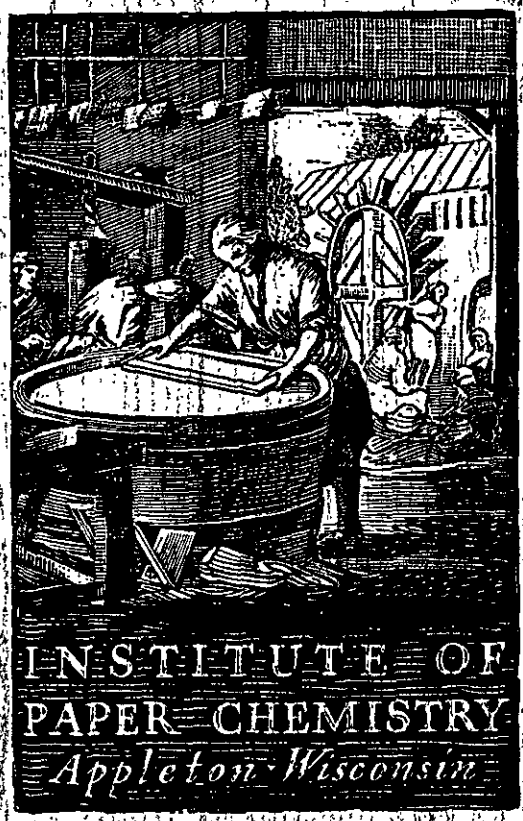
Institute of Paper Science and Technology
Central Files



CONTINUOUS BASELINE STUDY

Project 1108-13

Progress Report One Hundred Twenty

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

July 1, 1957

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

CONTINUOUS BASELINE STUDY

Project 1108-13

Progress Report 120

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

July 1, 1957

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 period from June 1 to June 30, ninety-two different sample lots of 42-lb. Fourdrinier kraft linerboard were submitted by seventeen different F.K.I. mills to The Institute of Paper Chemistry for testing. 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	4
B	2
C	4
D	3
E	5
F	5
G	10
H	1
I	5
J	5
K	8
L	9
M	0
N	4
O	4
P	5
Q	6
S	12
Total	92

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. average 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 June 1, 1956, to May 31, 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 43.1 lb., and the cumulative F.K.I. average basis weight is also 43.1 lb. Hence, the index for basis weight determined in per cent as indicated above is 100.0. This signifies that the current average basis weight is the same as 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 D had 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 K had the lowest average basis weight, it being 42.0 lb. or the same as the 42-lb. specification.

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

Mill Code	Per Cent
A	+1.9
B	+5.0
C	+4.0
D	+5.2
E	+1.0
F	+0.2
G	+2.4
H	+2.6
I	+2.1
J	+3.6
K	0.0
L	+5.0
M	--
N	+1.7
O	+1.2
P	+1.7
Q	+3.8
S	+2.6

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 43.0 lb. to 43.1 lb.

A comparison of the average caliper values for the various mills (see Figure 2) shows that the mill averages vary from a low of 11.8 points for Mill H to a high of 13.8 points for Mill F. The current F.K.I. average is 12.7 points, which is the same as the cumulative F.K.I. average.

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 D to a high of 125 for Mill C. The current F.K.I. average bursting strength is 113 p.s.i. g., somewhat higher than the cumulative F.K.I. average of 109 p.s.i. g. as indicated by the F.K.I. index of 103.7%.

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 D had the highest average machine direction tear value of 374 units whereas Mill B had the lowest value of 290 units. Mill Q had the highest cross-machine direction tear value of 399 units; Mill B had the lowest value of 337 units. It may be noted that the current F.K.I. machine and cross-machine direction tear averages are slightly lower than the corresponding cumulative F.K.I. averages.

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

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

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

In addition to the current and cumulative averages, the mill factor and mill index are given for each mill. The cumulative mill average is the average test result obtained on the samples submitted by the particular mill 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	4		
B	2		
C	4		
D	3		
E	5[a]		
F	5[a]		
G	10		
H	1		
I	5[a]		
J	5		
K	8[a]		
L	9		
M	No samples submitted.		
N	4		
O	4		
P	5[a]		
Q	6		
S	12		
R[b]	No samples submitted.		

[a] One side only.
[b] Drum linerboard.

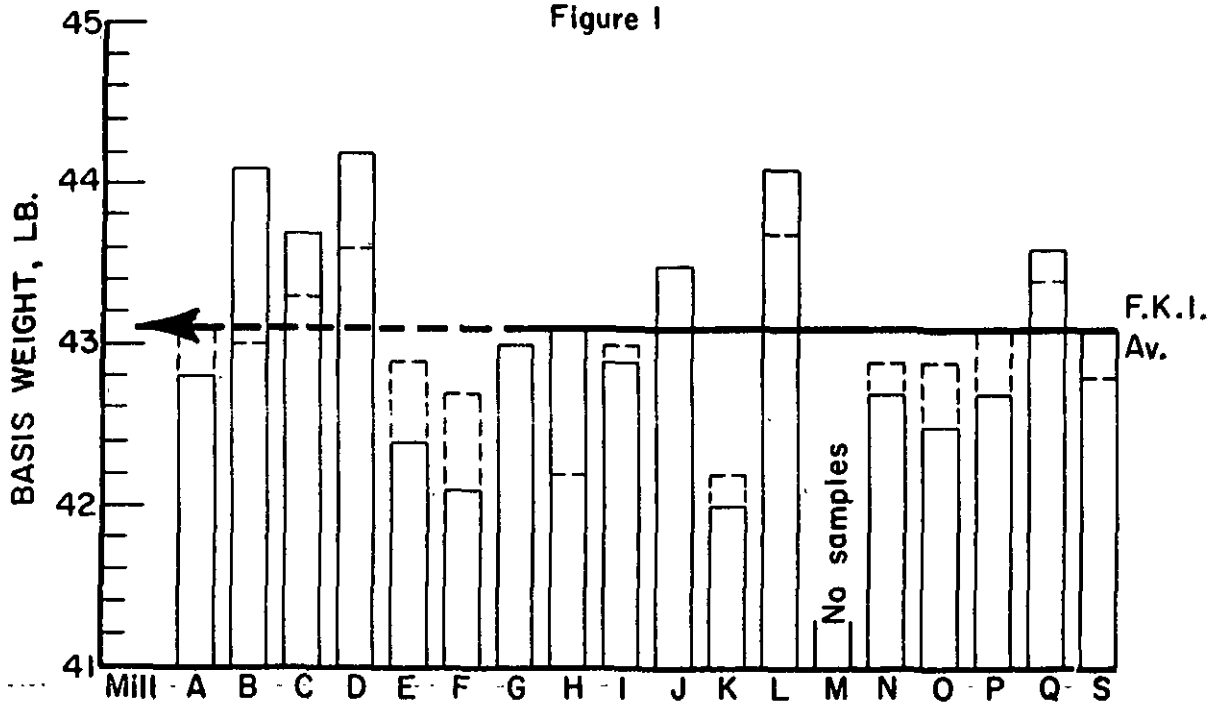
The results indicate that all participating mills are using a water finish on their 42-lb. linerboard.

TABLE II

SUMMARY OF COMPOSITE MILL AVERAGES--JUNE 1 THROUGH JUNE 30, 1957

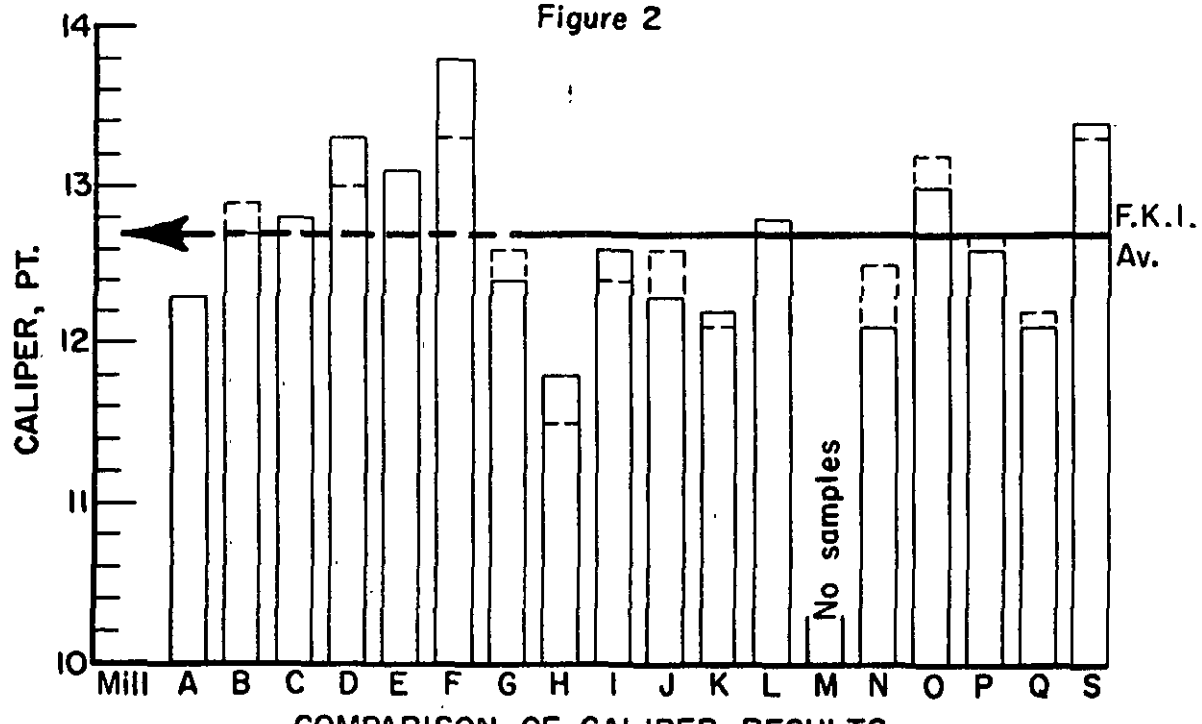
Mill	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	Elmendorf Tear, g./sheet In Machine	Elmendorf Tear, g./sheet Cross Machine
A	42.8	12.3	109	350	380
B	44.1	12.7	112	290	337
C	43.7	12.8	125	351	385
D	44.2	13.3	101	374	364
E	42.4	13.1	114	328	355
F	42.1	13.8	117	330	362
G	43.0	12.4	113	306	361
H	43.1	11.8	119	346	389
I	42.9	12.6	112	314	383
J	43.5	12.3	119	297	358
K	42.0	12.2	112	344	388
L	44.1	12.8	108	346	379
M	No samples submitted.				
N	42.7	12.1	109	329	346
O	42.5	13.0	111	356	380
P	42.7	12.6	112	308	364
Q	43.6	12.1	116	361	399
S	43.1	13.4	116	299	369
Current FKI Average	43.1	12.7	113	331	370
Cumulative FKI Average:	43.1	12.7	109	338	373
FKI Index, %	100.0	100.0	103.7	97.9	99.2

Figure 1



COMPARISON OF BASIS WEIGHT RESULTS
(Period June 1 - June 30, 1957)

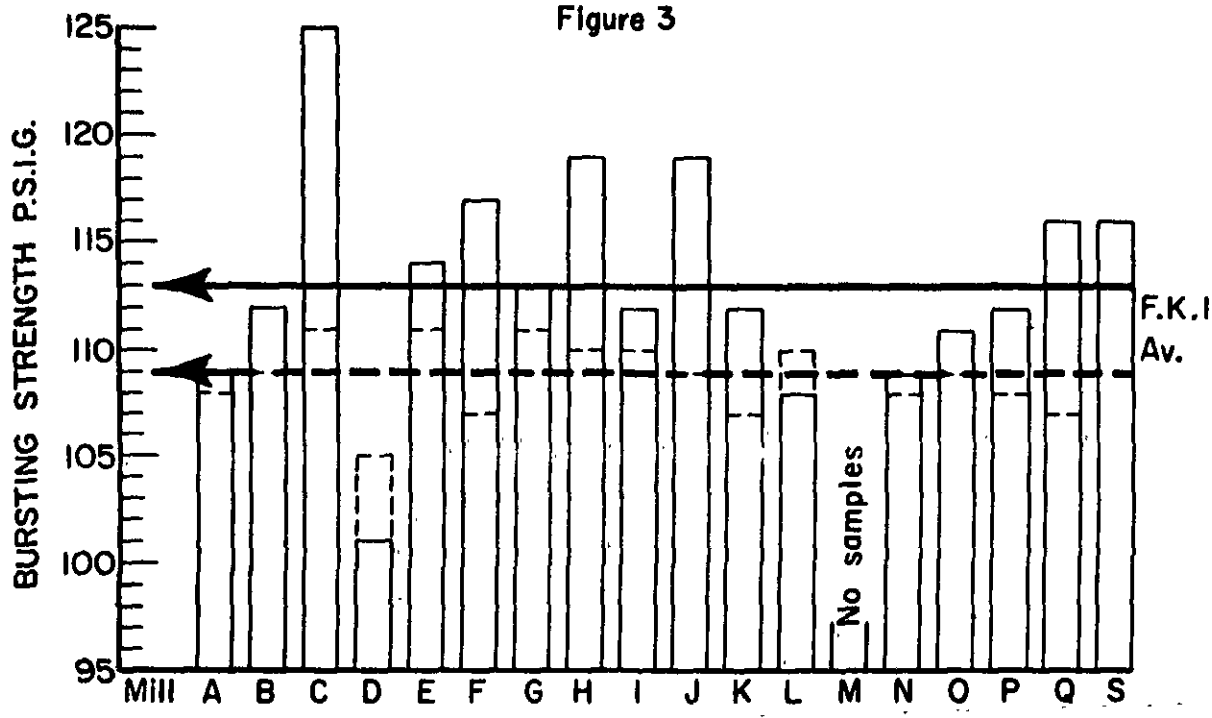
Figure 2



COMPARISON OF CALIPER RESULTS
(Period June 1 - June 30, 1957)

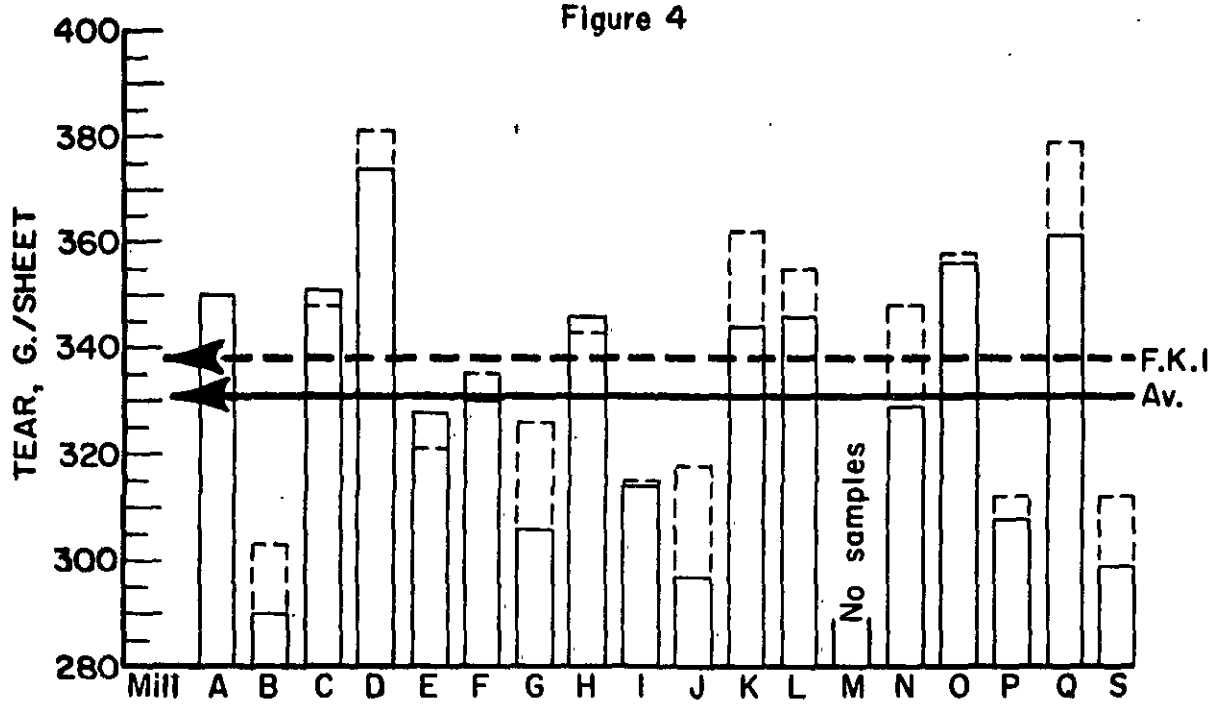
——— Current mill average
- - - - - Cumulative mill average

Figure 3



COMPARISON OF BURSTING STRENGTH RESULTS
(Period June 1 - June 30, 1957)

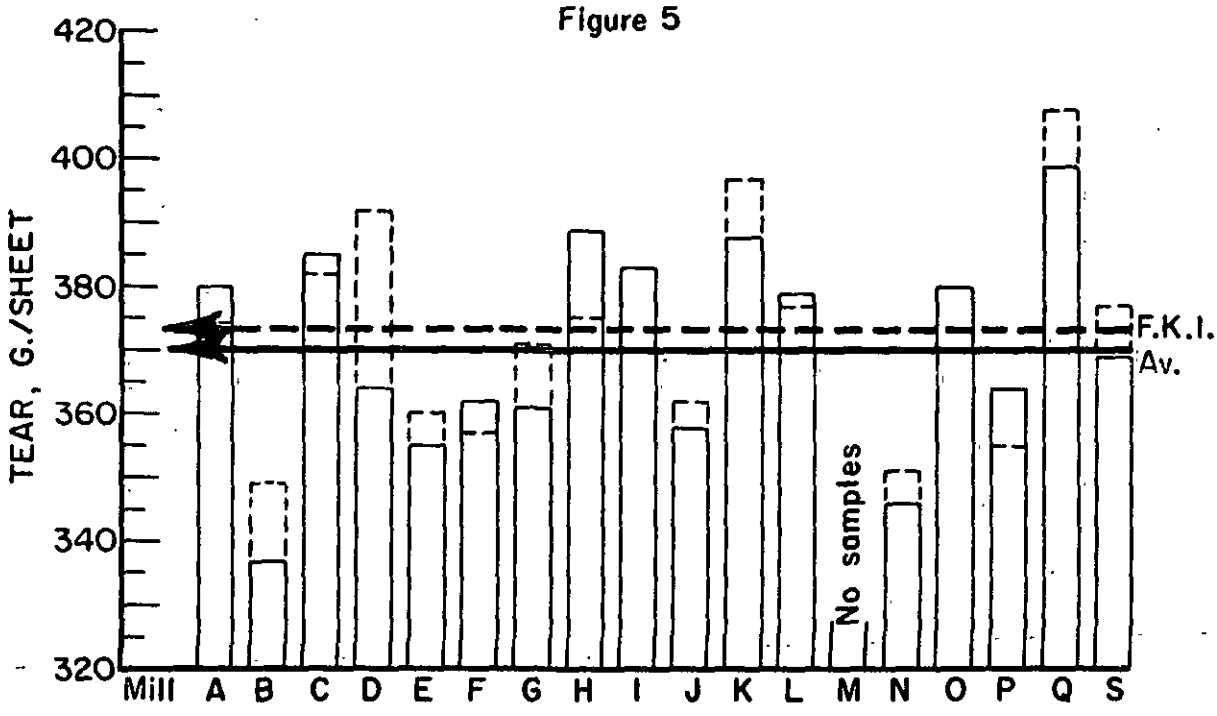
Figure 4



COMPARISON OF TEAR RESULTS, Machine Direction
(Period June 1 - June 30, 1957)

——— Current mill average
- - - - - Cumulative mill average

Figure 5



COMPARISON OF TEAR RESULTS, Cross-Machine Direction
(Period June 1 - June 30, 1957)

——— Current mill average
- - - - - Cumulative mill average

SUMMARY OF INSTITUTE DATA--JUNE 1 THROUGH JUNE 30, 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 In			Elmendorf Tear, g./sheet Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
174715	W.F.	6/17/57	6/ 5/57	2	44.0	43.4	43.8	12.5	12.0	12.2	132	90	110	384	320	347	416	352	381[a]
174716	W.F.	6/17/57	6/ 6/57	2	44.0	42.4	43.4	12.9	12.0	12.4	135	91	109	376	296	340	408	320	377[a]
174742	W.F.	6/18/57	6/ 9/57	2	42.2	42.0	42.1	12.5	12.0	12.3	135	77	107	392	336	364[a]	456	328	373[a]
174743	W.F.	6/18/57	6/ 9/57	2	42.2	42.0	42.0	12.6	11.9	12.2	137	89	111	392	272	351[a]	448	352	389[a]
Current Mill Average:							42.8			12.3			109			350			380
Cumulative Mill Average:							43.1			12.3			108			338			374
Mill Factor, %							99.3			100.0			100.9			103.6			101.6
Mill Index, %							99.3			96.9			100.0			103.6			101.9

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

SUMMARY OF INSTITUTE DATA--JUNE 1 THROUGH JUNE 30, 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 In			Elmendorf Tear, g./sheet Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
174680	W.F.	6/10/57	5/30/57	1	44.6	43.8	44.1	13.7	12.4	13.0	132	77	112	400	224	305[a]	360	304	329[a]
174712	W.F.	6/14/57	6/ 5/57	1	45.0	43.6	44.2	13.0	11.8	12.4	125	102	112	312	240	275	384	312	344[a]
Current Mill Average:							44.1			12.7			112			290			337
Cumulative Mill Average:							43.0			12.9			109			304			349
Mill Factor, %							102.6			98.4			102.8			95.4			96.6
Mill Index, %							102.3			100.0			102.8			85.8			90.3

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

SUMMARY OF INSTITUTE DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE V

MILL C -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb. Max.	Basis Weight, lb. Min.	Basis Weight, lb. Av.	Caliper, points Max.	Caliper, points Min.	Caliper, points Av.	Bursting Strength, p.s.i. gage Max.	Bursting Strength, p.s.i. gage Min.	Bursting Strength, p.s.i. gage Av.	Elmendorf Tear, g./sheet In Max.	Elmendorf Tear, g./sheet In Min.	Elmendorf Tear, g./sheet In Av.	Elmendorf Tear, g./sheet Across Max.	Elmendorf Tear, g./sheet Across Min.	Elmendorf Tear, g./sheet Across Av.
174670	W.F.	6/10/57	6/ 3/57	-	44.6	43.0	44.0	13.5	12.3	12.8	142	113	126	432	312	356[a]	448	344	392[a]
174671	W.F.	6/10/57	6/ 3/57	-	44.4	42.6	43.6	13.2	12.1	12.7	150	108	126	400	296	332[a]	416	344	371[a]
174672	W.F.	6/10/57	6/ 6/57	-	45.0	42.8	43.8	13.3	12.2	12.8	143	105	124	400	344	365[a]	440	352	391[a]
174673	W.F.	6/10/57	6/ 6/57	-	44.6	42.0	43.6	13.6	12.1	12.7	141	94	126	432	288	349[a]	432	344	387[a]
Current Mill Average:							43.7			12.8			125			351			385
Cumulative Mill Average:							43.3			12.8			111			348			382
Mill Factor, %							100.9			100.0			112.6			100.9			100.8
Mill Index, %							101.4			100.8			114.7			103.8			103.2

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

SUMMARY OF INSTITUTE DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE VI

MILL D -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb. Max.	Basis Weight, lb. Min.	Basis Weight, lb. Av.	Caliper, points Max.	Caliper, points Min.	Caliper, points Av.	Bursting Strength, p.s.i. gage Max.	Bursting Strength, p.s.i. gage Min.	Bursting Strength, p.s.i. gage Av.	Elmendorf Tear, g./sheet In Max.	Elmendorf Tear, g./sheet In Min.	Elmendorf Tear, g./sheet In Av.	Elmendorf Tear, g./sheet Across Max.	Elmendorf Tear, g./sheet Across Min.	Elmendorf Tear, g./sheet Across Av.
174571	S.F.	6/ 3/57	5/ 21/57	7	45.8	42.6	43.6	13.7	12.4	13.1	126	70	98	480	320	397	448	328	369[a]
174674	S.F.	6/10/57	6/ 4/57	7	46.2	44.0	45.6	14.0	13.0	13.5	135	85	109	432	336	372[a]	400	304	373[a]
174758	S.F.	6/20/57	6/17/57	7	46.2	41.8	43.4	14.1	12.9	13.3	133	77	96	416	312	352[a]	384	312	349[a]
Current Mill Average:							44.2			13.3			101			374			364
Cumulative Mill Average:							43.6			13.0			105			381			392
Mill Factor, %							101.4			102.3			96.2			98.2			92.9
Mill Index, %							102.6			104.7			92.7			110.7			97.6

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

SUMMARY OF INSTITUTE DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE VII

MILL E -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb. Max.	Basis Weight, lb. Min.	Basis Weight, lb. Av.	Caliper, points Max.	Caliper, points Min.	Caliper, points Av.	Bursting Strength, p.s.i. gage Max.	Bursting Strength, p.s.i. gage Min.	Bursting Strength, p.s.i. gage Av.	Elmendorf Tear, g./sheet In Max.	Elmendorf Tear, g./sheet In Min.	Elmendorf Tear, g./sheet In Av.	Elmendorf Tear, g./sheet Across Max.	Elmendorf Tear, g./sheet Across Min.	Elmendorf Tear, g./sheet Across Av.
174617	WF1S	6/ 6/57	5/15/57	1	42.6	41.8	42.1	14.0	13.1	13.6	126	76	108	352	304	321	368	320	349[a]
174618	WF1S	6/ 6/57	5/19/57	1	42.4	40.6	41.9	14.0	12.1	12.9	132	86	112	344	288	316[a]	384	320	356[a]
174619	WF1S	6/ 6/57	5/19/57	1	43.6	41.2	42.3	13.9	12.4	13.0	133	96	112	384	288	319[a]	360	304	331[a]
174620	WF1S	6/ 6/57	5/31/57	1	43.2	42.4	42.8	13.6	12.4	13.1	148	87	120	384	296	339[a]	400	320	367[a]
174621	WF1S	6/ 6/57	5/31/57	1	43.8	42.2	42.8	13.8	12.1	13.0	143	87	120	416	312	346[a]	416	336	371[a]
Current Mill Average:							42.4			13.1			114			328			355
Cumulative Mill Average:							42.9			13.1			111			321			360
Mill Factor, %							98.8			100.0			102.7			102.2			98.6
Mill Index, %							98.4			103.1			104.6			97.0			95.2

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

SUMMARY OF INSTITUTE DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE VIII

MILL F -- 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			Elmendorf Tear, g./sheet Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
174570	WF1S	6/ 3/57	5/30/57	2	43.8	40.2	42.1	14.7	13.3	14.2	130	83	113	368	272	333[a]	416	320	369[a]
174615	WF1S	6/ 6/57	5/31/57	2	43.0	40.8	41.7	14.2	13.2	13.8	135	103	115	376	280	331[a]	408	344	364[a]
174616	WF1S	6/ 6/57	6/ 1/57	2	43.2	41.2	42.3	14.5	13.5	14.0	138	88	116	376	280	328[a]	376	336	355[a]
174713	WF1S	6/17/57	6/ 5/57	2	43.2	41.0	41.8	13.7	12.6	13.1	135	108	120	384	280	308[a]	360	288	336[a]
174714	WF1S	6/17/57	6/11/57	2	43.8	42.0	42.6	14.0	13.1	13.7	137	99	119	416	304	349[a]	416	352	385[a]
Current Mill Average:							42.1			13.8			117			330			362
Cumulative Mill Average:							42.7			13.3			107			335			357
Mill Factor, %							98.6			103.8			109.3			98.5			101.4
Mill Index, %							97.7			108.7			107.3			97.6			97.1

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

SUMMARY OF INSTITUTE DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE IX

MILL G -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb. Max.	Basis Weight, lb. Min.	Basis Weight, lb. Av.	Caliper, points Max.	Caliper, points Min.	Caliper, points Av.	Bursting Strength, p.s.i gage Max.	Bursting Strength, p.s.i gage Min.	Bursting Strength, p.s.i gage Av.	Elmendorf Tear, g./sheet In Max.	Elmendorf Tear, g./sheet In Min.	Elmendorf Tear, g./sheet In Av.	Elmendorf Tear, g./sheet Across Max.	Elmendorf Tear, g./sheet Across Min.	Elmendorf Tear, g./sheet Across Av.
174622	W.F.	6/ 6/57	5/18/57	2	43.8	42.0	42.3	12.7	11.7	12.0	129	80	112	336	256	299[a]	384	296	351[a]
174572	W.F.	6/ 3/57	5/20/57	2	43.4	42.0	42.7	13.0	11.6	12.3	140	85	111	336	264	289[a]	408	336	352[a]
174586	W.F.	6/ 4/57	5/21/57	2	43.2	41.4	42.6	12.4	11.0	11.7	147	67	115	344	256	295[a]	376	328	354[a]
174623	W.F.	6/ 6/57	5/25/57	2	44.0	42.4	43.6	13.6	12.0	12.7	130	76	109	384	272	331	416	352	387[a]
174682	W.F.	6/10/57	5/30/57	2	43.8	42.0	43.2	12.2	11.4	11.9	129	98	115	328	272	301	392	320	364[a]
174683	W.F.	6/10/57	5/30/57	2	44.2	43.0	43.6	13.2	12.2	12.8	137	90	114	360	272	327[a]	408	320	366[a]
174701	W.F.	6/13/57	6/ 1/57	2	44.4	43.2	43.8	13.5	11.9	12.8	138	90	115	368	256	315	416	336	380[a]
174702	W.F.	6/13/57	6/ 1/57	2	44.2	43.6	44.0	13.1	12.2	12.8	128	89	112	352	272	306	384	320	355[a]
174777	W.F.	6/21/57	6/17/57	2	42.8	42.0	42.1	12.3	12.0	12.1	128	101	115	352	256	291	360	320	340[a]
174778	W.F.	6/21/57	6/17/57	2	43.2	41.8	42.2	13.0	12.0	12.6	131	94	115	352	256	309	384	336	360[a]
Current Mill Average:							43.0			12.4			113			306			361
Cumulative Mill Average:							43.0			12.6			111			326			371
Mill Factor, %							100.0			98.4			101.8			93.9			97.3
Mill Index, %							99.8			97.6			103.7			90.5			96.8

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

SUMMARY OF INSTITUTE DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE X

MILL H -- 42-LB. LINERBOARD

File No	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb. Max.	Basis Weight, lb. Min.	Basis Weight, lb. Av.	Caliper, points Max.	Caliper, points Min.	Caliper, points Av.	Bursting Strength, p.s.i. gage Max.	Bursting Strength, p.s.i. gage Min.	Bursting Strength, p.s.i. gage Av.	Elmendorf Tear, g./sheet In Max.	In Min.	In Av.	Across Max.	Across Min.	Across Av.
174587	W.F.	6/ 4/57	5/ 4/57	4	44.0	42.2	43.1	12.3	11.4	11.8	135	103	119	384	320	346[a]	424	360	389[a]
Current Mill Average:							43.1			11.8			119			346			389
Cumulative Mill Average·							42.2			11.5			110			343			375
Mill Factor, %							102.1			102.6			108.2			100.9			103.7
Mill Index, %							100.0			92.9			109.2			102.4			104.3

TABLE XI

MILL I -- 42-LB. LINERBOARD

174581	WF1S	6/ 3/57	5/17/57	1	44.0	42.0	42.7	13.0	12.0	12.4	136	88	111	384	248	306	432	320	368[a]
174582	WF1S	6/ 3/57	5/24/57	1	43.2	41.8	42.2	13.0	12.0	12.4	138	81	111	384	256	321[a]	424	352	377[a]
174583	WF1S	6/ 3/57	5/27/57	1	44.2	42.2	43.6	13.2	12.8	13.0	128	87	113	336	272	310	464	352	399[a]
174679	WF1S	6/10/57	5/29/57	1	45.6	42.6	43.9	13.4	12.8	13.1	134	95	114	432	264	335[a]	432	344	387[a]
174799	WF1S	6/25/57	6/17/57	1	42.6	41.0	42.0	12.9	12.0	12.4	147	85	109	344	264	299[a]	416	344	384[a]
Current Mill Average:							42.9			12.6			112			314			383
Cumulative Mill Average·							43.0			12.4			110			315			370
Mill Factor, %							99.8			101.6			101.8			99.7			103.5
Mill Index, %							99.5			99.2			102.8			92.9			102.7

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

SUMMARY OF INSTITUTE DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE XII

MILL J -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb. Max.	Basis Weight, lb. Min.	Basis Weight, lb. Av.	Caliper, points Max.	Caliper, points Min.	Caliper, points Av.	Bursting Strength, p.s.i. gage Max.	Bursting Strength, p.s.i. gage Min.	Bursting Strength, p.s.i. gage Av.	Elmendorf Tear, g./sheet In Max.	Elmendorf Tear, g./sheet In Min.	Elmendorf Tear, g./sheet In Av.	Elmendorf Tear, g./sheet Across Max.	Elmendorf Tear, g./sheet Across Min.	Elmendorf Tear, g./sheet Across Av.
174577	W.F.	6/ 3/57	5/26/57	1	44.2	43.6	43.9	12.8	11.5	12.3	147	85	122	352	280	312[a]	400	336	371[a]
174578	W.F.	6/ 3/57	5/27/57	2	44.0	43.4	43.7	12.7	11.8	12.3	138	78	117	320	256	287[a]	368	320	347[a]
174717	W.F.	6/17/57	6/ 4/57	2	43.8	42.4	43.2	12.9	11.9	12.4	137	100	121	352	272	299[a]	376	320	354[a]
174718	W.F.	6/17/57	6/ 4/57	2	43.8	42.0	43.2	12.8	11.8	12.3	143	110	122	320	272	296[a]	384	328	364[a]
174776	W.F.	6/21/57	6/13/57	2	44.0	42.4	43.3	13.0	12.1	12.5	130	97	114	336	256	293	384	304	355[a]
Current Mill Average:							43.5			12.3			119			297			358
Cumulative Mill Average:							43.5			12.6			109			318			362
Mill Factor, %							100.0			97.6			109.2			93.4			98.9
Mill Index, %							100.9			96.9			109.2			87.9			96.0

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

SUMMARY OF INSTITUTE DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE XIII

MILL K -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb. Max.	Basis Weight, lb. Min.	Basis Weight, lb. Av.	Caliper, points Max.	Caliper, points Min.	Caliper, points Av.	Bursting Strength, p.s.i. gage Max.	Bursting Strength, p.s.i. gage Min.	Bursting Strength, p.s.i. gage Av.	Elmendorf Tear, g./sheet In Max.	Elmendorf Tear, g./sheet In Min.	Elmendorf Tear, g./sheet In Av.	Elmendorf Tear, g./sheet Across Max.	Elmendorf Tear, g./sheet Across Min.	Elmendorf Tear, g./sheet Across Av.
174561	WF1S	6/ 3/57	5/23/57	1	42.8	41.8	42.1	13.0	11.4	12.3	129	84	110	416	320	349	424	376	401[a]
174562	WF1S	6/ 3/57	5/25/57	1	42.8	41.4	42.1	12.9	11.7	12.2	128	98	114	392	304	337	440	352	395[a]
174573	WF1S	6/ 3/57	5/29/57	1	42.0	40.4	41.2	12.6	10.8	11.8	125	92	107	368	296	341[a]	416	352	376[a]
174681	WF1S	6/10/57	6/ 4/57	1	42.2	41.6	41.9	12.8	11.5	12.1	123	100	110	392	296	348	416	368	393[a]
174739	WF1S	6/18/57	6/ 5/57	1	43.6	42.0	42.8	13.0	12.0	12.5	133	101	116	376	304	343[a]	416	344	383[a]
174740	WF1S	6/18/57	6/10/57	1	42.0	41.0	41.8	12.0	11.0	11.5	126	99	113	424	272	352[a]	408	336	383[a]
174791	WF1S	6/24/57	6/16/57	1	42.4	40.2	41.9	13.0	12.0	12.5	120	96	107	384	304	340	400	336	371[a]
174794	WF1S	6/25/57	6/16/57	1	43.4	41.6	42.0	13.0	11.8	12.4	130	102	117	376	304	339	424	368	399[a]
Current Mill Average:							42.0			12.2			112			344			388
Cumulative Mill Average:							42.2			12.1			107			362			397
Mill Factor, %							99.5			100.8			104.7			95.0			97.7
Mill Index, %							97.4			96.1			102.8			101.8			104.0

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

SUMMARY OF INSTITUTE DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE XIV

MILL L -- 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			Elmendorf Tear, g./sheet Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
174563	W.F.	6/ 3/57	5/29/57	-	43.6	42.4	42.9	13.1	12.5	12.9	119	86	103	352	312	325[a]	416	344	378
174564	W.F.	6/ 3/57	5/30/57	-	44.0	43.2	43.7	12.8	11.9	12.2	115	84	102	368	312	346	400	352	386[a]
174565	W.F.	6/ 3/57	5/31/57	-	46.0	44.6	45.7	13.3	12.9	13.0	124	95	112	360	304	333	440	384	413[a]
174719	W.F.	6/17/57	6/ 5/57	-	44.0	42.4	43.5	13.4	12.0	13.0	126	93	110	384	312	340[a]	416	320	379[a]
174720	W.F.	6/17/57	6/ 6/57	-	46.0	42.6	44.3	14.1	12.8	13.2	127	94	111	384	272	343	416	336	373[a]
174721	W.F.	6/17/57	6/ 7/57	-	45.6	44.0	44.6	13.2	12.4	12.9	126	98	114	368	320	340	416	352	385[a]
174765	W.F.	6/21/57	6/12/57	-	45.2	43.6	44.3	13.2	12.0	12.6	127	76	100	480	296	371[a]	392	272	347[a]
174766	W.F.	6/21/57	6/13/57	-	45.6	42.8	44.3	13.0	12.0	12.5	126	100	113	400	336	367[a]	400	336	387[a]
174767	W.F.	6/21/57	6/14/57	-	44.4	43.0	43.9	13.6	12.4	13.1	123	90	106	400	304	352[a]	400	336	365[a]
Current Mill Average:							44.1			12.8			108			346			379
Cumulative Mill Average:							43.7			12.8			110			355			377
Mill Factor, %							100.9			100.0			98.2			97.5			100.5
Mill Index, %							102.3			100.8			99.1			102.4			101.6

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

SUMMARY OF INSTITUTE DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE XV

MILL M -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb. Max.	Basis Weight, lb. Min.	Basis Weight, lb. Av.	Caliper, points Max.	Caliper, points Min.	Caliper, points Av.	Bursting Strength, p.s.i. gage Max.	Bursting Strength, p.s.i. gage Min.	Bursting Strength, p.s.i. gage Av.	Elmendorf Tear, g./sheet In Max.	Elmendorf Tear, g./sheet In Min.	Elmendorf Tear, g./sheet In Av.	Elmendorf Tear, g./sheet Across Max.	Elmendorf Tear, g./sheet Across Min.	Elmendorf Tear, g./sheet Across Av.
No samples submitted.																			

TABLE XVI

MILL N -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb. Max.	Basis Weight, lb. Min.	Basis Weight, lb. Av.	Caliper, points Max.	Caliper, points Min.	Caliper, points Av.	Bursting Strength, p.s.i. gage Max.	Bursting Strength, p.s.i. gage Min.	Bursting Strength, p.s.i. gage Av.	Elmendorf Tear, g./sheet In Max.	Elmendorf Tear, g./sheet In Min.	Elmendorf Tear, g./sheet In Av.	Elmendorf Tear, g./sheet Across Max.	Elmendorf Tear, g./sheet Across Min.	Elmendorf Tear, g./sheet Across Av.
174675	W.F.	6/10/57	6/ 3/57	-	44.0	42.2	43.5	12.9	11.8	12.3	122	64	106	384	288	341[a]	400	320	353[a]
174676	W.F.	6/10/57	6/ 3/57	-	44.0	42.4	43.3	13.0	11.8	12.5	127	88	109	360	296	323[a]	384	336	353[a]
174792	W.F.	6/24/57	6/14/57	-	43.6	40.6	42.2	12.7	11.1	11.8	130	98	111	368	288	330[a]	392	320	341[a]
174793	W.F.	6/24/57	6/14/57	-	43.4	40.0	42.0	12.6	11.2	11.8	124	96	110	368	280	321[a]	368	320	336[a]
Current Mill Average:							42.7			12.1			109			329			346
Cumulative Mill Average:							42.9			12.5			108			348			351
Mill Factor, %							99.5			96.8			100.9			94.5			98.6
Mill Index, %							99.1			95.3			100.0			97.3			92.8

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

SUMMARY OF INSTITUTE DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE XVII

MILL O -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Date	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet In			Elmendorf Tear, g./sheet Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
174695	W.	6/11/57	5/20/57	2	43.6	41.6	42.6	13.3	12.3	12.9	134	88	114	368	288	333[a]	416	344	372[a]
174696	W.	6/11/57	5/31/57	4	44.2	41.8	43.2	14.0	13.0	13.5	129	76	110	448	384	405[a]	424	368	393[a]
174788	W.	6/24/57	6/ 7/57	2	44.0	40.6	42.3	13.2	12.3	12.9	133	97	111	376	304	331[a]	416	368	393[a]
174789	W.	6/24/57	6/14/57	4	43.6	40.0	41.9	13.2	12.1	12.9	127	99	109	384	336	357[a]	392	336	359[a]
Current Mill Average:							42.5			13.0			111			356			380
Cumulative Mill Average:							42.9			13.2			109			358			380
Mill Factor, %							99.1			98.5			101.8			99.4			100.0
Mill Index, %							98.6			102.4			101.8			105.3			101.9

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

SUMMARY OF INSTITUTE DATA—JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE XVIII

MILL P — 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			Elmendorf Tear, g./sheet Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
174579	WF1S	6/ 3/57	5/27/57	1	43.8	40.2	42.3	13.2	12.1	12.7	136	89	112	376	248	291[a]	384	320	353[a]
174580	WF1S	6/ 3/57	5/28/57	1	44.8	42.4	43.7	13.2	12.1	12.7	132	77	113	368	248	314[a]	432	344	368[a]
174677	WF1S	6/10/57	6/ 4/57	1	43.6	41.2	42.8	12.8	11.9	12.3	132	97	112	400	256	315[a]	424	320	363[a]
174678	WF1S	6/10/57	6/ 5/57	1	42.4	40.0	41.7	13.1	12.0	12.6	135	72	112	328	256	291[a]	400	328	366[a]
174790	WF1S	6/24/57	6/17/57	1	44.0	42.2	43.2	13.1	12.4	12.9	134	94	109	368	256	328	408	328	370[a]
Current Mill Average:							42.7			12.6			112			308			364
Cumulative Mill Average:							43.0			12.7			108			312			355
Mill Factor, %							99.3			99.2			103.7			98.7			102.5
Mill Index, %							99.1			99.2			102.8			91.1			97.6

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

SUMMARY OF INSTITUTE DATA—JUNE 1 THROUGH JUNE 30, 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. gage			Elmendorf Tear, g./sheet In			Elmendorf Tear, g./sheet Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
174574	W.B.	6/ 3/57	5/19/57	-	45.2	42.0	43.4	12.0	11.0	11.6	144	101	121	400	296	354[a]	432	328	391[a]
174575	W.B.	6/ 3/57	5/22/57	-	45.6	41.6	44.0	13.0	11.9	12.3	132	92	114	400	296	357[a]	472	384	419[a]
174576	W.B.	6/ 3/57	5/23/57	-	45.6	42.0	43.8	13.0	11.9	12.2	141	97	119	424	328	381[a]	448	352	395[a]
174684	W.B.	6/10/57	5/28/57	-	45.4	41.2	43.7	12.5	11.7	12.1	125	94	112	392	344	366[a]	440	360	399[a]
174685	W.B.	6/10/57	5/31/57	-	44.4	42.0	43.7	12.9	12.0	12.4	130	85	115	408	312	361[a]	432	344	387[a]
174741	W.B.	6/18/57	5/31/57	-	44.0	42.2	43.3	12.5	11.9	12.1	134	99	113	376	320	348	432	376	401[a]
Current Mill Average:							43.6			12.1			116			361			399
Cumulative Mill Average:							43.4			12.2			107			379			408
Mill Factor, %							100.5			99.2			108.4			95.3			97.8
Mill Index, %							101.2			95.3			106.4			106.8			107.0

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

SUMMARY OF INSTITUTE DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE XX

MILL S -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb. Max.	Basis Weight, lb. Min.	Basis Weight, lb. Av.	Caliper, points Max.	Caliper, points Min.	Caliper, points Av.	Bursting Strength, p.s.i. gage Max.	Bursting Strength, p.s.i. gage Min.	Bursting Strength, p.s.i. gage Av.	Elmendorf Tear, g./sheet In Max.	Elmendorf Tear, g./sheet In Min.	Elmendorf Tear, g./sheet In Av.	Elmendorf Tear, g./sheet Across Max.	Elmendorf Tear, g./sheet Across Min.	Elmendorf Tear, g./sheet Across Av.
174566	W.F.	6/ 3/57	4/16/57	1	43.2	41.0	42.1	14.0	13.0	13.5	137	93	113	344	248	304[a]	384	320	353[a]
174567	W.F.	6/ 3/57	4/20/57	1	44.0	43.4	43.9	13.3	12.2	13.0	139	102	122	368	272	317[a]	448	352	384[a]
174568	W.F.	6/ 3/57	4/24/57	1	43.6	41.6	42.9	13.5	12.3	12.9	147	106	118	352	248	310[a]	400	352	375[a]
174569	W.F.	6/ 3/57	4/30/57	1	43.4	42.2	43.0	14.0	13.1	13.7	141	88	112	344	232	282[a]	440	328	365[a]
174703	W.F.	6/13/57	5/ 3/57	1	45.6	42.4	43.7	15.0	12.9	13.7	125	90	108	336	256	301	416	336	379[a]
174704	W.F.	6/13/57	5/ 6/57	1	42.4	41.8	42.1	14.0	12.6	13.4	133	99	116	320	232	279[a]	376	328	355[a]
174705	W.F.	6/13/57	5/10/57	1	43.8	41.0	42.8	13.9	12.2	13.2	133	78	110	360	272	307	416	352	375[a]
174706	W.F.	6/13/57	5/14/57	1	44.0	42.0	43.3	13.7	12.4	13.0	137	78	111	368	248	287[a]	368	320	346[a]
174795	W.F.	6/25/57	5/18/57	1	44.0	42.6	43.6	13.5	12.8	13.1	140	89	123	360	232	303	464	336	374[a]
174796	W.F.	6/25/57	5/21/57	1	43.8	42.0	43.2	14.1	13.1	13.7	138	106	120	336	216	297	432	344	383[a]
174797	W.F.	6/25/57	5/26/57	1	44.0	42.2	43.4	14.9	13.0	14.1	135	95	114	344	264	290	392	320	363[a]
174798	W.F.	6/25/57	5/30/57	1	44.0	42.0	43.5	13.8	12.2	13.1	144	97	118	360	240	307[a]	424	336	379[a]
Current Mill Average:							43.1			13.4			116			299			369
Cumulative Mill Average:							42.8			13.3			116			312			377
Mill Factor, %							100.7			100.8			100.0			95.8			97.9
Mill Index, %							100.0			105.5			106.4			88.5			98.9

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

SUMMARY OF INSTITUTE DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE XXI

MILL R -- 47-LB. DRUM 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.			Elmendorf Tear, g./sheet Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.

No samples submitted.

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 R.H., %	Preconditioning Temp., °F.	Preconditioning Time, hr.	Conditioning R.H., %	Conditioning Temp., °F.	Conditioning Time, hr.
A		None		50	73	24
B	56-75	63-76	0.5	50	73	48
C		None		50	72	24
D	50	73	24	50	73	--
E		None		52-64	78-90	--
F	50	70-72	24		None	
G	50	73	24	50	73	24
H		None		50	73	18
I		None		50-57	73-78	--
J		None		50	73	24
K	50	70-73	24	50	73	24
L	32-36	78	8	50-51	73	16
M			No samples submitted.			
N		None		44-50	73-75	0.5
O		None		50-52	71-73	--
P	46-66	75-78	24-48	56-70	74-83	1-2
Q		None		53-55	71-73	48
S		None		40-69	72-88	--

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 A, C, F, G, H, and P are higher than those for the Institute, the average results for Mills E and K 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. This variation is slightly less than the maximum variation

of seven per cent for the previous two periods. Compared with the Institute's test results, the test results for all mills are lower with the exception of the result for Mill B which is the same. Only the variation for Mill P may be excessive.

It may be noted in Table XXIV that the bursting strength results exhibited a maximum variation of twelve per cent for the current period. The average results for Mills A, D, and G are higher than those for the Institute, the average result for Mill N is the same, and the results for the other mills are lower. Only the variations associated with the results for Mills C, F, and H appear to be excessive.

It may be seen in Tables XXIII and XXIV that the average machine direction tear results for Mills A, B, E, F, G, I, J, K, L, N, and P are higher than those for the Institute, and the results for the other mills are lower. The maximum variation for the current period is fourteen per cent. The variations which exceed a magnitude of ten per cent may be excessive. Mills in this category include F, K, and S.

With regard to the cross-machine direction tear results, it may be noted that the average results for Mills A, B, C, D, E, F, G, I, J, K, L, N, and P 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 twenty-five per cent. The variations noted for Mills A, B, F, and K exceed ten per cent and appear to be excessive.

TABLE XXIII

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

Mills*	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	S
No. Samples Compared	4	2	4	3	5	5	10	1	5	5	8	9	0	4	4	5	6	12
Basis Weight																		
Institute	42.8	44.1	43.7	44.2	42.4	42.1	43.0	43.1	42.9	43.5	42.0	44.1	--	42.7	42.5	42.7	43.6	43.1
Mill	43.1	44.0	43.8	44.1	42.4	43.1	43.4	43.3	42.5	43.1	42.0	43.9	--	42.3	42.4	42.8	43.4	42.2
Av. Diff.**	+0.3	-0.1	+0.1	-0.1	0.0	+1.0	+0.4	+0.2	-0.4	-0.4	0.0	-0.2	--	-0.4	-0.1	+0.1	-0.2	-0.9
Max. Diff.***	+0.6	-0.5	+0.3	-0.3	±0.5	+1.4	+0.8	+0.2	-1.3	-0.8	-0.3	-1.2	--	-0.9	-0.8	-0.5	-0.6	-1.6
Caliper																		
Institute	12.3	12.7	12.8	13.3	13.1	13.8	12.4	11.8	12.6	12.3	12.2	12.8	--	12.1	13.0	12.6	12.1	13.4
Mill	12.0	12.7	12.3	12.8	12.7	13.2	12.1	11.7	12.4	12.2	11.7	12.7	--	11.8	12.5	12.0	11.6	13.0
Av. Diff.**	-0.3	0.0	-0.5	-0.5	-0.4	-0.6	-0.3	-0.1	-0.2	-0.1	-0.5	-0.1	--	-0.3	-0.5	-0.6	-0.5	-0.4
Max. Diff.***	-0.4	+0.2	-0.5	-0.6	-0.8	-0.7	-0.5	-0.1	-0.4	-0.2	-0.6	+0.4	--	-0.4	-0.7	-0.7	-0.6	-0.8
Bursting Strength																		
Institute	109	112	125	101	114	117	113	119	112	119	112	108	--	109	111	112	116	116
Mill	110	108	116	104	111	110	114	105	111	116	108	106	--	109	109	110	110	110
Av. Diff.**	+1	-4	-9	+3	-3	-7	+1	-14	-1	-3	-4	-2	--	0	-2	-2	-6	-6
Max. Diff.***	+5	-6	-12	+6	-7	-9	+4	-14	-3	-7	-10	-5	--	±4	-4	-9	-8	-12
Tearing Strength, In																		
Institute	350	290	351	374	328	330	306	346	314	297	344	346	--	329	356	308	361	299
Mill	384	317	339	345	346	366	318	312	343	321	391	348	--	347	346	310	340	264
Av. Diff.**	+34	+27	-12	-29	+18	+36	+12	-34	+29	+24	+47	+2	--	+18	-10	+2	-21	-35
Max. Diff.***	+72	+46	-23	-41	+34	+109	+28	-34	+55	-32	+64	+27	--	+36	-37	+15	-46	-52
Tearing Strength, Across																		
Institute	380	337	385	364	355	362	361	389	383	358	388	379	--	346	380	364	399	369
Mill	437	380	386	373	384	406	370	367	403	383	484	382	--	381	369	370	393	355
Av. Diff.**	+57	+43	+1	+9	+29	+44	+9	-22	+20	+25	+96	+3	--	+35	-11	+6	-6	-14
Max. Diff.***	+91	+45	+14	+15	+62	+52	+28	-22	+32	+35	+134	+20	--	+53	-23	+23	-31	-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

Mill	Period	Average Differences, per cent				
		Basis Weight	Caliper	Bursting Strength	Tearing Strength, In	Tearing Strength, Across
A	Current	+0.7	-2	+0.9	+10	+15
	119th	-0.9	-4	-0.9	+2	+9
	118th	+0.5	-3	+0.9	+5	+12
B	Current	-0.2	0	-4	+9	+13
	119th	-0.9	-2	-0.9	+3	+3
	118th	+1	-0.8	-0.9	+2	+5
C	Current	+0.2	-4	-7	-3	+0.3
	119th	+0.5	-3	-6	-5	-3
	118th	+0.2	-4	-3	-3	-3
D	Current	-0.2	-4	+3	-8	+2
	119th	-1	-3	-4	+0.3	+7
	118th	-0.7	-3	+5	-4	+4
E	Current	0	-3	-3	+5	+8
	119th	-2	-5	-4	+8	+10
	118th	-1	-6	-3	-7	-6
F	Current	+2	-4	-6	+11	+12
	119th	+3	-0.8	-7	+4	+10
	118th	+2	-4	-3	+10	+16
G	Current	+0.9	-2	+0.9	+4	+2
	119th	+1	-2	-2	+2	-2
	118th	+0.2	-2	0	+1	-0.3
H	Current	+0.5	-0.8	-12	-10	-6
	119th	+0.5	-2	-6	-11	-7
	118th	--	--	--	--	--
I	Current	-0.9	-2	-0.9	+9	+5
	119th	-0.7	-3	-3	+11	+10
	118th	-2	-3	-4	-2	+3
J	Current	-0.9	-0.8	-3	+8	+7
	119th	-0.9	-3	+0.9	+5	+4
	118th	-2	-3	+4	+3	+5
K	Current	0	-4	-4	+14	+25
	119th	0	-2	-0.9	+7	+18
	118th	-0.5	-3	-2	+11	+23
L	Current	-0.5	-0.8	-2	+0.6	+0.8
	119th	+0.5	-3	0	-1	+4
	118th	-2	-2	-2	-3	+2
M	Current	--	--	--	--	--
	119th	--	--	--	--	--
	118th	--	--	--	--	--
N	Current	-0.9	-2	0	+5	+10
	119th	-1	-2	+2	-6	+0.3
	118th	-0.9	-3	+0.9	-10	-4
O	Current	-0.2	-4	-2	-3	-3
	119th	-0.9	-5	+7	-6	-7
	118th	-0.2	-4	+11	-2	-3
P	Current	+0.2	-5	-2	+0.6	+2
	119th	+0.7	-7	+0.9	-21	-7
	118th	-1	-5	-0.9	-16	-8
Q	Current	-0.5	-4	-5	-6	-2
	119th	0	-4	-3	-13	-8
	118th	-1	-2	0	-10	-6
S	Current	-2	-3	-5	-12	-4
	119th	-0.9	-2	-4	-12	-3
	118th	-2	-2	-4	-15	-6

COMPARISON OF INSTITUTE AND MILL DATA--JUNE 1 THROUGH JUNE 30, 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			Elmendorf Tear, g./sheet In			Elmendorf Tear, g./sheet Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
174715	W.F.	6/ 5/57	2	43.8	43.7	-0.1	12.2	12.0	-0.2	110	108	- 2	347	408	+61	381[a]	472	+91
174716	W.F.	6/ 6/57	2	43.4	43.4	0.0	12.4	12.2	-0.2	109	108	- 1	340	412	+72	377[a]	468	+91
174742	W.F.	6/ 9/57	2	42.1	42.6	+0.5	12.3	11.9	-0.4	107	112	+ 5	364[a]	362	- 2	373[a]	406	+33
174743	W.F.	6/ 9/57	2	42.0	42.6	+0.6	12.2	11.9	-0.3	111	113	+ 2	351[a]	353	+ 2	389[a]	402	+13
Current Mill Average:				42.8	43.1	+0.3	12.3	12.0	-0.3	109	110	+ 1	350	384	+34	380	437	+57

TABLE XXVI

MILL B -- 42-LB. LINERBOARD

174680	W.F.	5/30/57	1	44.1	44.3	+0.2	13.0	12.9	-0.1	112	110	- 2	305[a]	313	+ 8	329[a]	371	+42
174712	W.F.	6/ 5/57	1	44.2	43.7	-0.5	12.4	12.6	+0.2	112	106	- 6	275	321	+46	344[a]	389	+45
Current Mill Average:				44.1	44.0	-0.1	12.7	12.7	0.0	112	108	- 4	290	317	+27	337	380	+43

[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.

COMPARISON OF INSTITUTE AND MILL DATA--JUNE 1 THROUGH JUNE 30, 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 In			Elmendorf Tear, g./sheet Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
174670	W.F.	6/ 3/57	-	44.0	44.0	0.0	12.8	12.5	-0.3	126	114	-12	356[a]	333	-23	392[a]	381	-11
174671	W.F.	6/ 3/57	-	43.6	43.7	+0.1	12.7	12.4	-0.3	126	114	-12	332[a]	315	-17	371[a]	385	+14
174672	W.F.	6/ 6/57	-	43.8	43.7	-0.1	12.8	12.3	-0.5	124	117	- 7	365[a]	360	- 5	391[a]	404	+13
174673	W.F.	6/ 6/57	-	43.6	43.9	+0.3	12.7	12.2	-0.5	126	119	- 7	349[a]	347	- 2	387[a]	375	-12
Current Mill Average:				43.7	43.8	+0.1	12.8	12.3	-0.5	125	116	- 9	351	339	-12	385	386	+ 1

TABLE XXVIII

MILL D -- 42-LB. LINERBOARD

174571	S.F.	5/21/57	7	43.6	43.5	-0.1	13.1	12.5	-0.6	98	104	+ 6	397	357	-40	369[a]	384	+15
174674	S.F.	6/ 4/57	7	45.6	45.3	-0.3	13.5	13.0	-0.5	109	107	- 2	372[a]	331	-41	373[a]	371	- 2
174758	S.F.	6/17/57	7	43.4	43.6	+0.2	13.3	12.9	-0.4	96	102	+ 6	352[a]	347	- 5	349[a]	363	+14
Current Mill Average:				44.2	44.1	-0.1	13.3	12.8	-0.5	101	104	+ 3	374	345	-29	364	373	+ 9

[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.

COMPARISON OF INSTITUTE AND MILL DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE XXIX

MILL E -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb. IPC	Basis Weight, lb. Mill	Basis Weight, lb. Diff.	Caliper, points IPC	Caliper, points Mill	Caliper, points Diff.	Bursting Strength, p.s.i. gage IPC	Bursting Strength, p.s.i. gage Mill	Bursting Strength, p.s.i. gage Diff.	Elmendorf Tear, g./sheet In IPC	Elmendorf Tear, g./sheet In Mill	Elmendorf Tear, g./sheet In Diff.	Elmendorf Tear, g./sheet Across IPC	Elmendorf Tear, g./sheet Across Mill	Elmendorf Tear, g./sheet Across Diff.
174617	WF1S	5/15/57	1	42.1	41.9	-0.2	13.6	12.8	-0.8	108	106	- 2	321	324	+ 3	349[a]	361	+12
174618	WF1S	5/19/57	1	41.9	42.4	+0.5	12.9	12.8	-0.1	112	106	- 6	316[a]	349	+33	356[a]	388	+32
174619	WF1S	5/19/57	1	42.3	42.7	+0.4	13.0	12.8	-0.2	112	105	- 7	319[a]	353	+34	331[a]	393	+62
174620	WF1S	5/31/57	1	42.8	42.3	-0.5	13.1	12.5	-0.6	120	119	- 1	339[a]	342	+ 3	367[a]	386	+19
174621	WF1S	5/31/57	1	42.8	42.6	-0.2	13.0	12.4	-0.6	120	116	- 4	346[a]	362	+16	371[a]	390	+19
Current Mill Average:				42.4	42.4	0.0	13.1	12.7	-0.4	114	111	- 3	328	346	+18	355	384	+29

TABLE XXX

MILL F -- 42-LB. LINERBOARD

174570	WF1S	5/30/57	2	42.1	43.1	+1.0	14.2	13.5	-0.7	113	107	- 6	333[a]	336	+ 3	369[a]	408	+39
174615	WF1S	5/31/57	2	41.7	42.8	+1.1	13.8	13.2	-0.6	115	106	- 9	331[a]	440	+109	364[a]	404	+40
174616	WF1S	6/ 1/57	2	42.3	43.2	+0.9	14.0	13.5	-0.5	116	114	- 2	328[a]	361	+ 33	355[a]	407	+52
174713	WF1S	6/ 5/57	2	41.8	42.6	+0.8	13.1	12.6	-0.5	120	115	- 5	308[a]	328	+ 20	336[a]	380	+44
174714	WF1S	6/11/57	2	42.6	44.0	+1.4	13.7	13.1	-0.6	119	110	- 9	349[a]	364	+ 15	385[a]	431	+46
Current Mill Average:				42.1	43.1	+1.0	13.8	13.2	-0.6	117	110	- 7	330	366	+ 36	362	406	+44

[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.

COMPARISON OF INSTITUTE AND MILL DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE XXXI

MILL G -- 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 In			Elmendorf Tear, g./sheet Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
174622	W.F.	5/18/57	2	42.3	42.8	+0.5	12.0	11.8	-0.2	112	112	0	299[a]	292	- 7	351[a]	352	+ 1
174572	W.F.	5/20/57	2	42.7	43.0	+0.3	12.3	12.0	-0.3	111	111	0	289[a]	298	+ 9	352[a]	354	+ 2
174586	W.F.	5/21/57	2	42.6	43.1	+0.5	11.7	11.6	-0.1	115	116	+ 1	295[a]	309	+14	354[a]	350	- 4
174623	W.F.	5/25/57	2	43.6	44.1	+0.5	12.7	12.5	-0.2	109	113	+ 4	331	341	+10	387[a]	387	0
174682	W.F.	5/30/57	2	43.2	43.1	-0.1	11.9	11.7	-0.2	115	115	0	301	307	+ 6	364[a]	370	+ 6
174683	W.F.	5/30/57	2	43.6	44.1	+0.5	12.8	12.3	-0.5	114	113	- 1	327[a]	346	+19	366[a]	382	+16
174701	W.F.	6/ 1/57	2	43.8	43.9	+0.1	12.8	12.3	-0.5	115	117	+ 2	315	324	+ 9	380[a]	391	+11
174702	W.F.	6/ 1/57	2	44.0	44.0	0.0	12.8	12.4	-0.4	112	115	+ 3	306	314	+ 8	355[a]	372	+17
174777	W.F.	6/17/57	2	42.1	42.9	+0.8	12.1	12.1	0.0	115	113	- 2	291	319	+28	340[a]	368	+28
174778	W.F.	6/17/57	2	42.2	42.9	+0.7	12.6	12.5	-0.1	115	114	- 1	309	329	+20	360[a]	375	+15
Current Mill Average:				43.0	43.4	+0.4	12.4	12.1	-0.3	113	114	+ 1	306	318	+12	361	370	+ 9

TABLE XXXII

MILL H -- 42-LB. LINERBOARD

174587	W.F.	5/ 4/57	4	43.1	43.3	+0.2	11.8	11.7	-0.1	119	105	-14	346[a]	312	-34	389[a]	367	-22
Current Mill Average:				43.1	43.3	+0.2	11.8	11.7	-0.1	119	105	-14	346	312	-34	389	367	-22

[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.

COMPARISON OF INSTITUTE AND MILL DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE XXXIII

MILL I -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb. IPC	Basis Weight, lb. Mill	Basis Weight, lb. Diff.	Caliper, points IPC	Caliper, points Mill	Caliper, points Diff.	Bursting Strength, p.s.i. gage IPC	Bursting Strength, p.s.i. gage Mill	Bursting Strength, p.s.i. gage Diff.	Elmendorf Tear, g./sheet In IPC	Elmendorf Tear, g./sheet In Mill	Elmendorf Tear, g./sheet In Diff.	Elmendorf Tear, g./sheet Across IPC	Elmendorf Tear, g./sheet Across Mill	Elmendorf Tear, g./sheet Across Diff.
174581	WF1S	5/17/57	1	42.7	42.5	-0.2	12.4	12.1	-0.3	111	111	0	306	333	+27	368[a]	397	+29
174582	WF1S	5/24/57	1	42.2	42.2	0.0	12.4	12.2	-0.2	111	111	0	321[a]	346	+25	377[a]	409	+32
174583	WF1S	5/27/57	1	43.6	42.7	-0.9	13.0	12.6	-0.4	113	110	- 3	310	342	+32	399[a]	403	+ 4
174679	WF1S	5/29/57	1	43.9	42.6	-1.3	13.1	12.7	-0.4	114	112	- 2	335[a]	340	+ 5	387[a]	404	+17
174799	WF1S	6/17/57	1	42.0	42.4	+0.4	12.4	12.3	-0.1	109	110	+ 1	299[a]	354	+55	384[a]	405	+21
Current Mill Average:				42.9	42.5	-0.4	12.6	12.4	-0.2	112	111	- 1	314	343	+29	383	403	+20

TABLE XXXIV

MILL J -- 42-LB. LINERBOARD

174577	W.F.	5/26/57	1	43.9	43.1	-0.8	12.3	12.2	-0.1	122	115	- 7	312[a]	322	+10	371[a]	399	+28
174578	W.F.	5/27/57	2	43.7	42.9	-0.8	12.3	12.1	-0.2	117	115	- 2	287[a]	308	+21	347[a]	374	+27
174717	W.F.	6/ 4/57	2	43.2	43.3	+0.1	12.4	12.2	-0.2	121	118	- 3	299[a]	331	+32	354[a]	381	+27
174718	W.F.	6/ 4/57	2	43.2	43.2	0.0	12.3	12.1	-0.2	122	119	- 3	296[a]	322	+26	364[a]	374	+10
174776	W.F.	6/13/57	2	43.3	43.2	-0.1	12.5	12.4	-0.1	114	111	- 3	293	321	+28	355[a]	390	+35
Current Mill Average:				43.5	43.1	-0.4	12.3	12.2	-0.1	119	116	- 3	297	321	+24	358	383	+25

[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.

COMPARISON OF INSTITUTE AND MILL DATA--JUNE 1 THROUGH JUNE 30, 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 In			Elmendorf Tear, g./sheet Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
174561	WF1S	5/23/57	1	42.1	42.1	0.0	12.3	11.9	-0.4	110	109	- 1	349	402	+53	401[a]	494	+ 93
174562	WF1S	5/25/57	1	42.1	42.1	0.0	12.2	12.0	-0.2	114	109	- 5	337	384	+47	395[a]	492	+ 97
174573	WF1S	5/29/57	1	41.2	41.4	+0.2	11.8	11.5	-0.3	107	110	+ 3	341[a]	347	+ 6	376[a]	441	+ 65
174681	WF1S	6/ 4/57	1	41.9	42.1	+0.2	12.1	11.6	-0.5	110	110	0	348	401	+53	393[a]	493	+100
174739	WF1S	6/ 5/57	1	42.8	42.7	-0.1	12.5	11.9	-0.6	116	111	- 5	343[a]	407	+64	383[a]	499	+116
174740	WF1S	6/10/57	1	41.8	42.0	+0.2	11.5	11.0	-0.5	113	111	- 2	352[a]	397	+45	383[a]	517	+134
174791	WF1S	6/16/57	1	41.9	41.6	-0.3	12.5	12.0	-0.5	107	97	-10	340	389	+49	371[a]	440	+ 69
174794	WF1S	6/16/57	1	42.0	42.1	+0.1	12.4	11.9	-0.5	117	109	- 8	339	397	+58	399[a]	498	+ 99
Current Mill Average:				42.0	42.0	0.0	12.2	11.7	-0.5	112	108	- 4	344	391	+47	388	484	+ 96

[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.

COMPARISON OF INSTITUTE AND MILL DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE XXXVI

MILL L -- 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 In			Elmendorf Tear, g./sheet Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
174563	W.F.	5/29/57	-	42.9	42.7	-0.2	12.9	12.8	-0.1	103	100	- 3	325[a]	339	+14	378	361	-17
174564	W.F.	5/30/57	-	43.7	43.5	-0.2	12.2	12.6	+0.4	102	102	0	346	368	+22	386[a]	397	+11
174565	W.F.	5/31/57	-	45.7	45.5	-0.2	13.0	13.1	+0.1	112	112	0	333	360	+27	413[a]	407	- 6
174719	W.F.	6/ 5/57	-	43.5	43.7	+0.2	13.0	12.7	-0.3	110	108	- 2	340[a]	351	+11	379[a]	393	+14
174720	W.F.	6/ 6/57	-	44.3	43.7	-0.6	13.2	12.9	-0.3	111	107	- 4	343	328	-15	373[a]	376	+ 3
174721	W.F.	6/ 7/57	-	44.6	43.4	-1.2	12.9	12.6	-0.3	114	109	- 5	340	315	-25	385[a]	379	- 6
174765	W.F.	6/12/57	-	44.3	44.3	0.0	12.6	12.5	-0.1	100	102	+ 2	371[a]	357	-14	347[a]	345	- 2
174766	W.F.	6/13/57	-	44.3	44.7	+0.4	12.5	12.5	0.0	113	109	- 4	367[a]	361	- 6	387[a]	407	+20
174767	W.F.	6/14/57	-	43.9	43.9	0.0	13.1	12.9	-0.2	106	108	+ 2	352[a]	351	- 1	365[a]	369	+ 4
Current Mill Average:				44.1	43.9	-0.2	12.8	12.7	-0.1	108	106	- 2	346	348	+ 2	379	382	+ 3

TABLE XXXVII

MILL M -- 42-LB. LINERBOARD

No samples submitted.

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

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

COMPARISON OF INSTITUTE AND MILL DATA--JUNE 1 THROUGH JUNE 30, 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 In			Elmendorf Tear, g./sheet Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
174675	W.F.	6/ 3/57	-	43.5	42.6	-0.9	12.3	11.9	-0.4	106	110	+ 4	341[a]	334	- 7	353[a]	369	+16
174676	W.F.	6/ 3/57	-	43.3	43.0	-0.3	12.5	12.3	-0.2	109	109	0	323[a]	344	+21	353[a]	377	+24
174792	W.F.	6/14/57	-	42.2	41.7	-0.5	11.8	11.4	-0.4	111	107	- 4	330[a]	354	+24	341[a]	388	+47
174793	W.F.	6/14/57	-	42.0	41.8	-0.2	11.8	11.4	-0.4	110	110	0	321[a]	357	+36	336[a]	389	+53
Current Mill Average:				42.7	42.3	-0.4	12.1	11.8	-0.3	109	109	0	329	347	+18	346	381	+35

TABLE XXXIX

MILL O -- 42-LB. LINERBOARD

174695	W.	5/20/57	2	42.6	42.2	-0.4	12.9	12.2	-0.7	114	112	- 2	333[a]	304	-29	372[a]	361	-11
174696	W.	5/31/57	4	43.2	42.4	-0.8	13.5	12.8	-0.7	110	108	- 2	405[a]	368	-37	393[a]	370	-23
174788	W.	6/ 7/57	2	42.3	42.7	+0.4	12.9	12.5	-0.4	111	111	0	331[a]	342	+11	393[a]	385	- 8
174789	W.	6/14/57	4	41.9	42.2	+0.3	12.9	12.3	-0.6	109	105	- 4	357[a]	369	+12	359[a]	359	0
Current Mill Average:				42.5	42.4	-0.1	13.0	12.5	-0.5	111	109	- 2	356	346	-10	380	369	-11

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

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

COMPARISON OF INSTITUTE AND MILL DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE XL

MILL P -- 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 In			Elmendorf Tear, g./sheet Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
174579	WF1S	5/27/57	1	42.3	42.5	+0.2	12.7	12.1	-0.6	112	111	- 1	291[a]	278	-13	353[a]	359	+ 6
174580	WF1S	5/28/57	1	43.7	43.2	-0.5	12.7	12.0	-0.7	113	114	+ 1	314[a]	320	+ 6	368[a]	391	+23
174677	WF1S	6/ 4/57	1	42.8	42.9	+0.1	12.3	11.8	-0.5	112	109	- 3	315[a]	327	+12	363[a]	370	+ 7
174678	WF1S	6/ 5/57	1	41.7	42.1	+0.4	12.6	12.0	-0.6	112	114	+ 2	291[a]	283	- 8	366[a]	357	- 9
174790	WF1S	6/17/57	1	43.2	43.6	+0.4	12.9	12.3	-0.6	109	100	- 9	328	343	+15	370[a]	372	+ 2
Current Mill Average:				42.7	42.8	+0.1	12.6	12.0	-0.6	112	110	- 2	308	310	+ 2	364	370	+ 6

TABLE XLI

MILL Q -- 42-LB. LINERBOARD

174574	W.B.	5/19/57	-	43.4	43.2	-0.2	11.6	11.1	-0.5	121	113	- 8	354[a]	308	-46	391[a]	371	-20
174575	W.B.	5/22/57	-	44.0	44.1	+0.1	12.3	11.8	-0.5	114	110	- 4	357[a]	355	- 2	419[a]	388	-31
174576	W.B.	5/23/57	-	43.8	43.8	0.0	12.2	11.8	-0.4	119	112	- 7	381[a]	339	-42	395[a]	391	- 4
174684	W.B.	5/28/57	-	43.7	43.2	-0.5	12.1	11.6	-0.5	112	109	- 3	366[a]	340	-26	399[a]	389	-10
174685	W.B.	5/31/57	-	43.7	43.1	-0.6	12.4	11.8	-0.6	115	108	- 7	361[a]	349	-12	387[a]	412	+25
174741	W.B.	5/31/57	-	43.3	42.9	-0.4	12.1	11.6	-0.5	113	110	- 3	348	348	0	401[a]	407	+ 6
Current Mill Average:				43.6	43.4	-0.2	12.1	11.6	-0.5	116	110	- 6	361	340	-21	399	393	- 6

[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.

COMPARISON OF INSTITUTE AND MILL DATA--JUNE 1 THROUGH JUNE 30, 1957 (continued)

TABLE XLII

MILL S -- 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 In			Elmendorf Tear, g./sheet Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
174566	W.F.	4/16/57	1	42.1	41.8	-0.3	13.5	12.9	-0.6	113	108	- 5	304[a]	252	-52	353[a]	350	- 3
174567	W.F.	4/20/57	1	43.9	42.6	-1.3	13.0	12.9	-0.1	122	113	- 9	317[a]	279	-38	384[a]	362	-22
174568	W.F.	4/24/57	1	42.9	41.8	-1.1	12.9	13.0	+0.1	118	110	- 8	310[a]	262	-48	375[a]	347	-28
174569	W.F.	4/30/57	1	43.0	42.0	-1.0	13.7	12.9	-0.8	112	110	- 2	282[a]	253	-29	365[a]	347	-18
174703	W.F.	5/ 3/57	1	43.7	42.6	-1.1	13.7	13.0	-0.7	108	108	0	301	279	-22	379[a]	369	-10
174704	W.F.	5/ 6/57	1	42.1	41.6	-0.5	13.4	12.8	-0.6	116	115	- 1	279[a]	261	-18	355[a]	352	- 3
174705	W.F.	5/10/57	1	42.8	42.0	-0.8	13.2	13.0	-0.2	110	107	- 3	307	257	-50	375[a]	351	-24
174706	W.F.	5/14/57	1	43.3	41.7	-1.6	13.0	12.9	-0.1	111	105	- 6	287[a]	251	-36	346[a]	344	- 2
174795	W.F.	5/18/57	1	43.6	42.5	-1.1	13.1	13.0	-0.1	123	111	-12	303	276	-27	374[a]	359	-15
174796	W.F.	5/21/57	1	43.2	43.0	-0.2	13.7	13.3	-0.4	120	114	- 6	297	272	-25	383[a]	377	- 6
174797	W.F.	5/26/57	1	43.4	42.2	-1.2	14.1	13.4	-0.7	114	108	- 6	290	267	-23	363[a]	354	- 9
174798	W.F.	5/30/57	1	43.5	42.3	-1.2	13.1	12.8	-0.3	118	111	- 7	307[a]	265	-42	379[a]	349	-30
Current Mill Average:				43.1	42.2	-0.9	13.4	13.0	-0.4	116	110	- 6	299	264	-35	369	355	-14

TABLE XLIII

MILL R -- 47-LB. DRUM LINERBOARD

No Samples Submitted

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

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