

CONTINUOUS BASELINE STUDY

Project 1108-13

Report 172

A Progress Report

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

August 1, 1961

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

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THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

CONTINUOUS BASELINE STUDY

PRESENTATION AND DISCUSSION OF TEST RESULTS

During the month of July, eighty-nine sample lots of 42-lb. fourdrinier kraft linerboard representing the production of sixteen mills were evaluated at The Institute of Paper Chemistry. Each sample lot was evaluated for basis weight, caliper, bursting strength, and Elmendorf tearing strength. The average strength results for each mill may be seen in Table I and are graphically presented in Fig. 1 to 5. In addition to a comparison of the current mill averages for the various tests, Table I also shows the current F.K.I. averages, the cumulative F.K.I. averages, and the F.K.I. indexes. For each test, the current mill average represents the average obtained on all sample lots evaluated during the current period, the current F.K.I. average represents the average of the current mill averages, and the cumulative F.K.I. average represents the average of the current F.K.I. averages for the previous twelve months excluding the current period. The F.K.I. index expressed in per cent is the ratio of the current F.K.I. average to the cumulative F.K.I. average.

In Table II, a tabulation of the number of sample lots submitted by each mill is shown.

Supplementary to the basis weight data given in Table I, a tabulation is given in Table III of the amount by which the basis weight average for each mill varies from the 42-lb. specification set forth in Rule 41.

TABLE I
SUMMARY OF COMPOSITE MILL AVERAGES---JULY 1 THROUGH JULY 31, 1961

Mill	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	In Machine	Elmendorf Tear, g./sheet Cross Machine
A	43.1	12.0	109	368	406
B	42.6	13.0	109	324	338
C	43.4	12.5	114	319	354
D	42.5	12.1	114	285	327
E	44.1	12.7	100	374	406
F	43.6	12.4	113	345	355
G	43.7	12.6	104	372	406
H	43.2	12.0	114	313	345
I	42.9	13.6	112	299	358
J	43.4	12.2	110	304	364
K	No samples submitted.				
L	43.8	13.1	111	345	382
M	No samples submitted.				
N	No samples submitted				
O	43.8	13.2	110	327	378
P	44.2	12.3	112	356	409
Q	43.3	12.0	116	321	383
S	43.4	11.3	112	327	365
T	42.6	12.5	111	314	396
Current FKI Average:	43.3	12.5	111	331	373
Cumulative FKI Average:	43.4	12.6	110	331	373
FKI Index, %	99.8	99.2	100.9	100.0	100.0

TABLE II
NUMBER OF SAMPLE LOTS SUBMITTED BY EACH MILL

Mill Code	Number
A	7
B	6
C	8
D	10
E	1
F	2
G	6
H	6
I	5
J	8
K	0
L	7
M	0
N	0
O	5
P	6
Q	7
S	3
T	<u>2</u>
Total	89

TABLE III
PERCENTAGE DEVIATION FROM 42-LB. BASIS WEIGHT
SPECIFICATION

Mill Code	Per Cent
A	+2.6
B	+1.4
C	+3.3
D	+1.2
E	+5.0
F	+3.8
G	+4.0
H	+2.9
I	+2.1
J	+3.3
K	---
L	+4.3
M	---
N	---
O	+4.3
P	+5.2
Q	+3.1
S	+3.3
T	+1.4

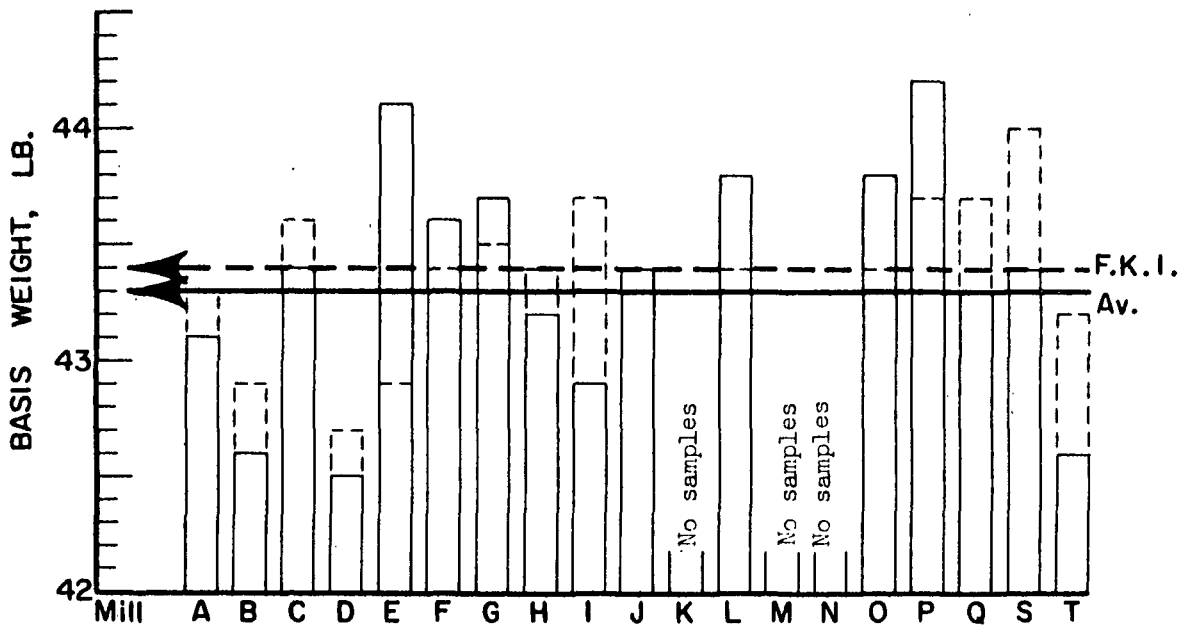


Figure 1. Comparison of Basis Weight Results for July, 1961

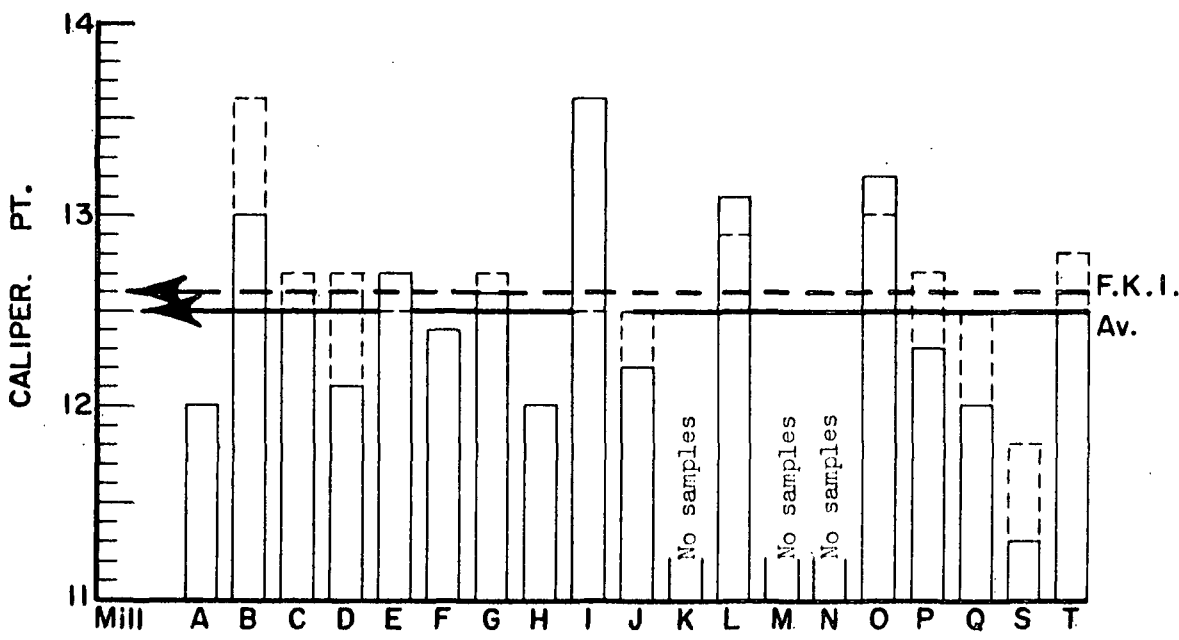


Figure 2. Comparison of Caliper Results for July, 1961

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

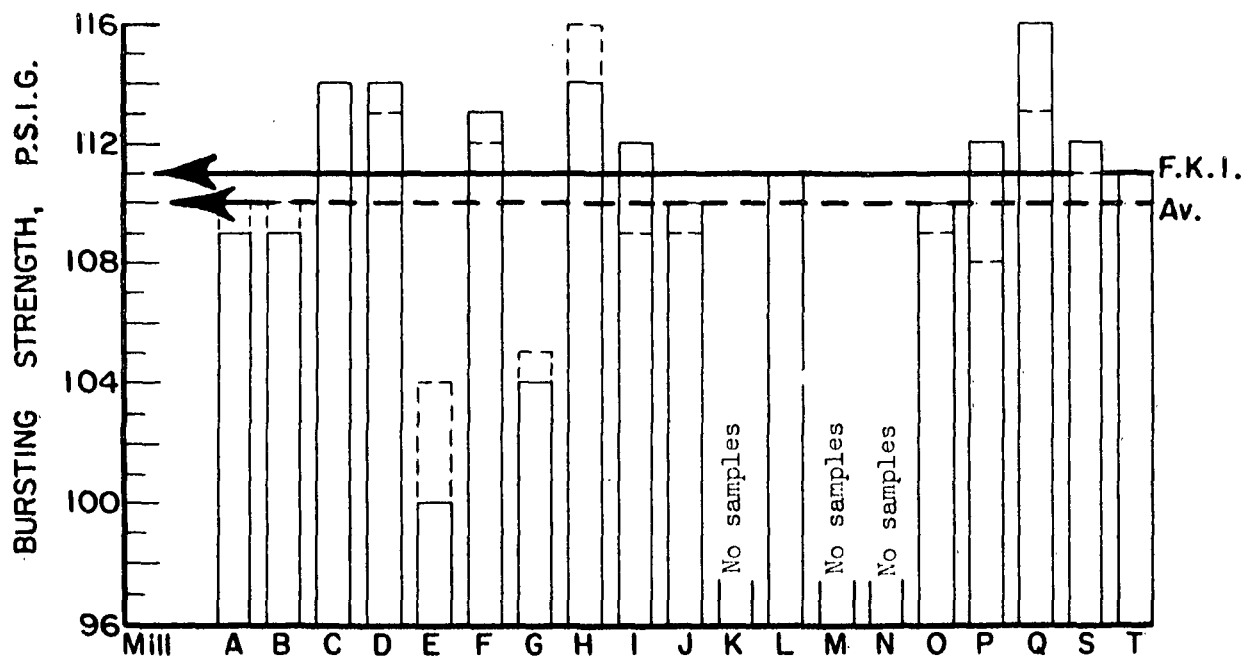


Figure 3. Comparison of Bursting Strength Results for July, 1961

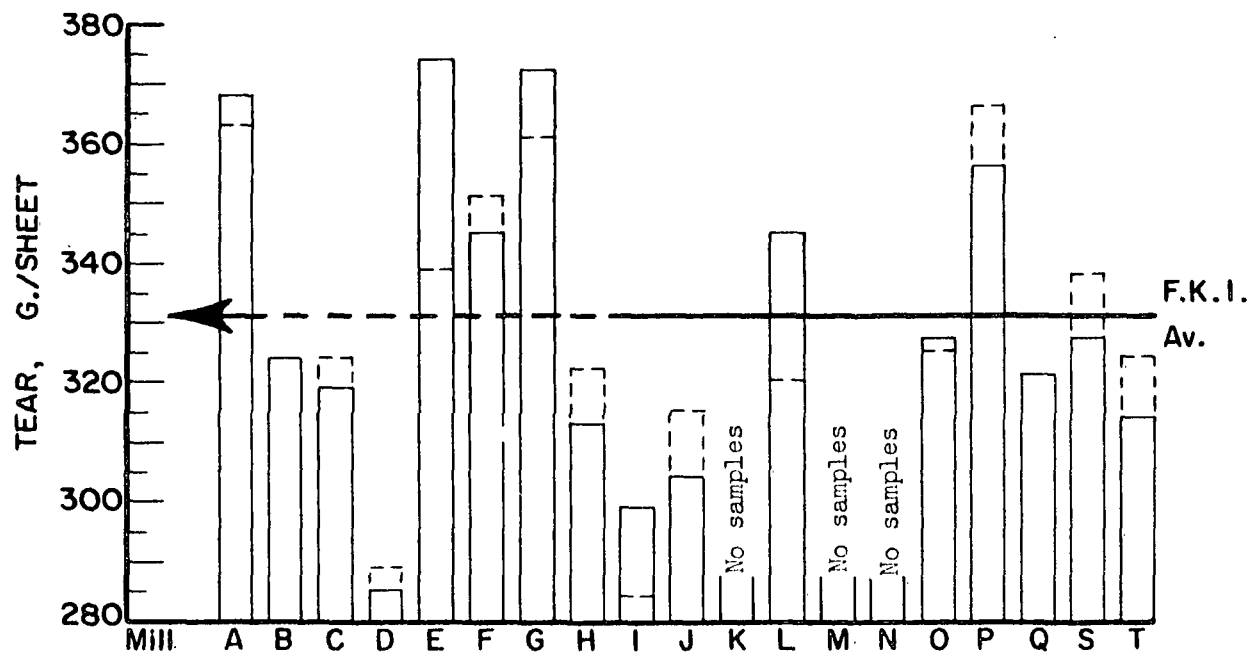


Figure 4. Comparison of Machine-Direction Tear Results for July, 1961

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

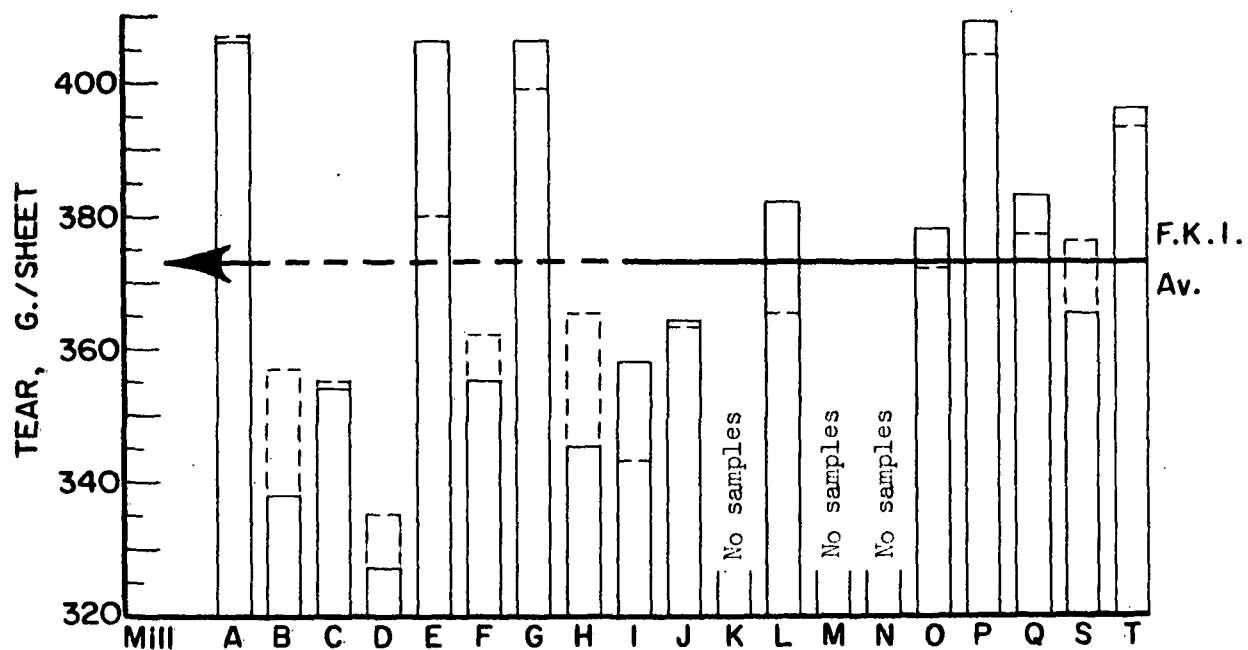


Figure 5. Comparison of Cross-Machine Direction Tear Results

for July, 1961

—— Current machine average
----- Cumulative machine average

Shown below from Table I are the maximum and minimum current mill averages for each test and also the current and cumulative F.K.I. averages:

	Current Mill Averages		F.K.I. Averages	
	Max.	Min.	Current	Cumulative
Basis weight, lb.	44.2	42.5	43.3	43.4
Caliper, points	13.6	11.3	12.5	12.6
Bursting strength, p.s.i. gage	116	100	111	110
Machine direction Elmendorf tear, g./sheet	374	285	331	331
Cross-machine direction Elmendorf tear, g./sheet	409	327	373	373

The test results obtained at the Institute and at the mill are given alphabetically in Tables IV to XXII for each mill. Included in each of these tables are the maximum, minimum, and average test data obtained at the Institute on each sample lot of linerboard. The data obtained at the Institute include also for each test the calculation of (1) a current mill average that represents the average of the averages obtained on the individual sample lots of linerboard evaluated during the current period, (2) a cumulative mill average that represents the average of the current mill averages for the previous twelve months excluding the current period, (3) a mill factor expressed in per cent that represents the ratio of the current mill average to the cumulative mill average, and (4) a mill index expressed in per cent that represents the ratio of the current mill average to the cumulative F.K.I. average. As mentioned above, the results presented in Tables IV to XXII also include data obtained at the mills. The mill data

TABLE IV
SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL A -- 42-1B, LINERBOARD

Date Made	Finish	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. range			Elmendorf Tear, g./sheet in Machine			Elmendorf Tear, g./sheet Cross Machine												
			Institute		Mill	Institute		Mill	Institute		Mill	Institute		Mill	Institute		Mill										
			Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Diff.						
6/16/61	W.B.	-	42.8	42.0	42.4	42.2	-0.2	12.7	11.5	12.1	11.8	-0.3	128	75	109	107	-2	368	312	341	367	+26	416	360	393 ^a	420	+27
6/23/61	W.B.	-	43.8	42.0	42.7	42.7	0.0	12.3	11.3	11.9	11.5	-0.4	128	82	108	105	-3	416	344	367 ^a	357	-10	456	368	403 ^a	411	+8
7/2/61	W.B.	-	44.4	42.8	43.8	42.8	-1.0	12.1	11.2	11.8	11.7	-0.1	122	83	104	103	-1	432	280	364 ^a	357	-7	416	352	395 ^a	411	+16
7/3/61	W.B.	-	44.0	42.0	43.4	42.7	-0.7	12.1	11.0	11.6	11.4	-0.2	132	87	113	108	-5	468	328	372 ^a	377	+5	472	360	411 ^a	455	+44
7/7/61	W.B.	-	43.8	42.4	43.1	42.5	-0.6	12.2	11.1	11.8	11.5	-0.3	131	95	112	111	-1	440	360	387	399	+12	448	376	400 ^a	444	+44
7/17/61	W.B.	-	43.4	42.0	42.7	42.4	-0.3	13.0	11.8	12.2	11.8	-0.4	120	87	104	107	+3	392	304	355 ^a	348	-7	464	392	420 ^a	433	+13
7/19/61	W.B.	-	44.2	43.0	43.8	43.5	-0.3	13.2	11.8	12.6	12.1	-0.5	127	89	110	106	-4	456	328	388 ^a	395	+7	464	376	417 ^a	469	+52
Current Mill Average:			43.1	42.7	-0.4	12.0	11.7	-0.3	109	107	-2	368	371	+3	406	435	+29										
Cumulative Mill Average:			43.3			12.0			110			363			407												
Mill Factor, %			99.5			100.0			99.1			101.4			99.8												
Mill Index, %			99.3			95.2			99.1			111.2			108.8												

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

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

TABLE V
SUMMARY OF INSTITUTE AND MILL DATA
July, 1961
MILL B -- 42-LB. LINERBOARD

Date Made	Mch. No.	Finish	Basis Weight, lb.			Caliper, points			Bursting Strength, P.S.I. gage			Elmendorf Tear, g./sheet In Machine			Elmendorf Tear, g./sheet Cross Machine										
			Institute		Mill	Institute		Mill	Institute		Mill	Institute		Mill	Institute		Mill								
			Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.								
			Diff.			Diff.			Diff.			Diff.				Diff.			Diff.						
6/25/61	2	WFLS	+0.6	42.4	42.4	13.5	12.5	13.0	12.8	-0.2	133	93	116	106	-10	384	264	317 ^a	310	-7	432	240	336 ^a	360	+24
7/1/61	2	WFLS	+0.2	42.1	42.1	13.4	12.5	13.0	12.8	-0.2	126	87	103	112	+9	384	240	323	340	+17	360	288	321 ^a	367	-46
7/10/61	2	WFLS	-0.4	42.4	42.4	13.5	12.9	13.1	13.0	-0.1	131	85	103	114	+11	432	328	355	340	-15	392	320	347 ^a	356	+9
7/11/61	2	WFLS	-0.3	43.7	44.0	14.2	13.2	13.7	13.6	-0.1	134	87	114	117	+3	320	272	294	311	+17	424	304	357 ^a	396	+39
7/15/61	2	WFLS	+0.2	42.0	41.8	13.0	12.1	12.6	12.8	+0.2	120	74	103	104	+1	368	264	324 ^a	330	+6	376	288	326 ^a	344	+18
7/16/61	2	WFLS	-0.1	43.1	43.0	13.4	12.1	12.8	12.6	-0.2	122	91	112	105	-7	384	264	330 ^a	336	+6	376	320	341 ^a	382	+41
Current Mill Average:			0.0	42.6	42.6	13.0	12.9	-0.1			109	110	+1			324	328	+4			338	368	+30		
Cumulative Mill Average:				42.9		13.6					110					324					357				
Mill Factor, %				99.3		95.6					99.1					100.0					94.7				
Mill Index, %				98.2		103.2					99.1					97.9					90.6				

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

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

TABLE VI
SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL C -- 42-LB. LINERBOARD

Date Made	Mch. No.	Finish	Basis Weight, lb.				Caliper, points				Bursting Strength, P.S.I. gage				Elmendorf Tear, g./sheet				Elmendorf Tear, g./sheet								
			Institute		Mill		Institute		Mill		Institute		Mill		Institute		Mill		Institute		Mill						
			Max.	Min.	Av.	Diff.	Max.	Min.	Av.	Diff.	Max.	Min.	Av.	Diff.	Max.	Min.	Av.	Diff.	Max.	Min.	Av.	Diff.					
6/28/61	-	W.F.	45.0	43.6	44.2	43.3	-0.9	13.0	12.2	12.6	12.2	-0.4	132	104	119	119	0	376	312	345 ^a	288	-57	448	320	372 ^a	336	-36
6/29/61	-	W.F.	44.4	42.6	43.6	43.3	-0.3	13.5	12.2	12.9	12.6	-0.3	127	82	111	112	+1	408	288	356 ^a	300	-56	416	328	361 ^a	341	-20
6/30/61	-	W.F.	43.6	42.0	42.6	42.0	-0.6	12.6	12.0	12.2	12.1	-0.1	137	97	113	115	+2	336	280	311 ^a	277	-34	400	320	349 ^a	328	-21
7/12/61	-	W.F.	43.8	41.6	42.6	41.8	-0.8	12.9	12.0	12.5	12.0	-0.5	128	94	113	118	+5	360	264	317 ^a	271	-46	400	328	359 ^a	308	-51
7/13/61	-	W.F.	43.8	42.2	42.5	41.8	-0.7	13.0	12.1	12.5	12.0	-0.5	129	99	116	122	+6	392	240	286	269	-17	368	320	341 ^a	324	-17
7/14/61	-	W.F.	44.2	42.8	43.8	43.0	-0.8	13.2	12.2	12.8	12.1	-0.7	124	87	111	117	+6	384	264	303 ^a	271	-32	392	304	350 ^a	331	-19
7/20/61	-	W.F.	44.6	44.0	44.3	43.2	-1.1	12.8	11.9	12.2	12.4	+0.2	131	91	113	117	+4	360	304	327 ^a	312	-15	392	328	355 ^a	331	-24
7/21/61	-	W.F.	44.0	42.2	43.4	41.9	-2.5	12.2	11.3	11.9	12.0	+0.1	129	104	116	120	+4	328	264	308	285	-23	376	320	345 ^a	332	-13
Current Mill Average:			43.4	42.5	-0.9			12.5	12.2	-0.3			114	118	+4			319	284	-35			354	329	-25		
Cumulative Mill Average:			43.6					12.7					114					324					355				
Mill Factor, %			99.5					98.4					100.0					98.5					99.7				
Mill Index, %			100.0					99.2					103.6					96.4					94.9				

^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.

TABLE VII
SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL D -- 42-1B. LINERBOARD

Date Made	Mch. No.	Finish	Basis Weight, lb.				Caliper, points				Bursting Strength, p.s.i.				Elmendorf Tear, g./sheet In Machine				Elmendorf Tear, g./sheet Cross Machine							
			Institute		Mill		Max.	Min.	Av.	Diff.	Institute		Mill		Max.	Min.	Av.	Diff.	Max.	Min.	Av.	Diff.				
			Max.	Min.	Av.	Diff.					Max.	Min.	Av.	Diff.												
6/19/61	1	W.F.	43.6	41.8	42.2	-0.2	12.6	11.7	12.0	0.0	141	84	118	111	-7	344	232	281 ^a	253	-28	368	304	330 ^a	340	+10	
6/22/61	1	W.F.	43.2	41.8	42.2	-0.2	12.6	11.8	12.1	-0.1	138	93	116	112	-4	344	248	289 ^a	256	-33	384	296	332 ^a	331	-1	
6/27/61	1	W.F.	43.8	41.6	42.4	-0.2	12.6	11.9	12.2	-0.1	130	83	111	113	+2	360	256	299 ^a	255	-44	400	304	347 ^a	340	-7	
6/30/61	1	W.F.	42.4	41.8	42.1	-0.3	12.7	11.8	12.1	-0.1	139	100	122	112	-10	320	232	289 ^a	256	-33	360	312	337 ^a	333	-4	
7/2/61	1	W.F.	43.8	42.0	42.7	-0.7	12.2	11.5	12.0	0.0	139	90	113	112	-1	328	240	274	252	-22	352	256	313 ^a	338	+25	
7/7/61	1	W.F.	44.0	42.0	42.9	-0.7	12.3	11.6	12.0	0.0	138	79	113	113	0	336	240	273 ^a	250	-23	352	304	324 ^a	338	+14	
7/10/61	1	W.F.	43.0	41.8	42.5	-0.6	12.6	11.8	12.1	-0.1	130	86	115	113	-2	320	248	278	255	-23	352	272	318 ^a	340	+22	
7/13/61	1	W.F.	43.0	42.0	42.5	-0.7	12.5	11.8	12.1	0.0	134	82	112	113	+1	320	248	285 ^a	254	-31	344	280	322 ^a	336	+14	
7/18/61	1	W.F.	43.4	42.0	42.7	-0.5	13.0	11.9	12.2	0.0	139	85	111	114	+3	336	240	293 ^a	259	-34	360	304	332 ^a	342	+10	
7/22/61	-	----	43.2	42.0	42.5	-0.7	12.7	11.8	12.2	-0.2	130	98	112	112	0	304	256	293 ^a	253	-40	336	288	317 ^a	335	+18	
Current Mill Average:			42.5				12.1				114				285				254				327			
Cumulative Mill Average:			42.7				12.7				113				289				335				335			
Mill Factor, %			99.5				95.3				100.9				98.6				97.6				97.6			
Mill Index, %			97.9				96.0				103.6				86.1				87.7				87.7			

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

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

TABLE VIII
SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL E -- 42-LB. LINERBOARD

Date Made	Mch. No.	Basis Weight, lb.			Caliber, points			Bursting Strength, P.s.i. gage			Elmendorf Tear, g./sheet			Elmendorf Tear, g./sheet		
		Max.	Min.	Av.	Institute	Max.	Min.	Av.	Institute	Max.	Min.	Av.	Institute	Max.	Min.	Av.

TABLE IX
SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL F -- 42-LB. LINERBOARD

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^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.
Note: All "current mill average" data are calculated from the totals of the individual readings.

MILL G -- 42-LB. LINERBOARD

Date Made	Vch. No.	Finish	Basis Weight, lb.				Caliber, points				Bursting Strength, p.s.i., gage				Elmendorf Tear, g./sheet				Elmendorf Tear, g./sheet							
			Institute		Mill		Institute		Mill		Institute		Mill		Institute		Mill		Institute		Mill					
			Max.	Min.	Av.	Diff.	Max.	Min.	Av.	Diff.	Max.	Min.	Av.	Diff.	Max.	Min.	Av.	Diff.	Max.	Min.	Av.	Diff.				
6/30/61	WFIS 1		43.8	40.6	42.2	42.4	+0.2	12.5	11.5	11.9	11.6	-0.3	127	84	106	110	+4	368	304	343	---	424	352	386 ^a	---	---
6/30/61	WFIS 2		45.8	40.6	43.8	44.2	+0.4	14.2	12.8	13.3	12.8	-0.5	123	69	102	107	+5	512	344	410 ^a	---	464	336	410 ^a	---	---
7/1/61	WFIS 2		44.6	42.2	43.8	44.1	+0.3	13.8	12.2	12.9	12.5	-0.4	123	82	108	112	+4	464	320	383	---	488	352	423 ^a	---	---
7/14/61	WFIS 1		43.8	42.0	43.2	42.2	-1.0	12.5	12.0	12.2	11.8	-0.4	117	87	104	106	+2	392	304	345 ^a	---	416	320	377 ^a	---	---
7/17/61	WFIS 2		45.8	43.4	44.4	43.4	-1.0	13.2	12.0	12.6	12.2	-0.4	131	62	99	105	+6	440	328	376 ^a	---	504	376	424 ^a	---	---
7/19/61	WFIS 2		45.8	43.6	44.6	44.0	-0.6	13.4	12.1	12.8	12.2	-0.6	125	75	104	112	+8	432	328	375 ^a	---	496	352	415 ^a	---	---
Current Mill Average:			43.7		43.4	-0.3		12.6		12.2	-0.4		104		109	+5		372				406				
Cumulative Mill Average:			43.5					12.7					105					361				399				
Mill Factor, %			100.5					99.2					99.0					103.0				101.8				
Mill Index, %			100.7					100.0					94.5					112.4				108.6				

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

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

TABLE XI
SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL H -- 42-LB. LINERBOARD

Date Made	Finish	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet In Machine			Elmendorf Tear, g./sheet Cross Machine												
			Institute		Mill	Institute		Mill	Institute		Mill	Institute		Mill	Institute		Mill										
			Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.										
6/26/61	W.F.	2	43.8	42.0	43.0	43.1	+0.1	12.1	11.5	11.9	11.8	-0.1	142	84	112	114	+2	312	264	286	324	+38	384	320	343 ^a	384	+41
6/26/61	W.F.	2	44.0	42.2	43.4	43.1	-0.3	12.2	11.2	11.8	11.8	0.0	139	89	110	110	0	344	264	299	316	+17	352	312	337 ^a	357	-20
6/29/61	W.F.	1	43.2	42.6	43.0	43.0	0.0	12.1	11.3	11.9	11.8	-0.1	139	107	121	118	-3	344	248	304 ^a	318	+14	392	320	352 ^a	361	+9
6/29/61	W.F.	1	43.0	42.0	42.4	42.7	+0.3	12.1	11.2	11.9	12.0	+0.1	130	100	115	118	+3	392	272	315 ^a	327	+12	400	304	352 ^a	375	+23
7/18/61	W.F.	1	44.0	42.6	43.6	43.2	-0.4	12.5	11.5	12.0	11.8	-0.2	130	88	114	118	-4	440	280	333 ^a	343	+10	400	320	347 ^a	378	-31
7/18/61	W.F.	1	44.0	43.0	43.8	43.3	-0.5	12.9	11.5	12.2	12.0	-0.2	132	93	114	114	0	392	288	341 ^a	327	-14	384	296	341 ^a	360	-39
Current Mill Average:			43.2	43.1	-0.1			12.0	11.9	-0.1			114	115	+1			313	326	-13			345	373	-28		
Cumulative Mill Average:			43.4					12.0					116					322					365				
Mill Factor, %			99.5					100.0					98.3					97.2					94.5				
Mill Index, %			99.5					95.2					103.6					94.6					92.5				

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

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

TABLE XII
SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL I -- 42-LB. LINERBOARD

Date Made	Mch. Finish	No.	Basis Weight, lb.			Caliper, points			Bursting Strength, P.S.I. gage			Elmendorf Tear, g./sheet In Machine			Elmendorf Tear, g./sheet Cross Machine												
			Institute		Mill	Institute		Mill	Institute		Mill	Institute		Mill	Institute		Mill										
			Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.										
5/22/61	W.F.	1	44.0	41.2	43.0	42.5	-0.5	14.1	13.0	13.5	13.1	-0.4	135	90	109	108	-1	336	248	292	283	-9	400	320	357 ^a	351	-6
5/27/61	W.F.	1	44.6	41.4	43.0	43.0	0.0	14.0	13.0	13.5	13.0	-0.5	137	83	115	113	-2	360	264	300 ^a	289	-11	416	328	363 ^a	349	-14
6/ 3/61	W.F.	1	44.2	41.6	42.9	42.7	-0.2	14.0	12.8	13.4	13.0	-0.4	140	96	114	110	-4	328	248	293 ^a	283	-10	376	320	352 ^a	349	-3
5/16/61	W.F.	1	44.2	41.4	42.9	42.9	0.0	14.1	13.0	13.7	13.1	-0.6	128	88	112	112	0	352	264	308	279	-29	392	336	358 ^a	354	-4
6/28/61	W.F.	1	44.2	41.2	42.8	42.8	0.0	14.2	13.0	13.8	13.1	-0.7	134	88	111	110	-1	364	248	300 ^a	285	-15	400	328	360 ^a	364	-4
Current Mill Average:			42.9	42.8	-0.1			13.6	13.1	-0.5			112	111	-1			299	284	-15			358	354	-4		
Cumulative Mill Average:			43.7					12.5					109					284					343				
Mill Factor, %			98.2					108.8					102.8					105.3					104.4				
Mill Index, %			98.8					107.9					101.8					90.3					96.0				

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

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

TABLE XIII
SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL J -- 42-LB. LINERBOARD

Date Made	Finish	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. page			Elmendorf Tear, g./sheet			Elmendorf Tear, g./sheet												
			Institute		Mill	Institute		Mill	Institute		Mill	Institute		Mill	Institute		Mill										
			Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.										
			Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.										
6/24/61	W.F.	1	44.6	41.6	43.2	43.8	+0.6	12.9	12.0	12.4	12.5	+0.1	130	85	117	113	-4	336	264	311	335	+24	424	328	378 ^a	439	+61
6/25/61	W.F.	1	46.0	43.8	44.3	44.5	+0.2	12.7	11.7	12.1	12.6	+0.5	148	96	119	115	-4	360	288	327	346	+19	440	360	402 ^a	439	+37
6/26/61	W.F.	1	43.0	40.0	42.0	42.4	+0.4	12.9	12.0	12.5	11.8	-0.7	129	87	107	109	+2	352	248	297	324	+27	392	320	350 ^a	420	+70
6/27/61	W.F.	1	44.2	42.0	42.8	43.0	+0.2	12.4	11.5	11.9	11.9	0.0	132	93	110	110	0	352	264	303	305	+2	416	320	350 ^a	407	+57
7/ 2/61	W.F.	1	46.0	43.8	44.6	44.3	-0.3	13.2	12.1	12.7	12.8	+0.1	128	80	106	107	+1	376	272	315 ^a	342	+27	440	336	383 ^a	441	+56
7/ 4/61	W.F.	1	44.0	42.2	43.2	42.9	-0.3	12.0	11.0	11.7	11.8	+0.1	121	98	107	107	0	328	256	287 ^a	291	+4	384	280	325 ^a	392	+67
7/ 1/61	W.F.	1	44.0	42.0	43.0	42.6	-0.4	12.3	11.0	11.7	11.8	+0.1	119	90	106	108	+2	328	240	288 ^a	312	+24	408	304	360 ^a	393	+33
7/11/61	W.F.	1	45.0	42.6	44.0	43.5	-0.5	12.9	11.8	12.4	12.4	0.0	122	102	111	110	-1	360	248	306	316	+10	416	296	362 ^a	411	+49
Current Mill Average:			43.4	43.4	43.4	43.4	0.0	12.2	12.2	12.2	12.2	0.0	110	110	110	110	0	304	304	304	324	+17	364	364	364	418	+54
Cumulative Mill Average:			43.4	43.4	43.4	43.4		12.5	12.5	12.5	12.5		109	109	109	109		315	315	315	315		363	363	363	418	
Mill Factor, %			100.0	100.0	100.0	100.0		97.6	97.6	97.6	97.6		100.9	100.9	100.9	100.9		96.5	96.5	96.5	96.5		100.3	100.3	100.3	97.6	
Mill Index, %			100.0	100.0	100.0	100.0		96.8	96.8	96.8	96.8		100.0	100.0	100.0	100.0		91.8	91.8	91.8	91.8		97.6	97.6	97.6	97.6	

TABLE XIV
SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL K -- 42-LB. LINERBOARD

No samples submitted.

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

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

TABLE XV

SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL L -- 42-1B. LINERBOARD

Date Made	Finish	Mch. No.	Basis Weight, lb.			Caliber, points			Bursting Strength, p.s.i.			Elmendorf Tear, g./sheet			Elmendorf Tear, g./sheet												
			Institute		Mill	Institute		Mill	Institute		Mill	Institute		Mill	Institute		Mill										
			Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Diff.						
6/23/61	WFLS	2	44.2	42.2	43.4	43.0	-0.4	13.6	12.4	12.9	12.3	-0.6	139	91	118	106	-12	392	280	339 ^a	326	-13	408	328	379 ^a	409	+30
6/25/61	WFLS	2	44.2	42.8	43.8	43.3	-0.5	13.9	12.8	13.4	12.9	-0.5	132	98	109	106	-3	392	280	329 ^a	319	-10	416	344	377 ^a	415	+38
6/27/61	WFLS	2	44.2	42.2	43.4	42.6	-0.8	13.8	12.3	13.1	12.3	-0.8	138	80	112	107	-5	368	312	346 ^a	305	-41	464	336	391 ^a	387	-4
6/28/61	----	2	44.8	43.8	44.2	43.0	-1.2	13.3	12.1	12.5	12.1	-0.4	133	71	111	110	-1	424	312	363 ^a	370	+7	472	344	385 ^a	413	+28
6/28/61	WFLS	2	44.0	42.4	43.0	42.6	-0.4	13.2	12.1	12.6	12.5	-0.1	137	86	108	108	0	376	304	333 ^a	323	-10	432	336	380 ^a	397	+17
6/28/61	WFLS	2	44.4	42.2	43.6	43.1	-0.5	14.3	13.4	13.9	13.0	-0.9	130	88	105	111	+6	400	296	346 ^a	351	+5	408	328	373 ^a	409	+36
7/7/61	WFLS	2	46.0	43.2	44.8	42.8	-2.0	13.7	12.7	13.1	12.6	-0.5	136	89	113	106	-7	424	312	360 ^a	333	-27	464	360	389 ^a	414	+25
Current Mill Average:			43.8	42.9	-0.9	13.1	12.5	-0.6	111	108	-3	345	332	-13	382	406	+24										
Cumulative Mill Average:			43.4			12.9			111			320			365												
Mill Factor, %			100.9			101.6			100.0			107.8			104.7												
Mill Index, %			100.9			104.0			100.9			104.2			102.4												

TABLE XVI

SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL M -- 42-1B. LINERBOARD

No samples submitted

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

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

TABLE XVII
SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL N -- 42-LB. LINERBOARD

Date Made	Finish	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gauge			Elmendorf Tear, g./sheet in Machine			Elmendorf Tear, g./sheet Cross Machine		
			Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
			Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute
			Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.

No samples submitted.

TABLE XVIII
SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL O -- 42-LB. LINERBOARD

Date Made	Finish	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gauge			Elmendorf Tear, g./sheet in Machine			Elmendorf Tear, g./sheet Cross Machine		
			Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
			Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute	Institute
			Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.	Diff.
6/4/61	----	1	43.4	41.6	42.3	42.7	-0.4	13.5	11.9	12.5	12.1	-0.4	148	89	114	114	0
6/12/61	----	1	44.2	43.0	43.9	43.8	-0.1	14.2	12.5	13.5	12.9	-0.6	138	95	114	114	0
6/12/61	----	1	43.6	41.6	43.0	43.0	0.0	14.2	12.1	13.2	12.6	-0.6	132	88	111	110	-1
6/14/61	----	1	45.8	43.8	44.6	43.4	-1.2	14.0	12.9	13.3	12.9	-0.4	130	80	106	107	+1
6/14/61	----	1	46.2	43.8	45.0	44.2	-0.8	14.1	13.1	13.6	13.0	-0.6	128	79	106	110	+4
Current Mill Average:			43.8	43.4	-0.4	13.2	12.7	-0.5	110	111	+1	327	310	-17	378	402	+24
Cumulative Mill Average:			43.4			13.0			109			325			372		
Mill Factor, %			100.9			101.5			100.9			100.6			101.6		
Mill Index, %			100.9			104.8			100.0			96.8			101.3		

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

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

TABLE XIX
SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL P -- 42-LB. LINERBOARD

Date Made	Mch. No.	Finish	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet In Machine			Elmendorf Tear, g./sheet Cross Machine												
			Institute		Mill	Institute		Mill	Institute		Mill	Institute		Mill	Institute		Mill										
			Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.										
6/28/61	-	W.F.	44.2	43.2	43.9	43.3	-0.6	13.0	12.0	12.4	12.0	-0.4	129	94	109	112	+3	440	312	362 ^a	405	+43	464	368	405 ^a	400	-5
7/ 3/61	-	W.F.	44.8	43.6	44.2	43.9	-0.3	13.3	12.2	12.8	12.5	-0.3	138	92	111	113	+2	432	304	355 ^a	413	+58	480	368	414 ^a	421	+7
7/ 3/61	-	W.F.	44.6	42.6	44.0	43.7	-0.3	13.0	11.2	12.1	11.9	-0.2	139	100	117	110	-7	376	296	332 ^a	409	+77	472	360	412 ^a	439	+27
7/ 6/61	-	W.F.	45.8	43.8	44.3	43.2	-1.1	12.9	11.9	12.3	12.2	-0.1	141	96	112	110	-2	400	312	349 ^a	373	+24	456	336	401 ^a	409	+8
7/ 6/61	-	W.F.	45.8	43.4	44.4	44.3	-0.1	12.7	11.2	12.0	12.1	+0.1	126	81	106	109	+3	512	328	386 ^a	412	+26	472	376	431 ^a	433	+2
7/16/61	-	W.F.	45.2	44.0	44.5	44.0	-0.5	12.8	11.4	12.2	12.0	-0.2	139	87	116	120	+4	384	304	351 ^a	379	+28	448	328	391 ^a	429	+38
Current Mill Average:			44.2		43.7	43.7	-0.5	12.3	12.1	12.1	12.1	-0.2	112	112	112	112	0	356	304	356	399	+43	409	328	409	422	+13
Cumulative Mill Average:			43.7					12.7					108					366					404				
Mill Factor, %			101.1					96.9					103.7					97.3					101.2				
Mill Index, %			101.8					97.6					101.8					107.6					109.7				

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

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

TABLE XX

SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL Q -- 42-1B, LINERBOARD

Date Made	Finish	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, P.S.I. Gage			Elmendorf Tear, g./sheet			Elmendorf Tear, g./sheet																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

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

TABLE XXI
SUMMARY OF INSTITUTE AND MILL DATA
July, 1961

MILL S -- 42-LB. LINERBOARD

Date Made	Mch. Finish	Basis Weight, lb.				Caliper, points				Bursting Strength, P.s.i. Edge				Elmendorf Tear, g./sheet													
		Institute		Mill Av.	Diff.	Institute		Mill Av.	Diff.	Institute		Mill Av.	Diff.	Institute		Mill Av.	Diff.										
		Max.	Min.			Max.	Min.			Max.	Min.			Max.	Min.												
6/16/61	W.F.	3	44.0	41.8	43.1	43.6	+0.5	11.8	10.8	11.4	11.2	-0.2	125	82	110	108	-2	368	272	326 ^a	317	-9	400	320	362 ^a	366	+4
6/24/61	W.F.	3	44.0	42.8	43.7	43.4	-0.3	11.8	11.1	11.4	11.1	-0.3	128	90	115	109	-6	384	288	340 ^a	335	-5	384	336	364 ^a	383	+19
6/25/61	W.F.	3	44.0	42.4	43.4	43.6	+0.2	11.5	10.9	11.2	11.2	0.0	122	90	112	110	-2	368	264	315	297	-18	416	328	369 ^a	358	-11
Current Mill Average:					43.4	+3.5	+0.1			11.3	11.2	-0.1			112	109	-3			327	317	-10			365	369	+4
Cumulative Mill Average:					44.0					11.8					111					338					376		
Mill Factor, %					98.6					95.8					100.9					96.7					97.1		
Mill Index, %					100.0					89.7					101.8					96.8					97.9		

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

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

TABLE XIII
SUMMARY OF INSTITUTE AND MILL DATA
July, 1961
MILL T - 42-LB. LINERBOARD

Date Made	Mch. No.	Finish	Basis Weight, lb.			Caliper, Points			Bursting Strength, P.s.i. gage			Elmendorf Tear, g./sheet		
			Institute	Max. Min.	Av.	Institute	Max. Min.	Av.	Institute	Max. Min.	Av.	Institute	Max. Min.	Av.
6/27/61	1	WFLS	43.6	41.8	42.4	43.2	+0.8		13.1	11.9	12.4	12.5	+0.1	
6/30/61	1	WFLS	43.8	42.0	42.7	43.4	+0.7		13.2	11.8	12.5	12.6	+0.1	
Current Mill Average			42.6	43.3	+0.7				12.5	12.6	+0.1			
Cumulative Mill Average:			43.2						12.8					
Mill Factor, %			98.6						97.7					
Mill Index, %			96.2						99.2					
									111	107	107	111	107	107
									111	107	107	111	107	107
									100.0			100.0		
									100.9			100.9		
									396	396	396	396	396	396
									393			393		
									415	415	415	415	415	415
									440	440	440	440	440	440
									334	334	334	334	334	334
									325 ^a	325 ^a	325 ^a	325 ^a	325 ^a	325 ^a
									392	264	325 ^a	392	264	325 ^a
									396	414	396	396	414	396
									393			393		
									100.8			100.8		
									106.2			106.2		

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

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

include for each test (1) the average result obtained on each sample lot of linerboard and (2) a current mill average (calculated at the Institute) that represents the average of the averages obtained on the individual sample lots of linerboard evaluated at the mills during the current period. In addition to the presentations of Institute and mill data described above, Tables IV through XXII also include under each test heading a column labeled "Diff." This column shows the differences between averages obtained at the Institute and those obtained at the mills. The data obtained at the Institute are used as the reference in calculating these differences.

The average test results obtained at the Institute and at the mills are summarized in Table XXIII. Shown in Table XXIII for each mill is the difference for each test between the current mill average based on Institute data and the current mill average based on mill data. In addition, for each test the maximum difference encountered in comparing Institute and mill averages for individual sample lots is shown. In Table XXIV, the difference for each test between current mill average based on Institute data and that based on mill data has been converted to per cent (based on Institute data as a reference). Corresponding data for the two preceding periods are shown.

A summary of the agreement obtained in the comparisons of Institute and mill test data for the current period is shown in Table XXV. This summary is based on the results given in Table XXIV. The tabulated data show the number of mills, and the percentage of all mills which this number represents, whose average test results for the current period fall within designated percentages from the average test results obtained at the Institute. It may

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

Mills ^a		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	S	T	
No. of Samples Compared		7	6	8	10	1	2	6	6	5	8	0	7	0	0	5	6	7	3	2	
		Basis Weight																			
		Caliber																			
Institute		43.1	42.6	43.4	42.5	44.1	43.6	43.7	43.2	42.9	43.4	--	43.8	--	--	43.8	44.2	43.3	43.4	42.6	
Mill		42.7	42.6	42.5	42.0	42.9	43.2	43.4	43.1	42.8	43.4	--	42.9	--	--	43.4	43.7	42.7	43.5	43.3	
Av. Diff. ^b		-0.4	0.0	-0.9	-0.5	-1.2	-0.4	-0.3	-0.1	-0.1	0.0	--	-0.9	--	--	-0.4	-0.5	-0.6	+0.1	+0.7	
Max. Diff. ^c		-1.0	+0.6	-1.5	-0.7	-1.2	-0.5	-1.0	-0.5	-0.5	+0.6	--	-2.0	--	--	-1.2	-1.1	-0.8	+0.5	+0.8	
		Bursting Strength																			
Institute		12.0	13.0	12.5	12.1	12.7	12.4	12.6	12.0	13.6	12.2	--	13.1	--	--	13.2	12.3	12.0	11.3	12.5	
Mill		11.7	12.9	12.2	12.1	12.6	12.4	12.2	11.9	13.1	12.2	--	12.5	--	--	12.7	12.1	11.8	11.2	12.6	
Av. Diff. ^b		-0.3	-0.1	-0.3	0.0	-0.1	0.0	-0.4	-0.1	-0.5	0.0	--	-0.6	--	--	-0.5	-0.2	-0.2	-0.1	+0.1	
Max. Diff. ^c		-0.5	+0.2	-0.7	-0.2	-0.1	-0.1	-0.6	-0.2	-0.7	-0.7	--	-0.9	--	--	-0.6	-0.4	-0.4	-0.3	+0.1	
		Tearing Strength, in																			
Institute		109	105	114	114	100	113	104	114	112	110	--	111	--	--	110	112	116	112	111	
Mill		107	110	118	112	103	108	109	115	111	110	--	108	--	--	111	112	111	109	107	
Av. Diff. ^b		-2	+1	+4	-2	+3	-5	+5	+1	-1	0	--	-3	--	--	+1	0	-5	-3	-4	
Max. Diff. ^c		-5	+11	+6	-10	+3	-8	+8	+4	-4	-4	--	-12	--	--	+4	-7	-8	-6	-5	
		Tearing Strength, across																			
Institute		368	324	319	235	374	345	372	313	299	304	--	345	--	--	327	356	321	327	314	
Mill		371	328	284	254	353	340	--	326	284	321	--	332	--	--	310	399	328	317	334	
Av. Diff. ^b		+3	+4	-35	-31	-21	-5	--	+13	-15	+17	--	-13	--	--	-17	+43	+7	-10	+20	
Max. Diff. ^c		+26	+17	-57	-44	-21	-21	--	+38	-29	+27	--	-41	--	--	-36	+77	+17	-18	+31	
		Tearing Strength, across																			
Institute		406	338	354	327	406	355	406	345	358	364	--	382	--	--	378	409	383	365	396	
Mill		435	368	329	337	403	373	--	373	354	418	--	406	--	--	402	422	410	369	414	
Av. Diff. ^b		+29	+30	-25	+10	-3	+18	--	+28	-4	+54	--	+24	--	--	+24	+13	+27	+4	+18	
Max. Diff. ^c		+52	+46	-51	+25	-3	+27	--	+41	-14	+70	--	+38	--	--	+43	+38	+38	+19	+20	

^a Comparison based on averages involved only those samples on which mill test data were submitted.

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

c 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 Difference, Per Cent

Mill	Period	Basis Weight	Bursting Strength	Tear, in	Tear, across	Cali-per	Bursting Strength	Tear, in	Tear, across
A	Current	-0.9	-2	+0.8	+7	-	-	-	-
	171st	-0.7	+4	+1	+4	-	-	-	-
	170th	-0.7	+2	-4	+2	-	-	-	-
B	Current	0	+0.9	+1	+9	-5	-3	-4	+6
	171st	+0.7	+6	+1	+16	-2	+0.9	+2	+10
	170th	+0.2	+6	+0.6	+10	-4	+2	+6	+11
C	Current	-2	+4	-11	-7	-	-	-	-
	171st	-0.2	+5	-9	-5	-	-	-	-
	170th	-0.5	+0.9	-12	-7	-	-	-	-
D	Current	-1	-2	-11	+3	-	-	-	-
	171st	-0.5	-3	-13	+2	-2	0	+9	+12
	170th	-0.5	0	-12	+0.9	-2	+2	+2	+5
E	Current	-3	+3	-6	-0.7	-4	+0.9	-5	+6
	171st	-0.5	+7	-4	-0.8	-5	+5	-9	+1
	170th	+1	+2	-4	+0.3	-2	-2	-6	+1
F	Current	-0.9	-4	-1	+5	-2	0	+12	+3
	171st	0	-3	-3	+3	-4	+4	+5	+0.5
	170th	+0.9	-0.9	-2	0	-4	+0.9	+2	-0.5
G	Current	-0.7	+5	-	-	-2	-4	+2	+7
	171st	-0.5	+4	-	-	-2	+2	+2	+5
	170th	+0.2	+3	-	-	-2	-0.9	-14	+0.8
H	Current	-0.2	+0.9	+4	+8	-0.9	-3	-3	+1
	171st	0	+5	+15	+9	-3	+0.9	+1	+6
	170th	+0.2	+0.9	+3	+0.8	-3	+3	-2	+4
I	Current	-0.2	-0.9	-5	-1	+0.8	-4	+6	+5
	171st	+0.2	+0.9	+1	+10	-0.8	-0.9	+5	+6
	170th	+0.5	+3	+3	+6	0	0	+0.9	+5
J	Current	0	0	+6	+15	-0.8	-2	+6	+5
	171st	+0.7	0	+2	+7	-0.8	0	+5	+6
	170th	+0.7	-2	+6	+8	-0.8	0	+0.9	+5

TABLE XXV
SUMMARY OF AGREEMENT BETWEEN INSTITUTE AND MILL RESULTS

Average Percentage Difference Between Institute and Mill Test Results											
	+0.5	+1	+2	+3	+4	+5	+7.5	+10		+15	
Basis weight											
Number of mills	5	12	15	16							
Percentage of all mills	31.2	75.0	93.8	100.0							
Caliper											
Number of mills	3	8	12	13	15	16					
Percentage of all mills	18.8	50.0	75.0	81.2	93.8	100.0					
Bursting strength											
Number of mills	2	6	8	11	15	16					
Percentage of all mills	12.5	37.5	50.0	68.8	93.8	100.0					
Tearing strength, in											
Number of mills	0	3	4	5	7	9	12	12	15		
Percentage of all mills	0.0	20.0	26.7	33.3	46.7	60.0	80.0	80.0	100.0		
Tearing strength, across											
Number of mills	0	3	3	5	5	7	12	14	15		
Percentage of all mills	0.0	20.0	20.0	33.3	33.3	46.7	80.0	93.3	100.0		

be noted from this summary that agreement between the results obtained at the Institute and those obtained at the mills was generally very good.

Preconditioning and conditioning data pertinent to the test results obtained at the mills are given in Table XXVI.

TABLE XXVI
PRECONDITIONING AND CONDITIONING DATA FOR MILL TESTS

Mill Code	Relative Humidity, %	Temperature, °F.	Time, hr.	Relative Humidity, %	Temperature, °F.	Time, hr.
A		No preconditioning.		52-64	69-73	48
B	50	72	24	No conditioning.		
C	34-35	76-77	8	48-52	72	16
D		No preconditioning.		76-86	85-96	--
E	50	72	24	No conditioning.		
F		No preconditioning.		50	73	24
G		No preconditioning.		50	73	24
H		No preconditioning.		50	73	24
I	40-68	76-82	0.5	50	73	24--48
J	50	73	24	50	73	24
K		No samples submitted.				
L	50	72	120	50	70-72	120-288
M		No samples submitted.				
N		No samples submitted.				
O	50	70	48	50	70	3
P	55-59	72-73	48	50	73	--
Q	50	73	24	50	73	24
S		No preconditioning.		50	73	24
T		No preconditioning.		55-57	72-73	--

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