	--	--
G	Current	+2	-0.7	-8	+6	+13	P	Current	-0.7	-5	-2	-9	-2
	125th	+3	-4	-3	+6	+6		125th	-0.7	-3	-3	-2	-1
	124th	+3	-3	-7	-8	+9		124th	-1	-4	-3	-2	-0.8
H	Current	-1	-2	-3	+5	+10	Q	Current	-2	-4	-3	-5	-3
	125th	-0.7	-0.8	-8	+19	+9		125th	-2	-4	-0.9	-0.3	+8
	124th	-2	-2	+0.9	+8	+5		124th	--	--	--	--	--
I	Current	-1	-5	-2	-11	-7	S	Current	-2	-2	-2	-3	+2
	125th	--	--	--	--	--		125th	--	--	--	--	--
	124th	--	--	--	--	--		124th	-1	-2	-5	-4	0

COMPARISON OF INSTITUTE AND MILL DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957

TABLE XXV  
 MILL A -- 42-LB. LINERBOARD

File No	Finish	Date Made	Mch. No.	Basis weight, lb		Caliper, points		Bursting Strength, P.S.I. gage		In		Across		Elmendorf Tear, g./sheet				
				IPC	Mill	Diff	IPC	Mill	Diff	IPC	Mill	Diff	IPC		Mill	Diff		
176289	S.F.	12/ 5/57	7	43.7	42.9	-0.8	12.4	12.7	+0.3	101	104	+3	360	362	+2	376 <sup>a</sup>	418	+42
Current Mill Average				43.7	42.9	-0.8	12.4	12.7	+0.3	101	104	+3	360	362	+2	376	418	+42

TABLE XXVI  
 MILL B -- 42-LB. LINERBOARD

176249	----	12/ 2/57	1	43.2	42.9	-0.3	12.8	12.2	-0.6	110	111	+1	319 <sup>a</sup>	328	+9	369 <sup>a</sup>	399	+30
176250	----	12/ 3/57	1	43.4	42.7	-0.7	13.0	12.2	-0.8	108	105	-3	299	313	+14	363 <sup>a</sup>	388	+25
176390	WFIS	12/16/57	1	42.5	41.6	-0.9	12.2	11.8	-0.4	117	111	-6	277 <sup>a</sup>	244	-33	349 <sup>a</sup>	348	-1
Current Mill Average				43.1	42.4	-0.7	12.7	12.1	-0.6	112	109	-3	298	295	-3	360	378	+18

<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.

COMPARISON OF INSTITUTE AND MILL DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XXVII

MILL C -- 42-LB. LINERBOARD

File No.	Finish	Date made	Mch. No.	Basis Weight, lb		Caliper, points		Bursting Strength, P.S.I. Gage		Elmendorf Tear, g / sheet								
				IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.					
176089	W.F.	11/19/57	1	42.7	+0.5	12.2	11.8	-0.4	112	116	+4	347 <sup>a</sup>	325	-22	361 <sup>a</sup>	365	+4	
176090	W.F.	11/19/57	1	43.6	-0.7	12.0	11.7	-0.3	112	114	+2	324 <sup>a</sup>	317	-7	384 <sup>a</sup>	348	-36	
176135	W.F.	11/21/57	1	42.8	+0.2	12.2	11.8	-0.4	111	116	+5	339	316	-23	369 <sup>a</sup>	357	-12	
176136	W.F.	11/23/57	1	42.7	+0.4	12.2	11.7	-0.5	107	114	+7	332 <sup>a</sup>	335	+3	367 <sup>a</sup>	355	-12	
176287	W.F.	11/25/57	2	43.5	-0.1	12.6	11.9	-0.7	115	118	+3	321 <sup>a</sup>	308	-13	365 <sup>a</sup>	349	-16	
176288	W.F.	11/26/57	2	42.8	0.0	12.4	11.9	-0.5	115	116	+1	300 <sup>a</sup>	291	-9	353 <sup>a</sup>	341	-12	
176281	W.F.	12/ 2/57	2	43.8	-0.6	12.3	12.0	-0.3	115	117	+2	300	300	0	353 <sup>a</sup>	343	-10	
176282	W.F.	12/ 4/57	2	42.3	+0.5	12.4	11.9	-0.5	116	117	+1	281	289	+8	353 <sup>a</sup>	351	-2	
Current Mill Average				43.0	43.0	0.0	12.3	11.9	-0.4	113	116	+3	318	310	-8	363	351	-12

<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.

COMPARISON OF INSTITUTE AND MILL DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XXVIII  
 MILL D -- 42-1B LINERBOARD

File No.	Finish	Date Made	Mch No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. range		Elmendorf Tear, g./sheet				
				IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	In	Across	IPC	Mill Diff.	
176069	W.F.	11/18/57	2	42.8	+0.3	13.4	-0.3	107	+1	377	+6	377 <sup>a</sup>	437	+60
176070	W.F.	11/19/57	2	42.8	+0.2	13.4	-0.3	103	+4	377	+24	375 <sup>a</sup>	444	+69
176279	W.F.	11/24/57	2	43.9	-0.4	13.1	-0.3	113	0	335 <sup>a</sup>	+25	387 <sup>a</sup>	438	+51
176280	W.F.	11/30/57	2	44.1	-0.1	13.0	0.0	114	-1	344	+22	375 <sup>a</sup>	448	+73
176290	W.F.	12/ 2/57	2	44.0	+0.1	13.1	-0.1	116	-2	333 <sup>a</sup>	+26	377 <sup>a</sup>	434	+57
176291	W.F.	12/ 3/57	2	43.8	+0.2	13.2	-0.4	116	-1	335	+32	380 <sup>a</sup>	432	+52
176388	W.F.	12/13/57	2	44.3	+0.4	12.6	-0.1	115	+1	340	+32	392 <sup>a</sup>	465	+73
176389	W.F.	12/14/57	2	44.0	+0.4	12.9	-0.3	113	0	319	+62	384 <sup>a</sup>	456	+72
Current Mill Average				43.7	+0.2	13.1	-0.2	112	0	345	+29	381	444	+63

<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.

COMPARISON OF INSTITUTE AND MILL DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XXIX

MILL E -- 42-LB LINERBOARD

file No	Finish	Date Made	Mch. No.	Basis weight, lb.		Caliper, points		Bursting Strength, p.s.i. edge		Elmendorf Tear, g./sheet								
				IPC Mill	Diff	IPC Mill	Diff	IPC Mill	Diff	In Mill	Diff	IPC Mill	Diff	Across Mill	Diff			
176079	W.F.	11/14/57	-	42.8	42.5	-0.3	12.8	12.6	-0.2	109	109	0	348a	299	-49	385a	363	-22
176080	W.F.	11/26/57	-	44.6	44.3	-0.3	13.2	13.1	-0.1	119	113	-6	388a	351	-37	429a	397	-32
176081	W.F.	11/26/57	-	44.4	44.7	+0.3	13.1	13.0	-0.1	120	117	-3	376a	329	-47	414a	396	-18
176156	W.F.	11/29/57	-	43.9	44.1	+0.2	12.7	12.7	0.0	120	117	-3	324a	329	+5	374a	368	-6
176157	W.F.	11/29/57	-	44.2	43.6	-0.6	12.8	12.7	-0.1	114	113	-1	353	324	-29	380a	380	0
176333	W.F.	12/10/57	-	43.3	42.7	-0.6	12.2	12.3	+0.1	118	121	+3	345a	297	-48	384a	364	-20
176334	W.F.	12/10/57	-	44.7	43.6	-1.1	12.5	12.6	+0.1	124	119	-5	379a	320	-59	418a	381	-37
Current Mill Average				44.0	43.6	-0.4	12.8	12.7	-0.1	118	116	-2	359	321	-38	398	378	-20

No samples submitted

TABLE XXX

MILL F -- 42-LB LINERBOARD

file No	Finish	Date Made	Mch. No.	Basis weight, lb.		Caliper, points		Bursting Strength, p.s.i. edge		Elmendorf Tear, g./sheet								
				IPC Mill	Diff	IPC Mill	Diff	IPC Mill	Diff	In Mill	Diff	IPC Mill	Diff	Across Mill	Diff			
176079	W.F.	11/14/57	-	42.8	42.5	-0.3	12.8	12.6	-0.2	109	109	0	348a	299	-49	385a	363	-22
176080	W.F.	11/26/57	-	44.6	44.3	-0.3	13.2	13.1	-0.1	119	113	-6	388a	351	-37	429a	397	-32
176081	W.F.	11/26/57	-	44.4	44.7	+0.3	13.1	13.0	-0.1	120	117	-3	376a	329	-47	414a	396	-18
176156	W.F.	11/29/57	-	43.9	44.1	+0.2	12.7	12.7	0.0	120	117	-3	324a	329	+5	374a	368	-6
176157	W.F.	11/29/57	-	44.2	43.6	-0.6	12.8	12.7	-0.1	114	113	-1	353	324	-29	380a	380	0
176333	W.F.	12/10/57	-	43.3	42.7	-0.6	12.2	12.3	+0.1	118	121	+3	345a	297	-48	384a	364	-20
176334	W.F.	12/10/57	-	44.7	43.6	-1.1	12.5	12.6	+0.1	124	119	-5	379a	320	-59	418a	381	-37
Current Mill Average				44.0	43.6	-0.4	12.8	12.7	-0.1	118	116	-2	359	321	-38	398	378	-20

<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.

COMPARISON OF INSTITUTE AND MILL DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XXXI

MILL G -- 42-LB. LINERBOARD

File No	Finish	Date Made	Mch No.	Basis weight, lb.		Calliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet		Across						
				IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	In	Diff.	IPC	Mill Diff.	IPC	Mill Diff.			
176082	WF1S	11/24/57	2	43.4	44.3	+0.9	13.2	13.5	+0.3	119	110	-9	324a	306	-18	373a	386	+15
176083	WF1S	11/25/57	2	43.4	44.3	+0.9	13.5	13	-0.5	115	108	-7	337a	365	+28	381a	430	+49
176084	WF1S	11/26/57	2	42.4	43.7	+1.3	12.9	13	+0.1	117	106	-11	343a	338	+15	369a	400	+31
176085	WF1S	11/27/57	2	42.4	44.0	+1.6	13.0	13	0.0	111	104	-7	324a	370	+46	369a	449	+80
176262	WF1S	12/3/57	2	43.4	44.2	+0.8	13.8	13.8	0.0	118	112	-6	319	374	+55	383	406	+23
176263	WF1S	12/10/57	2	43.2	42.7	-0.5	13.7	13.5	-0.2	120	104	-16	338a	341	+3	363a	408	+45
176387	WF1S	12/13/57	2	44.3	44.3	0.0	14.0	13.8	-0.2	119	112	-7	385a	399	+14	369a	454	+85
Current Mill Average				43.2	43.9	+0.7	13.5	13.4	-0.1	117	108	-9	339	359	+20	372	419	+47

TABLE XXXII

MILL H -- 42-LB. LINERBOARD

176097	WF1S	11/22/57	1	42.6	42.4	-0.2	12.8	12.6	-0.2	115	108	-7	303	331	+28	379a	404	+25
176176	WF1S	12/3/57	1	42.5	42.2	-0.3	12.8	12.4	-0.4	107	105	-2	311a	324	+13	363a	405	+42
176152	WF1S	12/4/57	1	43.4	42.1	-1.3	12.5	12.3	-0.2	106	104	-2	317	317	0	358a	395	+37
Current Mill Average				42.8	42.3	-0.5	12.7	12.5	-0.2	109	106	-3	310	324	+14	367	402	+35

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

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

COMPARISON OF INSTITUTE AND MILL DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XXXIII

MILL I -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb		Caliper, points		Bursting Strength, P.S.I. gage		Elmendorf Tear, g./sheet		Across Mill Diff.						
				IPC	Mill	IPC	Mill	IPC	Mill	IPC	Mill	IPC	Mill					
176145	WF1S	12/4/57	2	44.1	43.4	-0.7	13.2	12.5	-0.7	107	106	-1	336	293	-43	369 <sup>a</sup>	342	-27
176153	WF1S	11/29/57	2	43.2	42.6	-0.6	12.9	12.2	-0.7	112	109	-3	321	300	-21	374 <sup>a</sup>	388	+14
176335	----	12/10/57	2	44.0	43.7	-0.3	13.2	12.7	-0.5	115	113	-2	364	315	-49	435 <sup>a</sup>	366	-69
Current Mill Average				43.8	43.2	-0.6	13.1	12.5	-0.6	111	109	-2	340	303	-37	393	365	-28

TABLE XXXIV

MILL J -- 42-LB LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb		Caliper, points		Bursting Strength, P.S.I. gage		Elmendorf Tear, g./sheet		Across Mill Diff.						
				IPC	Mill	IPC	Mill	IPC	Mill	IPC	Mill							
176067	W.F.	11/12/57	1	43.2	43.0	-0.2	13.0	12.9	-0.1	107	108	+1	291	307	+16	349 <sup>a</sup>	359	+10
176068	W.F.	11/15/57	1	43.0	42.9	-0.1	13.0	12.8	-0.2	107	108	+1	277 <sup>a</sup>	307	+30	343 <sup>a</sup>	346	+3
176086	W.F.	11/21/57	1	42.8	43.0	+0.2	12.2	12.6	+0.4	102	104	+2	275 <sup>a</sup>	293	+15	336 <sup>a</sup>	345	+9
Current Mill Average				43.0	43.0	0.0	12.7	12.8	+0.1	106	107	+1	282	302	+20	343	350	+7

<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

COMPARISON OF INSTITUTE AND MILL DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XXXV  
MILL K -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis weight, lb		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet		Across						
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.			
176064	W.F.	11/20/57	-	44.5	44.2	-0.3	12.6	12.4	-0.2	113	110	-3	365	341	-24	391 <sup>a</sup>	376	-15
176065	W.F.	11/21/57	-	44.2	44.7	+0.5	12.9	12.5	-0.4	114	114	0	357 <sup>a</sup>	353	-4	383 <sup>a</sup>	387	+4
176066	W.F.	11/22/57	-	45.2	45.7	+0.5	13.0	12.2	-0.8	109	111	+2	361	351	-10	377 <sup>a</sup>	387	+10
176146	W.F.	11/27/57	-	43.7	45.3	+1.6	13.0	12.3	-0.7	104	109	+5	331 <sup>a</sup>	329	-2	369 <sup>a</sup>	376	+7
176147	W.F.	11/28/57	-	45.7	44.3	-1.4	12.9	12.3	-0.6	117	120	+3	355 <sup>a</sup>	316	-39	397 <sup>a</sup>	365	-32
176148	W.F.	11/29/57	-	45.4	45.4	0.0	12.4	11.9	-0.5	109	120	+11	363	323	-40	386 <sup>a</sup>	388	+2
176149	W.F.	12/4/57	-	42.8	42.1	-0.7	12.1	12.1	0.0	108	109	+1	324 <sup>a</sup>	327	+3	341 <sup>a</sup>	343	+2
176150	W.F.	12/5/57	-	43.8	43.9	+0.1	11.9	11.9	0.0	116	109	-7	319	337	+18	384 <sup>a</sup>	385	+1
176151	W.F.	12/6/57	-	43.7	43.4	-0.3	13.1	12.9	-0.2	103	102	-1	352 <sup>a</sup>	337	-15	339 <sup>a</sup>	360	+21
176276	W.F.	12/11/57	-	44.4	44.1	-0.3	12.5	12.2	-0.3	109	107	-2	330 <sup>a</sup>	333	+3	372 <sup>a</sup>	383	+11
176277	W.F.	12/12/57	-	45.9	44.1	-1.8	13.2	12.6	-0.6	112	107	-5	361	339	-22	392 <sup>a</sup>	400	+8
176278	W.F.	12/13/57	-	42.3	42.4	+0.1	12.0	11.8	-0.2	111	106	-5	295 <sup>a</sup>	287	-8	347 <sup>a</sup>	371	+24
Current Mill Average				44.3	44.1	-0.2	12.6	12.3	-0.3	110	110	0	343	331	-12	373	377	+4

<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.

COMPARISON OF INSTITUTE AND MILL DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XXXVI

MILL L -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliber, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet		Across Mill Diff.						
				IPC	Mill	IPC	Mill	IPC	Mill	In	Diff.	IPC	Mill	IPC	Mill			
176098	W.F.	11/18/57	-	43.2	42.3	-0.9	12.0	11.8	-0.2	110	108	-2	341 <sup>a</sup>	367	+26	358 <sup>a</sup>	377	+19
176099	W.F.	11/18/57	-	42.4	41.7	-0.7	11.6	11.5	-0.1	108	108	0	333	360	+27	343 <sup>a</sup>	374	+31
176177	W.F.	11/27/57	-	43.0	42.4	-0.6	11.6	11.4	-0.2	114	116	+2	340	365	+25	359 <sup>a</sup>	402	+43
176178	W.F.	11/26/57	-	43.1	42.5	-0.6	12.0	11.7	-0.3	111	113	+2	332	363	+31	352 <sup>a</sup>	399	+47
176179	W.F.	12/ 2/57	-	43.8	42.8	-1.0	12.3	11.9	-0.4	116	108	-8	317	329	+12	327 <sup>a</sup>	339	+12
176180	W.F.	12/ 2/57	-	43.9	42.8	-1.1	11.9	11.5	-0.4	109	116	+7	301	312	+11	321	342	+21
176349	W.F.	12/ 9/57	-	43.7	43.1	-0.6	12.3	11.7	-0.6	113	114	+1	327 <sup>a</sup>	336	+9	336 <sup>a</sup>	365	+29
176350	W.F.	12/ 9/57	-	43.4	42.7	-0.7	12.0	11.8	-0.2	115	111	-4	325 <sup>a</sup>	355	+30	360 <sup>a</sup>	392	+32
Current Mill Average:				43.3	42.5	-0.8	12.0	11.7	-0.3	112	112	0	327	348	+21	344	374	+30

<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.

COMPARISON OF INSTITUTE AND MILL DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XXXVII

MILL M -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g / sheet		Across Mill Diff						
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.			
176071	W.F.S	11/21/57	2	43.4	42.7	-0.7	12.7	12.3	-0.4	119	113	-6	331	306	-25	399 <sup>a</sup>	373	-26
176072	W.F.S	11/21/57	2	42.9	42.4	-0.5	12.5	12.2	-0.3	118	115	-3	313	335	+22	373 <sup>a</sup>	400	+27
176073	W.F.S	11/21/57	2	43.4	42.7	-0.7	12.2	12.1	-0.1	119	116	-3	307 <sup>a</sup>	325	+18	378 <sup>a</sup>	373	-5
176074	W.F.	11/22/57	2	42.8	42.6	-0.2	12.1	12.2	+0.1	115	113	-2	325 <sup>a</sup>	326	+1	366 <sup>a</sup>	396	+30
176075	W.F.	11/24/57	2	42.5	41.9	-0.6	12.2	12.1	-0.1	121	117	-4	298 <sup>a</sup>	306	+8	395 <sup>a</sup>	340	-55
176076	W.F.	11/24/57	2	43.4	42.9	-0.5	12.3	12.1	-0.2	117	115	-2	319 <sup>a</sup>	308	-11	377 <sup>a</sup>	360	-17
176283	W.F.	12/6/57	2	44.0	42.8	-1.2	12.3	12.1	-0.2	115	112	-3	316	313	-3	376 <sup>a</sup>	379	+3
176284	W.F.	12/6/57	2	44.1	43.0	-1.1	13.2	12.7	-0.5	116	113	-3	345 <sup>a</sup>	322	-23	391 <sup>a</sup>	389	-2
176285	W.F.	12/8/57	2	44.0	42.8	-1.2	12.4	12.1	-0.3	118	113	-5	303	318	+15	367 <sup>a</sup>	367	0
176286	W.F.	12/8/57	2	43.7	42.6	-1.1	12.2	12.1	-0.1	118	113	-5	295	311	+16	352 <sup>a</sup>	377	+25
176348	W.F.	12/16/57	2	44.2	43.0	-1.2	12.6	12.4	-0.2	116	117	+1	356	338	-18	422 <sup>a</sup>	414	-8
Current Mill Average				43.5	42.7	-0.8	12.4	12.2	-0.2	118	114	-4	319	319	0	381	379	-2

<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.

COMPARISON OF INSTITUTE AND MILL DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XXXVIII

MILL N -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis weight, lb.		Caliper, points		Bursting Strength, P.S.I. gage		Elmendorf Tear, g./sheet								
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.			
176077	W.B.	11/19/57	-	43.0	42.9	-0.1	12.3	11.6	-0.7	105	110	+5	378	365	-13	423	427	+4
176078	W.B.	11/20/57	-	43.2	42.8	-0.4	12.4	12.0	-0.4	104	113	+9	379 <sup>a</sup>	367	-12	419 <sup>a</sup>	448	+29
176139	W.B.	11/22/57	-	44.0	43.4	-0.6	12.2	11.6	-0.6	112	110	-2	351	392	+41	390 <sup>a</sup>	441	+51
176140	W.B.	11/25/57	-	43.7	43.3	-0.4	12.5	11.8	-0.7	110	109	-1	372	411	+39	417	435	+18
176141	W.B.	11/26/57	-	44.1	43.2	-0.9	12.9	12.0	-0.9	106	106	0	381	395	+14	410	432	+22
176142	W.B.	11/27/57	-	44.0	43.1	-0.9	12.1	11.5	-0.6	111	112	+1	371	361	-10	401 <sup>a</sup>	385	-16
176208	W.B.	11/28/57	-	43.9	42.9	-1.0	11.8	11.4	-0.4	107	107	0	332 <sup>a</sup>	347	+15	375 <sup>a</sup>	368	-7
176209	W.B.	12/3/57	-	43.5	42.8	-0.7	12.0	11.4	-0.6	111	112	+1	363	373	+10	383	368	-15
176210	W.B.	12/3/57	-	44.0	42.8	-1.2	12.0	11.3	-0.7	108	112	+4	379 <sup>a</sup>	376	-3	385 <sup>a</sup>	393	+8
176303	W.B.	12/6/57	-	45.0	43.2	-1.8	12.0	11.5	-0.5	111	110	-1	409 <sup>a</sup>	395	-14	395 <sup>a</sup>	413	+18
Current Mill Average:				43.8	43.0	-0.8	12.2	11.6	-0.6	109	110	+1	372	378	+6	400	411	+11

<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.

COMPARISON OF INSTITUTE AND MILL DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XXXIX

MILL O -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet							
				IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	In	Across						
176095	W.	11/ 7/57	4	42.8	42.6	-0.2	13.5	12.8	-0.7	108	108	0	375	353	355 <sup>a</sup>	363	+ 8
176096	W.	11/12/57	4	41.8	42.0	+0.2	13.1	12.6	-0.5	114	111	-3	369 <sup>a</sup>	347	373 <sup>a</sup>	382	+ 9
176351	W.	11/14/57	4	43.0	42.9	-0.1	13.3	12.8	-0.5	108	104	-4	375 <sup>a</sup>	341	401 <sup>a</sup>	375	-26
176352	W.	12/ 7/57	4	43.1	42.0	-1.1	13.4	12.6	-0.8	115	112	-3	396 <sup>a</sup>	333	399 <sup>a</sup>	371	-28
Current Mill Average:				42.7	42.4	-0.3	13.3	12.7	-0.6	111	109	-2	379	343	382	373	- 9

No samples submitted

TABLE XL

MILL F -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet							
				IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	In	Across						
176095	W.	11/ 7/57	4	42.8	42.6	-0.2	13.5	12.8	-0.7	108	108	0	375	353	355 <sup>a</sup>	363	+ 8
176096	W.	11/12/57	4	41.8	42.0	+0.2	13.1	12.6	-0.5	114	111	-3	369 <sup>a</sup>	347	373 <sup>a</sup>	382	+ 9
176351	W.	11/14/57	4	43.0	42.9	-0.1	13.3	12.8	-0.5	108	104	-4	375 <sup>a</sup>	341	401 <sup>a</sup>	375	-26
176352	W.	12/ 7/57	4	43.1	42.0	-1.1	13.4	12.6	-0.8	115	112	-3	396 <sup>a</sup>	333	399 <sup>a</sup>	371	-28
Current Mill Average:				42.7	42.4	-0.3	13.3	12.7	-0.6	111	109	-2	379	343	382	373	- 9

<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.

COMPARISON OF INSTITUTE AND MILL DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XLII

MILL Q -- 42-LB LINERBOARD

File No.	Finish	Date Made	"ch. No	Basis Weight, lb		Caliper, Points		Bursting Strength, P.S.I. gage		In		Across						
				IPC	Mill Diff	IPC	Mill Diff	IPC	Mill Diff	IPC	Mill Diff	IPC	Mill Diff					
176087	WFLS	11/25/57	1	43.1	42.3	-0.8	13.2	12.6	-0.6	114	110	-4	325	276	-49	361a	343	-18
176088	WFLS	11/25/57	1	43.4	42.2	-1.2	13.2	12.5	-0.6	117	110	-7	307	277	-30	352a	344	-8
176154	WFLS	11/29/57	1	43.7	42.7	-1.0	13.4	13.1	-0.3	122	121	-1	319	328	+9	351a	389	+38
176155	WFLS	11/29/57	1	43.7	43.0	-0.7	13.3	13.0	-0.3	123	120	-3	307a	315	+8	361a	395	+34
Current Mill Average				43.5	42.5	-1.0	13.3	12.8	-0.5	119	115	-4	315	299	-16	356	368	-12

TABLE XLIII

MILL S -- 42-LB. LINERBOARD

176091	W F	10/14/57	1	43.3	41.9	-1.4	13.1	12.9	-0.2	118	111	-7	317	273	-44	377a	361	-16
176092	W.F.	10/19/57	1	42.0	41.8	-0.2	13.0	12.8	-0.2	111	108	-3	275	269	-6	338a	349	+11
176093	W F.	10/23/57	1	42.0	41.9	-0.1	13.4	13.1	-0.3	110	115	+5	289a	323	+34	351a	381	+30
176094	W F.	10/27/57	1	43.5	42.5	-1.0	13.3	12.9	-0.4	113	110	-3	313	293	-20	362a	364	+2
Current Mill Average				42.7	42.0	-0.7	13.2	12.9	-0.3	113	111	-2	299	290	-9	357	364	+7

<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

COMPARISON OF INSTITUTE AND MILL DATA--DECEMBER 1 THROUGH DECEMBER 31, 1957 (continued)

TABLE XLIII

MILL R -- 47-LB. DRUM LINERBOARD

File No.	Finish	Date Made	Vch. No.	Basis Weight, lb		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet	
				IPC	Mill Diff	IPC	Mill Diff	IPC	Mill Diff	In	Across

No samples submitted