

INSTITUTE OF
PAPER CHEMISTRY
Appleton, Wisconsin

CONTINUOUS BASE LINE STUDY OF DUPED OMIDYNEROMETER DATA FOR JANUARY AND FEBRUARY, 1970

Project 4634

Report Sixty-One

A Progress Report

to

FOURDRINIER KRAFT BOARD GROUP

of

AMERICAN PAPER INSTITUTE

April, 1970

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

CONTINUOUS BASE-LINE STUDY (MODIFIED)
(MILL LINERBOARD DATA FOR JANUARY AND FEBRUARY, 1977)

Project 2694-1

Report Sixty-one

A Progress Report

to

FOURDRINIER KRAFT BOARD GROUP

of The

AMERICAN PAPER INSTITUTE

Information contained herein is furnished for your internal use only and is not to be disseminated or disclosed outside your company nor copied or otherwise reproduced without the express written permission of The Institute of Paper Chemistry

April 27, 1977

TABLE OF CONTENTS

		Page
SUMMARY		1
INTRODUCTION		5
PRESENTATION OF DATA		5
Presentations (Tables):		
Table I-II	26-Lb Linerboard, Monthly Averages of Mill Data	6-7
Table III-IV	33-Lb Linerboard, Monthly Averages of Mill Data	8-9
Table V-VI	38-Lb Linerboard, Monthly Averages of Mill Data	10-11
Table VII-VIII	42-Lb Linerboard, Monthly Averages of Mill Data	12-13
Table IX-X	69-Lb Linerboard, Monthly Averages of Mill Data	14-15
Table XI-XII	90-Lb Linerboard, Monthly Averages of Mill Data	16-17
Table XIII	Data on Conditioning and Testing Environments	19
APPENDIX. NOTES A, B, C, AND D USED IN TABULATION OF MILL DATA		21

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

CONTINUOUS BASE-LINE STUDY (MODIFIED)
(MILL LINERBOARD DATA FOR JANUARY AND FEBRUARY, 1977)

SUMMARY

PART I: SUMMARY OF MOISTURE CONTENT DATA (NOVEMBER, 1976-FEBRUARY, 1977)

Linerboard Grade Wt.		Moisture Content			
		November	December	January	February
26 Lb	Max.[a]	6.2	6.1	5.8	6.3
	Min.[a]	0.3	2.9	2.7	2.7
	Av.[b]	4.2 (22)	4.5 (17)	4.6 (16)	4.8 (16)
33 Lb	Max.[a]	6.3	5.9	6.0	6.3
	Min.[a]	2.0	2.7	2.4	2.5
	Av.[b]	4.5 (24)	4.8 (24)	4.6 (25)	4.8 (25)
38 Lb	Max.[a]	6.0	5.9	5.9	6.3
	Min.[a]	2.2	4.1	2.5	2.5
	Av.[b]	4.8 (20)	5.0 (18)	4.8 (20)	5.0 (24)
42 Lb	Max.[a]	6.7	6.7	6.7	6.8
	Min.[a]	2.5	3.0	2.9	2.7
	Av.[b]	5.2 (46)	5.2 (43)	5.2 (44)	5.2 (42)
69 Lb	Max.[a]	7.9	7.9	8.0	7.9
	Min.[a]	3.7	3.9	3.7	3.7
	Av.[b]	6.0 (31)	5.9 (30)	5.7 (31)	6.0 (32)
90 Lb	Max.[a]	7.1	7.7	7.2	7.1
	Min.[a]	5.3	3.9	3.9	4.0
	Av.[b]	6.2 (12)	5.9 (15)	6.1 (13)	6.0 (15)

[a] Current machine average.

[b] Current FKBG average, number of machines is indicated in parentheses.

PART II: SUMMARY OF ADJUSTED BASIS WEIGHT DATA (NOVEMBER, 1976-FEBRUARY, 1977)

Linerboard Grade Wt.		Adjusted Basis Weight, lb/M ft^2 November	December	January	February
26 Lb	Max.[a]	27.8	27.6	27.5	27.1
	Min.[a]	25.7	25.7	26.1	25.8
	Av.[b]	26.7 (22)	26.7 (17)	26.7 (16)	26.5 (16)
33 Lb	Max.[a]	34.8	34.4	34.4	36.7
	Min.[a]	32.4	32.6	33.1	32.7
	Av.[b]	33.5 (24)	33.5 (24)	33.6 (25)	33.7 (25)
38 Lb	Max.[a]	40.1	39.3	42.1	39.6
	Min.[a]	37.9	37.5	37.9	37.9
	Av.[b]	38.7 (20)	38.6 (18)	38.8 (20)	38.6 (24)
42 Lb	Max.[a]	44.5	43.1	44.8	44.5
	Min.[a]	41.4	41.4	41.6	41.5
	Av.[b]	42.6 (46)	42.5 (43)	42.5 (44)	42.6 (42)
69 Lb	Max.[a]	70.6	70.6	71.0	70.3
	Min.[a]	68.2	67.5	68.1	68.4
	Av.[b]	69.6 (31)	69.6 (30)	69.7 (31)	69.6 (32)
90 Lb	Max.[a]	91.9	91.7	91.6	92.0
	Min.[a]	89.7	88.3	88.5	90.1
	Av.[b]	90.8 (12)	90.6 (15)	90.6 (13)	90.9 (15)

[a] Current machine average.

[b] Current FKBG average, number of machines is indicated in parentheses.

PART III: SUMMARY OF CALIPER DATA
(NOVEMBER, 1976-FEBRUARY, 1977)

Linerboard Grade Wt.		Caliper, pt. November	December	January	February
26 Lb	Max.[a]	9.1	9.3	8.5	8.9
	Min.[a]	7.1	6.6	7.2	7.0
	Av.[b]	7.8 (20)	7.8 (16)	7.9 (14)	8.0 (15)
33 Lb	Max.[a]	10.7	10.6	10.6	11.6
	Min.[a]	9.0	9.0	8.3	8.1
	Av.[b]	9.9 (23)	9.9 (22)	9.7 (24)	9.8 (24)
38 Lb	Max.[a]	11.9	12.0	12.8	12.1
	Min.[a]	10.0	9.9	9.9	10.2
	Av.[b]	10.9 (19)	11.0 (17)	11.0 (19)	10.8 (23)
42 Lb	Max.[a]	13.2	13.4	14.3	14.3
	Min.[a]	10.9	10.8	10.6	10.4
	Av.[b]	11.9 (45)	12.0 (42)	12.0 (43)	12.0 (42)
69 Lb	Max.[a]	21.6	21.9	22.0	23.1
	Min.[a]	17.5	17.6	17.7	18.1
	Av.[b]	19.6 (31)	19.7 (30)	19.6 (31)	19.8 (32)
90 Lb	Max.[a]	26.7	26.7	26.8	26.8
	Min.[a]	23.9	23.6	23.9	23.6
	Av.[b]	25.4 (12)	25.4 (15)	25.4 (13)	25.3 (15)

[a] Current machine average.

[b] Current FKBG average, number of machines is indicated in parentheses.

PART IV: SUMMARY OF BURSTING STRENGTH DATA (NOVEMBER, 1976-FEBRUARY, 1977)

Linerboard Grade Wt.		Bursting Strength, psig			
		November	December	January	February
26 Lb	Max.[a]	82	80	75	76
	Min.[a]	65	65	64	64
	Av.[b]	71 (22)	71 (17)	70 (16)	71 (16)
33 Lb	Max.[a]	104	93	99	97
	Min.[a]	77	77	78	79
	Av.[b]	86 (24)	84 (24)	86 (25)	86 (25)
38 Lb	Max.[a]	106	110	106	105
	Min.[a]	90	86	91	87
	Av.[b]	96 (20)	96 (18)	97 (20)	97 (24)
42 Lb	Max.[a]	118	117	119	115
	Min.[a]	99	98	97	96
	Av.[b]	105 (46)	105 (43)	105 (44)	105 (42)
69 Lb	Max.[a]	150	159	155	156
	Min.[a]	133	132	132	132
	Av.[b]	142 (31)	142 (30)	141 (31)	142 (32)
90 Lb	Max.[a]	183	191	181	185
	Min.[a]	160	158	160	161
	Av.[b]	172 (12)	171 (15)	170 (13)	173 (15)

[a] Current machine average.

[b] Current FKBG average, number of machines is indicated in parentheses.

INTRODUCTION

The continuous base-line study (modified) is a compilation of monthly averages of mill test data obtained routinely on six major grade weights of linerboard manufactured in the member mills of F.K.B.G. Mill data are included for moisture content, basis weight, caliper, and bursting strength tests made on the production of individual machines which produced at least 500 tons of one or more of the following six major grade weights during a given month: 26, 33, 38, 42, 69, and 90 lb. At the Institute, the as-reported basis weight, corresponding to the as-reported moisture content, is adjusted to a moisture content of 7.8%. Both the as-reported and the adjusted basis weight averages are included in the report. Note that the moisture content at the as-reported basis weight (not shown in tables) does not necessarily agree with the moisture content indicated in the report as measured at the reel. This is because some mills measure their basis weight at other than reel or standard conditions. The as-reported basis weight is included in the tables for reference only and should not be used for comparison purposes.

PRESENTATION OF DATA

For the six major grade weights of linerboard referred to earlier, mill test averages for moisture content, basis weight (reported and adjusted), caliper, and bursting strength are compiled in the following tables.

Table Number	Description
I - II	Mill Test Averages on 26-lb Linerboard
III - IV	Mill Test Averages on 33-lb Linerboard
V - VI	Mill Test averages on 38-lb Linerboard
VII - VIII	Mill Test Averages on 42-lb Linerboard
IX - X	Mill Test Averages on 69-lb Linerboard
XI - XII	Mill Test Averages on 90-lb Linerboard

TABLE I

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 26 LB FOURDRINIER KRAFT LINERBOARD

JANUARY, 1977

	MOISTURE CONTENT, PERCENT				BASIS WT., LB / M SQ FT				ADJ. BASIS WT.,*A LB / M SQ FT				CALIPER, PT				BURSTING STRENGTH, P S I G			
		MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA		
CODE	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1		4.0				26.1				27.2				7.3				76		
B1		5.8				26.2				26.3				8.3				73		
D1		3.5				26.7				27.1				7.9				75		
E1	2.7	2.3	117.4	61.4	25.3	25.2	100.4	97.3	26.7	26.7	100.0	100.0	8.1	8.2	98.8	101.2	75	74	101.4	104.2
H1	4.9	4.5	108.9	111.4	26.1	25.7	101.6	100.4	26.9	26.7	100.7	100.7	8.0	7.9	101.3	100.0	68	70	97.1	94.4
I1		4.1				25.4				26.4				7.2				69		
J1	3.8	2.8	135.7	86.4	26.7	26.8	99.6	102.7	26.8	26.8	100.0	100.4	7.2	7.7	93.5	90.0	70	71	98.6	97.2
M1	4.3	4.6	93.5	97.7	25.6	25.6	100.0	98.5	26.6	26.5	100.4	99.6	7.3	7.2	101.4	91.2	68	68	100.0	94.4
O1		4.3				26.5				27.5				8.4				66		
P1		4.8				25.8				26.6				8.6				77		
R1		6.5				26.2				26.2				8.2				74		
S1	5.1	5.0	102.0	115.9	26.3	26.2	100.4	101.2	27.1	26.9	100.7	101.5	8.0	8.4	95.2	100.0	68	71	95.8	94.4
T1	5.3	5.4	98.1	120.4	26.8	26.6	100.8	103.1	27.5	27.3	100.7	103.0	7.8	7.4	105.4	97.5	64	65	98.5	88.9
U1	4.0	4.0	100.0	90.9	26.0	26.0	100.0	100.0	27.1	27.1	100.0	101.5	7.5	7.8	96.2	93.8	71	78	91.0	98.6
V1		4.9				26.1				26.9				9.0				71		
Y1	5.8	5.9	98.3	131.8	26.1	25.9	100.8	100.4	26.2	26.0	100.8	98.1					69	74	93.2	95.8
C2		6.3				26.0				26.0				7.7				78		
F2		4.8				26.1				27.0				8.0				70		
G2		5.3				27.1				27.2				8.5				66		
H2	4.5	3.9	115.4	102.3	25.5	25.3	100.8	98.1	26.4	26.4	100.0	98.9	8.1	7.8	103.8	101.2	72	80	90.0	100.0
K2		5.5				25.6				26.2				7.6				68		
L2	4.4	4.4	100.0	100.0	26.3	26.2	100.4	101.2	26.4	26.3	100.4	98.9	8.1	8.0	101.2	101.2	71	72	98.6	98.6
O2	4.8	5.0	96.0	109.1	25.5	25.6	99.6	98.1	26.3	26.4	99.6	98.5	8.0	7.8	102.6	100.0	70	72	97.2	97.2
P2	5.1	5.2	98.1	115.9	25.4	25.9	98.1	97.7	26.1	26.0	100.4	97.8	8.0	7.7	103.9	100.0	69	70	98.6	95.8
Q2	4.4	3.8	115.8	100.0	26.0	25.9	100.4	100.0	27.0	27.0	100.0	101.1	7.8	7.9	98.7	97.5	72	70	102.8	100.0
S2	5.6	5.9	94.9	127.3	26.1	26.2	99.6	100.4	26.2	26.3	99.6	98.1					65	70	92.8	90.3
T2	5.4	4.9	110.2	122.7	26.0	25.7	101.2	100.0	26.7	26.5	100.8	100.0	8.5	8.7	97.7	106.2	70	71	98.6	97.2
U2	3.6	3.8	94.7	81.8	27.4	27.2	100.7	105.4	27.5	27.3	100.7	103.0	8.0	8.0	100.0	100.0	71	74	95.9	98.6
W2		0.4				25.2				27.2				8.1				65		
A3		3.5				25.6				26.8				8.2				85		
FKBG DATA																				
CUR. AV.	4.6				26.1				26.7				7.9				70			
CUM. AV.	4.4				26.0				26.7				8.0				72			
IND. *D	104.5				100.4				100.0				98.8				97.2			

NOTE- NOTES A, B, C, AND D, ARE GIVEN IN APPENDIX.

TABLE II

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 26 LB FOURDRINIER KRAFT LINERBOARD

FEBRUARY, 1977

	MOISTURE CONTENT, PERCENT				BASIS WT., LB / M SQ FT				ADJ. BASIS WT.,*A LB / M SQ FT				CALIPER, PT				BURSTING STRENGTH, P S I G			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
CODE	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1		4.0				26.1				27.2				7.3				76		
B1		5.9				26.2				26.3				8.4				71		
D1		3.5				26.7				27.1				7.9				75		
E1	2.7	2.4	112.5	61.4	25.2	25.2	100.0	96.9	26.6	26.7	99.6	99.6	8.4	8.2	102.4	105.0	74	74	100.0	102.8
H1	4.9	4.6	106.5	111.4	25.8	25.8	100.0	99.2	26.6	26.7	99.6	99.6	7.8	7.9	98.7	97.5	70	70	100.0	97.2
I1		4.1				25.4				26.4				7.2				69		
J1		3.0				26.7				26.8				7.6				71		
M1	4.0	4.6	87.0	90.9	25.4	25.6	99.2	97.7	26.4	26.5	99.6	98.9	7.0	7.2	97.2	87.5	68	68	100.0	94.4
O1		4.3				26.4				27.4				8.4				66		
P1		5.5				25.8				26.4				8.5				75		
R1		6.5				26.2				26.2				8.2				74		
S1		5.0				26.2				26.9				8.4				70		
T1		5.4				26.6				27.3				7.5				65		
U1	4.1	4.0	102.5	93.2	26.1	26.0	100.4	100.4	27.1	27.1	100.0	101.5	8.8	7.8	112.8	110.0	69	77	89.6	95.8
V1	5.7	4.8	118.8	129.5	26.0	26.1	99.6	100.0	26.6	26.9	98.9	99.6	8.9	9.0	98.9	111.2	72	71	101.4	100.0
Y1	6.2	5.9	105.1	140.9	25.7	26.0	98.8	98.8	25.8	26.0	99.2	96.6					71	74	95.9	98.6
C2	6.3	6.3	100.0	143.2	26.0	26.0	100.0	100.0	26.0	26.0	100.0	97.4	7.0	7.7	90.9	87.5	72	78	92.3	100.0
F2		4.9				26.0				26.8				8.1				70		
G2		5.3				27.1				27.2				8.5				66		
H2	4.8	4.0	120.0	109.1	25.5	25.3	100.8	98.1	26.3	26.4	99.6	98.5	7.6	7.8	97.4	95.0	74	80	92.5	102.8
K2	5.3	5.5	96.4	120.4	25.8	25.5	101.2	99.2	26.5	26.2	101.1	99.2	8.1	7.6	106.6	101.2	64	69	92.8	88.9
L2	4.5	4.4	102.3	102.3	26.3	26.2	100.4	101.2	26.4	26.3	100.4	98.9	8.0	8.0	100.0	100.0	72	71	101.4	100.0
O2	5.2	4.9	106.1	118.2	25.8	25.6	100.8	99.2	26.5	26.4	100.4	99.2	8.2	7.8	105.1	102.5	69	72	95.8	95.8
P2	4.5	5.1	88.2	102.3	25.4	25.8	98.4	97.7	26.3	25.9	101.5	98.5	7.3	7.8	93.6	91.2	70	70	100.0	97.2
Q2	4.9	3.8	128.9	111.4	26.0	25.9	100.4	100.0	26.8	27.0	99.2	100.4	7.7	7.9	97.5	96.2	69	70	98.6	95.8
S2		5.7				26.1				26.2								69		
T2	5.4	5.1	105.9	122.7	25.9	25.7	100.8	99.6	26.6	26.4	100.8	99.6	8.8	8.6	102.3	110.0	72	70	102.8	100.0
U2	3.7	3.8	97.4	84.1	26.8	27.2	98.5	103.1	26.9	27.3	98.5	100.7	7.8	8.0	97.5	97.5	71	74	95.9	98.6
W2		0.4				25.2				27.2				8.1				65		
A3	4.0	3.5	114.3	90.9	25.6	25.6	100.0	98.5	26.6	26.8	99.2	99.6	8.5	8.2	103.6	106.2	76	85	89.4	105.6
FKBG DATA																				
CUR. AV.	4.8				25.8				26.5				8.0				71			
CUM. AV.	4.4				26.0				26.7				8.0				72			
IND. *D	109.1				99.2				99.2				100.0				98.6			

NOTE- NOTES A, B, C, AND D, ARE GIVEN IN APPENDIX.

TABLE III

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 33 LB FOURDRINIER KRAFT LINERBOARD

JANUARY, 1977

	MOISTURE CONTENT, PERCENT				BASIS WT., LB / M SQ FT				ADJ. BASIS WT.,*A LB / M SQ FT				CALIPER, PT				BURSTING STRENGTH, P S I G			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
CODE	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1		4.5				32.6				33.7				9.4				94		
B1		5.5				33.0				33.1				10.2				89		
D1		3.9				33.7				34.2				10.1				90		
E1	2.7	2.3	117.4	58.7	31.9	31.8	100.3	97.6	33.7	33.6	100.3	100.3	9.7	10.2	95.1	98.0	86	90	95.6	98.8
F1		5.3				33.0				33.9				9.3				82		
H1	4.8	5.0	96.0	104.3	32.6	32.6	100.0	99.7	33.7	33.5	100.6	100.3	9.9	10.0	99.0	100.0	80	84	95.2	92.0
I1		4.6				32.4				33.5				9.6				79		
J1	4.6	3.7	124.3	100.0	33.5	33.2	100.9	102.4	33.7	33.4	100.9	100.3	9.1	9.5	95.8	91.9	82	82	100.0	94.2
M1	4.9	5.0	98.0	106.5	32.5	32.5	100.0	99.4	33.5	33.5	100.0	99.7	9.4	9.5	98.9	94.9	82	81	101.2	94.2
O1		4.6				33.5				34.6				10.8				81		
P1	4.8	5.0	96.0	104.3	32.0	32.3	99.1	97.8	33.1	33.3	99.4	98.5	9.1	10.1	90.1	91.9	99	88	112.5	113.8
Q1		5.4				32.8				33.6				10.2				78		
R1		6.5				33.1				33.1				10.8				98		
S1	6.0	5.9	101.7	130.4	33.0	33.0	100.0	100.9	33.7	33.7	100.0	100.3	10.4	10.4	100.0	105.0	80	82	97.6	92.0
T1	5.2	5.4	96.3	113.0	33.0	33.0	100.0	100.9	33.9	33.8	100.3	100.9	9.7	9.3	104.3	98.0	78	79	98.7	89.6
U1	4.2	4.4	95.4	91.3	32.2	32.5	99.1	98.5	33.5	33.7	99.4	99.7	9.2	9.7	94.8	92.9	90	92	97.8	103.4
V1		5.0				33.0				34.0				10.1				88		
W1	5.8	5.8	100.0	126.1	32.6	32.6	100.0	99.7	33.3	33.4	99.7	99.1	9.4	9.6	97.9	94.9	89	86	103.5	102.3
X1	4.1	4.5	91.1	89.1	32.0	32.3	99.1	97.8	33.3	33.5	99.4	99.1	9.7	10.0	97.0	98.0	92	84	109.5	105.7
Y1	5.7	5.8	98.3	123.9	33.6	33.0	101.8	102.8	33.7	33.1	101.8	100.3					88	91	96.7	101.1
B2		3.8				33.0				34.4				10.1				82		
C2		6.3				32.8				32.8				9.8				102		
F2	5.2	5.3	98.1	113.0	32.8	33.1	99.1	100.3	33.7	34.0	99.1	100.3	10.6	10.2	103.9	107.1	80	83	96.4	92.0
G2	5.5	5.5	100.0	119.6	33.5	33.3	100.6	102.4	33.6	33.4	100.6	100.0	9.1	9.4	96.8	91.9	85	83	102.4	97.7
H2	3.9	4.1	95.1	84.8	32.2	32.0	100.6	98.5	33.6	33.2	101.2	100.0	9.3	9.2	101.1	93.9	93	101	92.1	106.9
K2		5.4				32.7				33.6				9.7				79		
L2	4.6	4.5	102.2	100.0	33.1	33.2	99.7	101.2	33.2	33.3	99.7	98.8	10.1	10.1	100.0	102.0	85	88	96.6	97.7
O2	5.0	5.0	100.0	108.7	32.7	32.5	100.6	100.0	33.7	33.5	100.6	100.3	10.5	10.4	101.0	106.1	79	81	97.5	90.8
P2	5.3	5.6	94.6	115.2	32.3	32.6	99.1	98.8	33.2	32.7	101.5	98.8	10.0	9.6	104.2	101.0	85	86	98.8	97.7
Q2	4.6	4.4	104.5	100.0	32.6	32.7	99.7	99.7	33.7	33.9	99.4	100.3	10.1	10.0	101.0	102.0	85	86	98.8	97.7
R2	5.7	5.8	98.3	123.9	33.2	33.2	100.0	101.5	33.3	33.3	100.0	99.1	9.5	10.5	90.5	96.0	88	88	100.0	101.1
S2		5.9				33.2				33.3								77		
U2	4.7	4.3	109.3	102.2	33.3	33.5	99.4	101.8	33.4	33.6	99.4	99.4	10.1	9.9	102.0	102.0	83	88	94.3	95.4
W2	2.4	1.7	141.2	52.2	31.6	31.5	100.3	96.6	33.5	33.5	100.0	99.7	10.0	10.2	98.0	101.0	80	84	95.2	92.0
Y2	3.3	3.6	91.7	71.7	34.1	33.8	100.9	104.3	34.4	34.2	100.6	102.4	9.9	9.5	104.2	100.0	81	80	101.2	93.1
A3	4.5	4.5	100.0	97.8	32.3	32.5	99.4	98.8	33.5	33.7	99.4	99.7	10.3	10.0	103.0	104.0	95	102	93.1	109.2
B3	5.3	0.0	0.0	115.2	32.8	0.0	0.0	100.3	33.7	0.0	0.0	100.3	9.8	0.0	0.0	99.0	87	0	0.0	100.0
C3	2.5	2.9	86.2	54.3	31.3	31.5	99.4	95.7	33.1	33.2	99.7	98.5	8.3	9.5	87.4	83.8	89	88	101.1	102.3
FKBG DATA																				
CUR. AV.	4.6				32.7				33.5				9.7				86			
CUM. AV.	4.6				32.7				33.6				9.9				87			
IND. *D	100.0				100.0				99.7				98.0				98.8			

NOTE- NOTES A, B, C, AND D, ARE GIVEN IN APPENDIX.

TABLE IV

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 33 LB FOURDRINIER KRAFT LINERBOARD

FEBRUARY, 1977

	MOISTURE CONTENT, PERCENT				BASIS WT., LB / M SQ FT				ADJ. BASIS WT.,*A LB / M SQ FT				CALIPER, PT				BURSTING STRENGTH, P S I G			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
CODE	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1		4.7				32.7				33.8				9.4				92		
B1		5.5				33.0				33.1				10.2				89		
D1		3.9				33.7				34.2				10.1				90		
E1	2.9	2.4	120.8	63.0	32.0	31.8	100.6	97.8	33.7	33.7	100.0	100.6	10.4	10.2	102.0	105.0	89	89	100.0	103.5
F1		5.4				33.0				33.8				9.3				80		
H1	5.0	5.0	100.0	108.7	32.5	32.6	99.7	99.4	33.5	33.6	99.7	100.0	9.7	10.0	97.0	98.0	81	84	96.4	94.2
I1		4.7				32.4				33.5				9.6				80		
J1	4.7	3.8	123.7	102.2	33.3	33.2	100.3	101.8	33.5	33.4	100.3	100.0	9.1	9.4	96.8	91.9	81	82	98.8	94.2
M1	4.9	5.0	98.0	106.5	32.5	32.5	100.0	99.4	33.5	33.5	100.0	100.0	9.2	9.4	97.9	92.9	82	81	101.2	95.3
O1	4.9	4.6	106.5	106.5	35.6	33.4	106.6	108.9	36.7	34.6	106.1	109.6	11.6	10.7	108.4	117.2	86	81	106.2	100.0
P1		4.9				32.2				33.2				9.8				90		
Q1		5.4				32.7				33.6				10.5				77		
R1		6.5				33.1				33.1				10.8				98		
S1	6.2	5.9	105.1	134.8	32.9	33.0	99.7	100.6	33.5	33.7	99.4	100.0	10.2	10.4	98.1	103.0	82	82	100.0	95.3
T1	5.5	5.4	101.8	119.6	33.1	33.0	100.3	101.2	33.9	33.8	100.3	101.2	9.9	9.3	106.4	100.0	79	79	100.0	91.9
U1	4.1	4.4	93.2	89.1	32.3	32.5	99.4	98.8	33.6	33.7	99.7	100.3	9.3	9.7	95.9	93.9	88	92	95.6	102.3
V1		5.0				33.0				34.0				10.1				88		
W1	5.3	5.8	91.4	115.2	32.5	32.6	99.7	99.4	33.4	33.4	100.0	99.7	9.8	9.6	102.1	99.0	86	86	100.0	100.0
X1		4.4				32.3				33.5				9.9				84		
Y1	6.0	5.8	103.4	130.4	33.0	33.0	100.0	100.9	33.1	33.1	100.0	98.8					83	90	92.2	96.5
B2		3.8				33.0				34.4				10.1				82		
C2	6.3	6.3	100.0	137.0	32.7	32.8	99.7	100.0	32.7	32.8	99.7	97.6	9.0	9.8	91.8	90.9	91	102	89.2	105.8
F2	4.9	5.3	92.4	106.5	32.7	33.0	99.1	100.0	33.7	33.9	99.4	100.6	10.4	10.2	102.0	105.0	81	82	98.8	94.2
G2		5.5				33.4				33.4				9.3				83		
H2	4.5	4.1	109.8	97.8	32.2	32.0	100.6	98.5	33.4	33.3	100.3	99.7	9.0	9.2	97.8	90.9	97	101	96.0	112.8
K2	5.4	5.4	100.0	117.4	32.5	32.7	99.4	99.4	33.3	33.6	99.1	99.4	10.2	9.7	105.2	103.0	79	79	100.0	91.9
L2	4.8	4.5	106.7	104.3	33.1	33.2	99.7	101.2	33.2	33.3	99.7	99.1	10.1	10.0	101.0	102.0	87	88	98.9	101.2
D2	4.9	5.0	98.0	106.5	32.7	32.5	100.6	100.0	33.7	33.5	100.6	100.6	10.3	10.4	99.0	104.0	93	80	116.2	108.1
P2	5.3	5.6	94.6	115.2	32.1	32.5	98.8	98.2	33.0	32.7	100.9	98.5	9.7	9.6	101.0	98.0	85	86	98.8	98.8
Q2	5.0	4.4	113.6	108.7	32.7	32.6	100.3	100.0	33.7	33.8	99.7	100.6	9.8	10.0	98.0	99.0	83	86	96.5	96.5
R2	5.8	5.8	100.0	126.1	33.5	33.2	100.9	102.4	33.8	33.3	101.5	100.9	9.7	10.4	93.3	98.0	92	88	104.5	107.0
S2		5.9				33.2				33.3								77		
U2	4.3	4.4	97.7	93.5	33.4	33.5	99.7	102.1	33.5	33.6	99.7	100.0	10.1	9.9	102.0	102.0	84	88	95.4	97.7
W2	2.5	1.8	138.9	54.3	32.0	31.5	101.6	97.8	33.8	33.5	100.9	100.9	10.7	10.1	105.9	108.1	81	83	97.6	94.2
Y2	3.4	3.6	94.4	73.9	34.3	33.9	101.2	104.9	34.6	34.2	101.2	103.3	9.4	9.6	97.9	94.9	82	80	102.5	95.3
A3	4.5	4.5	100.0	97.8	32.5	32.5	100.0	99.4	33.7	33.7	100.0	100.6	10.9	10.1	107.9	110.1	95	102	93.1	110.5
B3	5.2	5.3	98.1	113.0	32.8	32.8	100.0	100.3	33.7	33.7	100.0	100.6	9.4	9.8	95.9	94.9	89	87	102.3	103.5
C3	2.6	2.8	92.8	56.5	31.4	31.5	99.7	96.0	33.2	33.2	100.0	99.1	8.1	9.4	86.2	81.8	88	88	100.0	102.3
FKBG DATA																				
CUR. AV.	4.8				32.8				33.6				9.8				86			
CUM. AV.	4.6				32.7				33.5				9.9				86			
IND. *D	104.3				100.3				100.3				99.0				100.0			

NOTE- NOTES A, B, C, AND D, ARE GIVEN IN APPENDIX.

TABLE V

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 38 LB FOURDRINIER KRAFT LINERBOARD

JANUARY, 1977

	MOISTURE CONTENT, PERCENT				BASIS WT., LB / M SQ FT				ADJ. BASIS WT.,*A LB / M SQ FT				CALIPER, PT				BURSTING STRENGTH, P S I G			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
CODE	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1		5.4				37.8				38.7				10.7				102		
B1	5.4	5.5	98.2	108.0	37.9	38.0	99.7	100.0	38.0	38.1	99.7	98.2	11.4	11.6	98.3	103.6	95	100	95.0	97.9
D1		3.8				38.7				39.0				11.4				105		
E1	2.6	2.7	96.3	52.0	36.6	36.8	99.4	96.6	38.6	38.8	99.5	99.7	11.1	10.8	102.8	100.9	100	104	96.2	103.1
F1		6.3				38.6				39.2				10.3				94		
H1		5.0				37.7				38.8				11.3				93		
I1		4.1				37.0				38.4				11.2				89		
J1	4.6	4.0	115.0	92.0	38.8	38.3	101.3	102.4	39.0	38.5	101.3	100.8	10.2	11.0	92.7	92.7	98	95	103.2	101.0
L1	5.1	5.0	102.0	102.0	39.2	39.3	99.7	103.4	39.3	39.4	99.7	101.6	9.9	10.9	90.8	90.0	94	95	98.9	96.9
M1	4.7	5.2	90.4	94.0	37.3	37.4	99.7	98.4	38.6	38.5	100.2	99.7	11.0	10.9	100.9	100.0	92	92	100.0	94.8
P1		4.6				36.9				38.2				11.3				102		
Q1		5.4				37.4				38.3				11.2				88		
S1	5.9	6.0	98.3	118.0	38.0	38.0	100.0	100.3	38.8	38.7	100.2	100.2	10.5	10.8	97.2	95.4	91	93	97.8	93.8
U1	4.9	4.8	102.1	98.0	37.5	37.6	99.7	98.9	38.7	38.8	99.7	100.0	10.9	11.2	97.3	99.1	100	99	101.0	103.1
V1		4.6				38.0				39.3				12.0				102		
X1	4.1	4.6	89.1	82.0	37.1	37.3	99.5	97.9	38.6	38.6	100.0	99.7	11.3	11.4	99.1	102.7	94	94	100.0	96.9
Y1	5.4	5.8	93.1	108.0	37.8	38.0	99.5	99.7	37.9	38.1	99.5	97.9					98	99	99.0	101.0
A2		6.4				38.3				38.9				10.8				96		
B2	5.8	5.6	103.6	116.0	37.8	37.4	101.1	99.7	38.6	38.3	100.8	99.7	10.7	11.0	97.3	97.3	99	95	104.2	102.1
F2		5.4				37.6				38.6				11.3				92		
G2	5.3	5.8	91.4	106.0	38.4	38.4	100.0	101.3	38.5	38.5	100.0	99.5	10.8	10.7	100.9	98.2	94	96	97.9	96.9
H2	3.8	4.4	86.4	76.0	36.7	36.9	99.4	96.8	38.3	38.3	100.0	99.0	10.8	10.5	102.8	98.2	102	109	93.6	105.2
L2	4.7	4.9	95.9	94.0	38.2	38.2	100.0	100.8	38.3	38.3	100.0	99.0	11.5	11.3	101.8	104.5	99	98	101.0	102.1
M2	2.5	2.6	96.2	50.0	37.2	37.4	99.5	98.2	39.3	39.5	99.5	101.6	10.1	10.4	97.1	91.8	105	98	107.1	108.2
O2		4.9				37.4				38.6				11.4				92		
P2	5.3	5.9	89.8	106.0	37.1	38.2	97.1	97.9	38.1	38.3	99.5	98.4	11.6	11.0	105.4	105.4	95	95	100.0	97.9
Q2	4.8	4.8	100.0	96.0	37.6	37.7	99.7	99.2	38.8	39.0	99.5	100.2	11.5	11.3	101.8	104.5	95	97	97.9	97.9
R2	5.7	5.6	101.8	114.0	38.2	38.2	100.0	100.8	38.3	38.3	100.0	99.0	10.5	11.6	90.5	95.4	95	97	97.9	97.9
U2	4.9	4.9	100.0	98.0	39.2	39.0	100.5	103.4	39.3	39.1	100.5	101.6	11.2	10.9	102.8	101.8	101	98	103.1	104.1
V2		4.8				37.7				38.9				11.0				98		
W2	5.4			108.0	41.0			108.2	42.1			108.8	12.8			116.4	92			94.8
Z2		4.0				39.0				39.1				10.8				96		
A3	5.6	5.4	103.7	112.0	37.8	37.8	100.0	99.7	38.7	38.8	99.7	100.0	10.4	10.6	98.1	94.5	106	114	93.0	109.3
FKBG DATA																				
CUR. AV.	4.8				38.0				38.8				11.0				97			
CUM. AV.	5.0				37.9				38.7				11.0				97			
IND. *D	96.0				100.3				100.2				100.0				100.0			

NOTE- NOTES A, B, C, AND D, ARE GIVEN IN APPENDIX.

TABLE VI

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 38 LB FOURDRINIER KRAFT LINERBOARD

FEBRUARY, 1977

	MOISTURE CONTENT, PERCENT				BASIS WT., LB / M SQ FT				ADJ. BASIS WT.,*A LB / M SQ FT				CALIPER, PT				BURSTING STRENGTH, P S I G			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
CODE	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1	5.3	5.4	98.1	106.0	37.8	37.8	100.0	99.7	38.8	38.7	100.2	100.2	10.4	10.7	97.2	94.5	97	101	96.0	100.0
B1	5.5	5.6	98.2	110.0	38.1	38.0	100.3	100.5	38.2	38.1	100.3	98.7	12.1	11.6	104.3	110.0	100	99	101.0	103.1
D1		3.8				38.8				39.2				11.4				105		
E1	2.5	2.7	92.6	50.0	36.4	36.7	99.2	96.0	38.5	38.7	99.5	99.5	10.4	10.9	95.4	94.5	100	103	97.1	103.1
F1	4.6	6.3	73.0	92.0	37.9	38.6	98.2	100.0	39.2	39.2	100.0	101.3	10.7	10.3	103.9	97.3	87	94	92.6	89.7
H1		5.0				37.7				38.8				11.3				93		
I1		4.6				37.2				38.5				11.2				90		
J1	4.9	4.0	122.5	98.0	38.5	38.3	100.5	101.6	38.7	38.5	100.5	100.0	10.4	10.8	96.3	94.5	97	95	102.1	100.0
L1	5.0	5.0	100.0	100.0	38.8	39.3	98.7	102.4	38.9	39.4	98.7	100.5	10.2	10.9	93.6	92.7	98	95	103.2	101.0
M1	4.8	5.2	92.3	96.0	37.3	37.4	99.7	98.4	38.5	38.5	100.0	99.5	10.2	10.8	94.4	92.7	90	92	97.8	92.8
P1	4.7	4.6	102.2	94.0	36.8	36.9	99.7	97.1	38.1	38.2	99.7	98.4	10.7	11.3	94.7	97.3	104	102	102.0	107.2
Q1		5.3				37.1				38.1				12.0				86		
S1	6.3	6.1	103.3	126.0	38.0	38.0	100.0	100.3	38.6	38.7	99.7	99.7	10.5	10.8	97.2	95.4	90	92	97.8	92.8
U1	4.6	4.8	95.8	92.0	37.2	37.6	98.9	98.2	38.5	38.8	99.2	99.5	11.1	11.1	100.0	100.9	97	99	98.0	100.0
V1		4.6				38.0				39.3				12.0				102		
X1	4.2	4.5	93.3	84.0	36.9	37.2	99.2	97.4	38.3	38.6	99.2	99.0	11.2	11.3	99.1	101.8	98	94	104.2	101.0
Y1	5.9	5.7	103.5	118.0	38.0	38.0	100.0	100.3	38.1	38.0	100.3	98.4					95	98	96.9	97.9
A2		6.4				38.3				38.9				10.8				96		
E2	5.6	5.6	100.0	112.0	37.6	37.4	100.5	99.2	38.5	38.3	100.5	99.5	11.0	11.0	100.0	100.0	97	95	102.1	100.0
F2	5.1	5.4	94.4	102.0	37.5	37.6	99.7	98.9	38.6	38.6	100.0	99.7	11.7	11.3	103.5	106.4	90	92	97.8	92.8
G2	5.8	5.8	100.0	116.0	38.3	38.4	99.7	101.0	38.4	38.5	99.7	99.2	10.7	10.6	100.9	97.3	98	96	102.1	101.0
H2	4.4	4.4	100.0	88.0	36.9	36.9	100.0	97.4	38.3	38.3	100.0	99.0	10.5	10.4	101.0	95.4	105	108	97.2	108.2
L2	5.1	4.9	104.1	102.0	38.2	38.2	100.0	100.8	38.3	38.3	100.0	99.0	11.0	11.3	97.3	100.0	101	99	102.0	104.1
M2	2.9	2.4	120.8	58.0	37.6	37.3	100.8	99.2	39.6	39.5	100.2	102.3	10.7	10.3	103.9	97.3	100	98	102.0	103.1
O2	5.0	4.9	102.0	100.0	37.6	37.4	100.5	99.2	38.7	38.6	100.2	100.0	11.4	11.4	100.0	103.6	94	92	102.2	96.9
P2	6.0	5.9	101.7	120.0	37.2	38.1	97.6	98.2	37.9	38.3	99.0	97.9	11.0	11.0	100.0	100.0	93	95	97.9	95.9
Q2	5.3	4.8	110.4	106.0	37.8	37.7	100.3	99.7	38.8	39.0	99.5	100.2	11.4	11.4	100.0	103.6	95	97	97.9	97.9
R2	5.8	5.7	101.8	116.0	38.2	38.2	100.0	100.8	38.5	38.3	100.5	99.5	10.6	11.5	92.2	96.4	102	96	106.2	105.2
U2	5.5	5.0	110.0	110.0	38.4	39.0	98.5	101.3	38.5	39.1	98.5	99.5	10.8	10.9	99.1	98.2	93	98	94.9	95.9
V2		4.8				37.7				38.9				11.0				98		
W2		5.4				41.0				42.1				12.8				92		
Z2		4.0				39.0				39.1				11.0				94		
A3	5.7	5.4	105.6	114.0	38.0	37.8	100.5	100.3	38.9	38.8	100.2	100.5	10.5	10.6	99.0	95.4	104	113	92.0	107.2
FKBG DATA																				
CUR. AV.	5.0				37.7				38.6				10.8				97			
CUM. AV.	5.0				37.9				38.7				11.0				97			
IND. *D	100.0				99.5				99.7				98.2				100.0			

NOTE- NOTES A, B, C, AND D, ARE GIVEN IN APPENDIX.

TABLE VII

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 42 LB FOURDRINIER KRAFT LINERBOARD

JANUARY, 1977

	MOISTURE CONTENT, PERCENT				BASIS WT., LB / M SQ FT				ADJ. BASIS WT.,*A LB / M SQ FT				CALIPER, PT				BURSTING STRENGTH, P S I G			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
CODE	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1	5.4	5.8	93.1	103.8	41.7	41.5	100.5	100.2	42.8	42.4	100.9	100.5	11.0	11.6	94.8	90.9	104	107	97.2	99.0
B1	5.5	5.5	100.0	105.8	42.0	42.0	100.0	101.0	42.1	42.1	100.0	98.8	12.5	12.6	99.2	103.3	104	104	100.0	99.0
C1	6.0	6.1	98.4	115.4	41.8	41.8	100.0	100.5	42.6	42.5	100.2	100.0	12.3	12.3	100.0	101.6	102	106	96.2	97.1
D1		4.4				43.0				43.1				12.2				113		
E1	2.9	3.1	93.5	55.8	40.6	40.8	99.5	97.6	42.8	42.8	100.0	100.5	12.1	12.3	98.4	100.0	111	111	100.0	105.7
F1	5.6	6.0	93.3	107.7	41.3	41.6	99.3	99.3	42.3	42.4	99.8	99.3	11.3	11.4	99.1	93.4	98	101	97.0	93.3
G1	4.6	3.9	117.9	88.5	42.0	42.1	99.8	101.0	42.2	42.3	99.8	99.1	10.6	11.0	96.4	87.6	106	103	102.9	101.0
H1	4.9	5.1	96.1	94.2	41.4	41.3	100.2	99.5	42.7	42.5	100.5	100.2	12.1	12.4	97.6	100.0	103	100	103.0	98.1
I1		5.4				41.2				42.3				12.1				103		
J1	4.8	4.2	114.3	92.3	42.2	42.1	100.2	101.4	42.4	42.3	100.2	99.5	11.1	12.2	91.0	91.7	103	103	100.0	98.1
K1		5.6				42.8				42.9				12.1				108		
L1	4.9	5.2	94.2	94.2	42.4	42.4	100.0	101.9	42.5	42.5	100.0	99.8	11.2	11.6	96.6	92.6	102	104	98.1	97.1
M1	5.2	4.9	106.1	100.0	41.4	41.3	100.2	99.5	42.6	42.6	100.0	100.0	12.1	11.8	102.5	100.0	102	102	100.0	97.1
N1	4.7	5.0	94.0	90.4	41.3	41.8	98.8	99.3	42.7	43.0	99.3	100.2	11.9	11.9	100.0	98.3	113	109	103.7	107.6
O1	5.1	5.0	102.0	98.1	43.5	43.1	100.9	104.6	44.8	44.4	100.9	105.2	14.3	13.7	104.4	118.2	101	100	101.0	96.2
P1	5.3	4.8	110.4	101.9	40.6	41.1	98.8	97.6	41.7	42.5	98.1	97.9	12.4	12.4	100.0	102.5	113	112	100.9	107.6
Q1	5.6	5.6	100.0	107.7	41.9	41.7	100.5	100.7	42.9	42.7	100.5	100.7	12.8	12.4	103.2	105.8	97	101	96.0	92.4
S1	6.6	6.6	100.0	126.9	41.9	42.0	99.8	100.7	42.4	42.5	99.8	99.5	11.2	11.7	95.7	92.6	103	104	99.0	98.1
U1	5.4	5.2	103.8	103.8	41.6	41.6	100.0	100.0	42.7	42.8	99.8	100.2	12.1	12.3	98.4	100.0	107	107	100.0	101.9
W1	6.0	6.2	96.8	115.4	41.7	41.4	100.7	100.2	42.5	42.2	100.7	99.8	12.2	12.5	97.6	100.8	104	102	102.0	99.0
X1	4.3	4.7	91.5	82.7	40.7	41.2	98.8	97.8	42.2	42.6	99.1	99.1	12.1	12.4	97.6	100.0	104	103	101.0	99.0
Y1	5.8	5.8	100.0	111.5	42.1	42.0	100.2	101.2	42.2	42.1	100.2	99.1					105	105	100.0	100.0
Z1	3.5	3.6	97.2	67.3	40.9	41.0	99.8	98.3	42.8	42.9	99.8	100.5	12.2	12.2	100.0	100.8	107	108	99.1	101.9
A2	6.7	6.7	100.0	128.8	42.0	42.0	100.0	101.0	42.5	42.5	100.0	99.8	11.5	11.6	99.1	95.0	103	103	100.0	98.1
B2	5.8	5.5	105.4	111.5	41.6	41.3	100.7	100.0	42.5	42.4	100.2	99.8	12.6	12.4	101.6	104.1	100	100	100.0	95.2
E2	5.8	5.9	98.3	111.5	41.2	41.4	99.5	99.0	42.1	42.2	99.8	98.8	11.8	12.2	96.7	97.5	103	104	99.0	98.1
F2	5.6	5.4	103.7	107.7	42.1	41.8	100.7	101.2	43.1	42.9	100.5	101.2	12.7	12.6	100.8	105.0	98	102	96.1	93.3
G2	6.2	6.2	100.0	119.2	42.3	42.2	100.2	101.7	42.4	42.2	100.5	99.5	12.3	12.1	101.6	101.6	105	104	101.0	100.0
H2	4.6	4.6	100.0	88.5	40.9	40.8	100.2	98.3	42.3	42.3	100.0	99.3	11.7	11.7	100.0	96.7	115	115	100.0	109.5
I2	5.4	4.7	114.9	103.8	41.0	41.3	99.3	98.6	42.1	42.6	98.8	98.8	12.2	12.1	100.8	100.8	111	116	95.7	105.7
J2	5.9	5.9	100.0	113.5	41.2	41.4	99.5	99.0	42.1	42.2	99.8	98.8	11.6	11.6	100.0	95.9	108	102	105.9	102.8
L2	5.0	5.1	98.0	96.2	42.1	42.1	100.0	101.2	42.2	42.2	100.0	99.1	12.5	12.6	99.2	103.3	104	106	98.1	99.0
M2	3.0	3.2	93.8	57.7	40.7	40.9	99.5	97.8	42.8	42.9	99.8	100.5	11.2	11.5	97.4	92.6	106	104	101.9	101.0
N2	5.6	5.6	100.0	107.7	42.4	41.8	101.4	101.9	43.4	42.8	101.4	101.9	11.8	11.5	102.6	97.5	110	112	98.2	104.8
O2	5.1	5.0	102.0	98.1	41.4	41.3	100.2	99.5	42.6	42.6	100.0	100.0	12.7	12.6	100.8	105.0	100	102	98.0	95.2
P2	5.6	6.1	91.8	107.7	40.6	41.5	97.8	97.6	41.6	41.6	100.0	97.6	11.9	11.8	100.8	98.3	102	102	100.0	97.1
Q2	5.3	5.0	106.0	101.9	41.6	41.8	99.5	100.0	42.7	43.0	99.3	100.2	12.4	12.4	100.0	102.5	105	106	99.0	100.0
R2	5.8	5.9	98.3	111.5	42.3	42.2	100.2	101.7	42.4	42.4	100.0	99.5	11.6	12.4	93.5	95.9	107	107	100.0	101.9
U2	5.0	5.1	98.0	96.2	42.4	42.3	100.2	101.9	42.5	42.4	100.2	99.8	12.1	12.0	100.8	100.0	107	106	100.9	101.9
V2	5.3	5.5	96.4	101.9	41.6	41.8	99.5	100.0	42.7	42.8	99.8	100.2	12.7	12.3	103.2	105.0	104	105	99.0	99.0
W2	5.7	5.5	103.6	109.6	41.6	41.5	100.2	100.0	42.6	42.5	100.2	100.0	13.1	13.2	99.2	108.3	102	104	98.1	97.1
X2	4.0	4.6	87.0	76.9	40.9	41.4	98.8	98.3	42.6	42.8	99.5	100.0	11.6	11.7	99.1	95.9	103	103	100.0	98.1
Y2	3.8	3.8	100.0	73.1	42.4	42.6	99.5	101.9	42.8	43.0	99.5	100.5	12.1	12.0	100.8	100.0	101	101	100.0	96.2
Z2	5.2	4.4	118.2	100.0	42.4	42.7	99.3	101.9	42.5	42.8	99.3	99.8	12.3	11.8	104.2	101.6	104	103	101.0	99.0
A3	6.3	6.2	101.6	121.2	41.9	41.9	100.0	100.7	42.6	42.6	100.0	100.0	11.6	11.6	100.0	95.9	119	123	96.7	113.3
B3	5.4	5.5	98.2	103.8	41.5	41.4	100.2	99.8	42.6	42.4	100.5	100.0	11.9	11.8	100.8	98.3	104	102	102.0	99.0
C3	3.4	3.6	94.4	65.4	40.2	40.4	99.5	96.6	42.1	42.3	99.5	98.8	10.9	11.6	94.0	90.1	105	106	99.0	100.0
FKBG DATA																				
CUR. AV.	5.2				41.6				42.5				12.0				105			
CUM. AV.	5.2				41.6				42.6				12.1				105			
IND. *D	100.0				100.0				99.8				99.2				100.0			

NOTE- NOTES A, B, C, AND D, ARE GIVEN IN APPENDIX.

TABLE VIII

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 42 LB FOURDRINIER KRAFT LINERBOARD

FEBRUARY, 1977

	MOISTURE CONTENT, PERCENT				BASIS WT., LB / M SQ FT				ADJ. BASIS WT.,*A LB / M SQ FT				CALIPER, PT				BURSTING STRENGTH, P S I G			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
CODE	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1	5.5	5.8	94.8	105.8	41.5	41.6	99.8	99.8	42.5	42.5	100.0	100.0	11.1	11.5	96.5	92.5	104	106	98.1	99.0
B1	5.5	5.5	100.0	105.8	41.9	42.0	99.8	100.7	42.0	42.1	99.8	98.8	12.6	12.6	100.0	105.0	108	104	103.8	102.8
C1	6.1	6.1	100.0	117.3	41.7	41.8	99.8	100.2	42.5	42.5	100.0	100.0	12.1	12.3	98.4	100.8	102	106	96.2	97.1
D1		4.4				43.0				43.1				12.2				113		
E1	2.7	3.1	87.1	51.9	40.6	40.8	99.5	97.6	42.8	42.8	100.0	100.7	12.5	12.3	101.6	104.2	114	111	102.7	108.6
F1	5.6	5.9	94.9	107.7	41.5	41.5	100.0	99.8	42.5	42.3	100.5	100.0	11.4	11.4	100.0	95.0	96	100	96.0	91.4
G1	4.4	4.0	110.0	84.6	42.1	42.1	100.0	101.2	42.3	42.3	100.0	99.5	10.5	11.0	95.4	87.5	104	103	101.0	99.0
H1	4.9	5.1	96.1	94.2	41.5	41.3	100.5	99.8	42.8	42.5	100.7	100.7	12.1	12.3	98.4	100.8	102	101	101.0	97.1
I1		5.4				41.2				42.3				12.1				103		
J1	5.0	4.3	116.3	96.2	42.2	42.1	100.2	101.4	42.4	42.3	100.2	99.8	11.4	12.0	95.0	95.0	104	103	101.0	99.0
K1		5.6				42.8				42.9				12.1				108		
L1	5.0	5.1	98.0	96.2	42.4	42.4	100.0	101.9	42.5	42.5	100.0	100.0	11.1	11.6	95.7	92.5	103	104	99.0	98.1
M1	5.3	4.9	108.2	101.9	41.4	41.3	100.2	99.5	42.5	42.6	99.8	100.0	11.9	11.8	100.8	99.2	102	102	100.0	97.1
N1	4.6	5.0	92.0	88.5	41.3	41.6	99.3	99.3	42.7	42.9	99.5	100.5	12.0	11.8	101.7	100.0	110	109	100.9	104.8
O1	5.5	5.0	110.0	105.8	43.4	43.1	100.7	104.3	44.5	44.4	100.2	104.7	14.3	13.7	104.4	119.2	99	100	99.0	94.3
P1	5.2	4.9	106.1	100.0	40.9	41.0	99.8	98.3	42.0	42.3	99.3	98.8	12.0	12.4	96.8	100.0	111	112	99.1	105.7
Q1	5.6	5.6	100.0	107.7	42.0	41.7	100.7	101.0	43.0	42.7	100.7	101.2	12.7	12.5	101.6	105.8	98	100	98.0	93.3
S1	6.5	6.7	97.0	125.0	42.0	42.0	100.0	101.0	42.6	42.5	100.2	100.2	11.4	11.6	98.3	95.0	102	104	98.1	97.1
U1		5.1				41.5				42.7				12.2				107		
W1	6.4	6.2	103.2	123.1	41.4	41.4	100.0	99.5	42.0	42.2	99.5	98.8	12.0	12.4	96.8	100.0	101	102	99.0	96.2
X1	4.2	4.6	91.3	80.8	40.8	41.2	99.0	98.1	42.4	42.6	99.5	99.8	12.2	12.4	98.4	101.7	105	103	101.9	100.0
Y1		5.8				42.0				42.1								104		
Z1	3.8	3.6	105.6	73.1	41.2	41.0	100.5	99.0	43.0	42.9	100.2	101.2	12.2	12.2	100.0	101.7	107	108	99.1	101.9
A2	6.8	6.7	101.5	130.8	42.0	42.0	100.0	101.0	42.5	42.5	100.0	100.0	11.5	11.6	99.1	95.8	103	103	100.0	98.1
B2	5.5	5.6	98.2	105.8	41.7	41.4	100.7	100.2	42.7	42.4	100.7	100.5	12.5	12.5	100.0	104.2	100	100	100.0	95.2
E2	5.9	5.8	101.7	113.5	41.3	41.3	100.0	99.3	42.2	42.2	100.0	99.3	12.0	12.1	99.2	100.0	106	104	101.9	101.0
F2	5.2	5.4	96.3	100.0	41.5	41.8	99.3	99.8	42.7	42.8	99.8	100.5	12.9	12.6	102.4	107.5	99	102	97.0	94.3
G2	6.1	6.2	98.4	117.3	42.2	42.2	100.0	101.4	42.3	42.3	100.0	99.5	12.1	12.0	100.8	100.8	105	104	101.0	100.0
H2	4.8	4.6	104.3	92.3	41.1	40.8	100.7	98.8	42.5	42.3	100.5	100.0	11.8	11.6	101.7	98.3	115	115	100.0	109.5
I2	5.3	4.8	110.4	101.9	41.1	41.2	99.8	98.8	42.2	42.6	99.1	99.3	11.6	12.0	96.7	96.7	111	116	95.7	105.7
J2	6.2	5.9	105.1	119.2	41.6	41.4	100.5	100.0	42.3	42.2	100.2	99.5	11.6	11.6	100.0	96.7	106	103	102.9	101.0
L2	5.0	5.1	98.0	96.2	42.1	42.1	100.0	101.2	42.2	42.2	100.0	99.3	12.5	12.6	99.2	104.2	106	106	100.0	101.0
M2	3.5	3.2	109.4	67.3	40.9	40.8	100.2	98.3	42.8	42.9	99.8	100.7	11.7	11.4	102.6	97.5	102	105	97.1	97.1
N2	6.3	5.6	112.5	121.2	42.0	41.9	100.2	101.0	42.7	42.9	99.5	100.5	11.7	11.5	101.7	97.5	114	112	101.8	108.6
O2	4.8	5.0	96.0	92.3	41.4	41.2	100.5	99.5	42.8	42.5	100.7	100.7	12.6	12.6	100.0	105.0	100	101	99.0	95.2
P2	5.8	6.1	95.1	111.5	40.6	41.4	98.1	97.6	41.5	41.6	99.8	97.6	11.7	11.8	99.2	97.5	101	102	99.0	96.2
Q2	5.5	5.0	110.0	105.8	41.7	41.7	100.0	100.2	42.7	43.0	99.3	100.5	12.5	12.4	100.8	104.2	104	105	99.0	99.0
R2	5.9	5.9	100.0	113.5	42.2	42.2	100.0	101.4	42.6	42.4	100.5	100.2	11.7	12.3	95.1	97.5	109	108	100.9	103.8
U2	5.4	5.2	103.8	103.8	42.0	42.3	99.3	101.0	42.1	42.4	99.3	99.0	12.2	12.0	101.7	101.7	102	106	96.2	97.1
V2	5.7	5.5	103.6	109.6	41.8	41.8	100.0	100.5	42.8	42.8	100.0	100.7	12.6	12.3	102.4	105.0	104	105	99.0	99.0
W2	5.8	5.5	105.4	111.5	41.6	41.5	100.2	100.0	42.5	42.5	100.0	100.0	13.5	13.2	102.3	112.5	103	104	99.0	98.1
X2	4.2	4.5	93.3	80.8	41.0	41.3	99.3	98.6	42.6	42.8	99.5	100.2	11.7	11.7	100.0	97.5	102	103	99.0	97.1
Y2	3.6	3.8	94.7	69.2	42.6	42.5	100.2	102.4	43.0	42.9	100.2	101.2	12.1	12.0	100.8	100.8	100	101	99.0	95.2
Z2	5.4	4.5	120.0	103.8	43.0	42.7	100.7	103.4	43.1	42.8	100.7	101.4	11.5	11.8	97.4	95.8	106	103	102.9	101.0
A3	6.3	6.2	101.6	121.2	42.1	41.9	100.5	101.2	42.8	42.6	100.5	100.7	11.6	11.6	100.0	96.7	114	122	93.4	108.6
B3	5.5	5.5	100.0	105.8	41.5	41.4	100.2	99.8	42.5	42.5	100.0	100.0	12.0	11.8	101.7	100.0	104	103	101.0	99.0
C3	4.1	3.5	117.1	78.8	40.5	40.4	100.2	97.4	42.1	42.3	99.5	99.0	10.4	11.5	90.4	86.7	106	106	100.0	101.0
FKBG DATA																				
CUR. AV.	5.2				41.6				42.6				12.0				105			
CUM. AV.	5.2				41.6				42.5				12.0				105			
IND. *D	100.0				100.0				100.2				100.0				100.0			

NOTE- NOTES A, B, C, AND D, ARE GIVEN IN APPENDIX.

TABLE IX

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 69 LB FOURDRINIER KRAFT LINERBOARD

JANUARY, 1977

	MOISTURE CONTENT, PERCENT				BASIS WT., LB / M SQ FT				ADJ. BASIS WT.,*A LB / M SQ FT				CALIPER, PT				BURSTING STRENGTH, P S I G			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
CODE	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1	5.4	6.9	78.3	91.5	68.5	68.7	99.7	99.8	70.3	69.4	101.3	101.0	17.7	18.9	93.6	89.8	141	149	94.6	99.3
B1	5.5	5.6	98.2	93.2	68.9	68.9	100.0	100.4	69.1	69.1	100.0	99.3	18.7	19.5	95.9	94.9	155	144	107.6	109.2
C1	6.4	6.3	101.6	108.5	68.6	68.5	100.1	100.0	69.6	69.6	100.0	100.0	19.4	19.5	99.5	98.5	141	144	97.9	99.3
D1		5.3				69.9				70.1				19.9				155		
E1	3.7	3.7	100.0	62.7	67.4	67.4	100.0	98.2	70.4	70.4	100.0	101.1	19.9	20.1	99.0	101.0	142	149	95.3	100.0
F1	5.8	5.9	98.3	98.3	68.1	68.4	99.6	99.3	69.6	69.8	99.7	100.0	19.0	19.0	100.0	96.4	132	133	99.2	93.0
G1	5.2	5.2	100.0	88.1	69.0	69.0	100.0	100.6	69.3	69.4	99.8	99.6	18.6	18.8	98.9	94.4	142	139	102.2	100.0
K1	6.3	6.2	101.6	106.8	69.6	69.7	99.8	101.4	69.8	69.9	99.8	100.3	20.2	20.5	98.5	102.5	142	144	98.6	100.0
L1	5.6	5.8	96.6	94.9	69.2	69.3	99.8	100.9	69.4	69.5	99.8	99.7	19.3	19.9	97.0	98.0	139	136	102.2	97.9
N1	5.6	5.7	98.2	94.9	68.8	68.5	100.4	100.3	70.5	70.0	100.7	101.3	19.8	20.4	97.0	100.5	144	138	104.3	101.4
Q1	6.8	6.4	106.2	115.2	69.5	69.1	100.6	101.3	70.3	70.1	100.3	101.0	22.0	21.0	104.8	111.7	136	139	97.8	95.8
U1		6.0				68.6				70.0				20.8				142		
W1	7.0	7.2	97.2	118.6	68.8	68.7	100.1	100.3	69.4	69.2	100.3	99.7	20.6	21.2	97.2	104.6	134	136	98.5	94.4
X1	5.1	5.4	94.4	86.4	67.3	68.0	99.0	98.1	69.3	69.7	99.4	99.6	19.7	20.0	98.5	100.0	139	139	100.0	97.9
Z1	3.9	4.1	95.1	66.1	67.8	67.6	100.3	98.8	70.6	70.3	100.4	101.4	19.9	20.8	95.7	101.0	144	144	100.0	101.4
A2	8.0	8.0	100.0	135.6	69.2	69.1	100.1	100.9	69.1	69.0	100.1	99.3	19.8	19.5	101.5	100.5	141	141	100.0	99.3
B2	6.2	6.0	103.3	105.1	68.1	68.0	100.1	99.3	69.3	69.4	99.8	99.6	21.4	20.8	102.9	108.6	133	132	100.8	93.7
D2	5.5	6.0	91.7	93.2	68.6	68.5	100.1	100.0	70.3	69.8	100.7	101.0	19.7	19.6	100.5	100.0	144	144	100.0	101.4
E2	6.5	6.8	95.6	110.2	68.2	68.8	99.1	99.4	69.2	69.6	99.4	99.4	20.4	20.8	98.1	103.6	138	139	99.3	97.2
G2	6.8	6.8	100.0	115.2	69.0	69.2	99.7	100.6	69.2	69.4	99.7	99.4	20.1	19.8	101.5	102.0	139	142	97.9	97.9
I2	5.5	5.5	100.0	93.2	67.7	68.1	99.4	98.7	69.4	69.8	99.4	99.7	19.7	19.5	101.0	100.0	145	151	96.0	102.1
J2		7.2				69.1				69.6				19.7				142		
L2	5.3	5.5	96.4	89.8	69.2	69.2	100.0	100.9	69.4	69.4	100.0	99.7	19.6	19.9	98.5	99.5	141	141	100.0	99.3
M2	5.1	5.8	87.9	86.4	67.6	68.4	98.8	98.5	69.6	69.9	99.6	100.0	18.4	18.7	98.4	93.4	138	140	98.6	97.2
N2	5.9	5.6	105.4	100.0	69.5	68.8	101.0	101.3	71.0	70.4	100.8	102.0	19.5	19.6	99.5	99.0	145	145	100.0	102.1
P2	6.0	6.4	93.8	101.7	66.8	68.2	97.9	97.4	68.1	68.4	99.6	97.8	18.1	19.5	92.8	91.9	142	139	102.2	100.0
Q2		7.0				68.4				69.0				21.0				150		
R2		6.0				69.4				69.6				20.0				149		
U2	5.9	6.4	92.2	100.0	69.6	69.6	100.0	101.4	69.8	69.8	100.0	100.3	19.8	19.6	101.0	100.5	135	139	97.1	95.1
V2	6.9	7.2	95.8	116.9	68.6	68.7	99.8	100.0	69.3	69.1	100.3	99.6	20.5	19.7	104.1	104.1	142	145	97.9	100.0
X2	4.2	4.9	85.7	71.2	67.5	68.0	99.3	98.4	70.1	70.1	100.0	100.7	18.6	18.4	101.1	94.4	142	141	100.7	100.0
Y2	4.1	4.3	95.3	69.5	69.4	69.0	100.6	101.2	70.0	69.6	100.6	100.6	19.7	19.3	102.1	100.0	142	144	98.6	100.0
Z2	5.4	4.8	112.5	91.5	69.4	69.6	99.7	101.2	69.6	69.8	99.7	100.0	17.8	18.4	96.7	90.4	143	144	99.3	100.7
A3	6.7	6.8	98.5	113.6	69.0	69.2	99.7	100.6	69.8	69.9	99.8	100.3	19.5	18.8	103.7	99.0	148	157	94.3	104.2
B3	6.1	6.6	92.4	103.4	68.6	68.6	100.0	100.0	69.8	69.4	100.6	100.3	20.9	20.9	100.0	106.1	140	135	103.7	98.6
C3	4.4	3.8	115.8	74.6	66.8	66.5	100.4	97.4	69.3	69.3	100.0	99.6	18.4	19.2	95.8	93.4	139	141	98.6	97.9
FKBG DATA																				
CUR. AV.	5.7				68.5				69.7				19.6				141			
CUM. AV.	5.9				68.6				69.6				19.7				142			
IND. *D	96.6				99.8				100.1				99.5				99.3			

NOTE- NOTES A, B, C, AND D, ARE GIVEN IN APPENDIX.

TABLE X

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 69 LB FOURDRINIER KRAFT LINERBOARD

FEBRUARY, 1977

	MOISTURE CONTENT, PERCENT				BASIS WT., LB / M SQ FT				ADJ. BASIS WT.,*A LB / M SQ FT				CALIPER, PT				BURSTING STRENGTH, P S I G			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
CODE	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1	7.1	6.7	106.0	120.3	68.9	68.6	100.4	100.4	69.5	69.5	100.0	99.8	18.4	18.7	98.4	93.4	144	148	97.3	101.4
B1	5.7	5.6	101.8	96.6	68.9	68.9	100.0	100.4	69.1	69.1	100.0	99.3	19.2	19.6	98.0	97.5	156	144	108.3	109.8
C1	6.4	6.4	100.0	108.5	68.6	68.6	100.0	100.0	69.6	69.6	100.0	100.0	19.8	19.5	101.5	100.5	142	144	98.6	100.0
D1		5.3				69.9				70.1				19.9				155		
E1	3.7	3.7	100.0	62.7	67.2	67.4	99.7	98.0	70.2	70.4	99.7	100.9	23.1	20.2	114.4	117.2	143	147	97.3	100.7
F1	7.0	5.9	118.6	118.6	67.8	68.2	99.4	98.8	68.4	69.6	98.3	98.3	19.5	19.0	102.6	99.0	133	133	100.0	93.7
G1	5.3	5.3	100.0	89.8	69.1	69.0	100.1	100.7	69.4	69.4	100.0	99.7	18.4	18.6	98.9	93.4	143	139	102.9	100.7
K1	6.6	6.2	106.4	111.9	69.4	69.7	99.6	101.2	70.0	69.9	100.1	100.6	20.5	20.4	100.5	104.1	144	144	100.0	101.4
L1	5.5	5.8	94.8	93.2	69.2	69.3	99.8	100.9	69.4	69.5	99.8	99.7	19.4	19.8	98.0	98.5	140	137	102.2	98.6
N1	5.4	5.7	94.7	91.5	68.3	68.5	99.7	99.6	70.1	70.1	100.0	100.7	20.7	20.4	101.5	105.1	140	139	100.7	98.6
Q1	6.6	6.5	101.5	111.9	69.3	69.1	100.3	101.0	70.2	70.1	100.1	100.9	21.6	21.2	101.9	109.6	136	139	97.8	95.8
U1		6.0				68.6				70.0				20.8				142		
W1	7.2	7.2	100.0	122.0	69.0	68.7	100.4	100.6	69.5	69.2	100.4	99.8	21.0	21.2	99.0	106.6	133	135	98.5	93.7
X1	5.2	5.4	96.3	88.1	68.1	68.0	100.1	99.3	70.0	69.7	100.4	100.6	20.5	20.0	102.5	104.1	139	139	100.0	97.9
Z1	4.0	4.1	97.6	67.8	67.5	67.6	99.8	98.4	70.3	70.3	100.0	101.0	20.2	20.8	97.1	102.5	141	144	97.9	99.3
A2	7.9	8.0	98.8	133.9	69.1	69.2	99.8	100.7	69.0	69.0	100.0	99.1	19.7	19.5	101.0	100.0	142	141	100.7	100.0
B2	6.5	6.0	108.3	110.2	68.4	68.0	100.6	99.7	69.4	69.4	100.0	99.7	21.2	20.9	101.4	107.6	132	133	99.2	93.0
D2	6.2	6.0	103.3	105.1	68.5	68.5	100.0	99.8	69.7	69.8	99.8	100.1	19.2	19.6	98.0	97.5	141	145	97.2	99.3
E2	7.1	6.8	104.4	120.3	68.7	68.8	99.8	100.1	69.2	69.6	99.4	99.4	19.4	20.8	93.3	98.5	138	139	99.3	97.2
G2	6.7	6.8	98.5	113.6	69.1	69.1	100.0	100.7	69.3	69.3	100.0	99.6	20.5	19.8	103.5	104.1	142	142	100.0	100.0
I2	5.3	5.5	96.4	89.8	67.7	68.0	99.6	98.7	69.5	69.6	99.8	99.8	19.1	19.5	97.9	97.0	150	150	100.0	105.6
J2		7.2				69.1				69.6				19.7				142		
L2	5.5	5.5	100.0	93.2	69.2	69.2	100.0	100.9	69.4	69.4	100.0	99.7	19.6	19.9	98.5	99.5	143	141	101.4	100.7
M2	5.6	5.7	98.2	94.9	67.9	68.2	99.6	99.0	69.5	69.8	99.6	99.8	18.9	18.6	101.6	95.9	139	140	99.3	97.9
N2	6.2	5.6	110.7	105.1	69.0	69.0	100.0	100.6	70.2	70.6	99.4	100.9	19.4	19.6	99.0	98.5	142	144	98.6	100.0
P2	6.4	6.4	100.0	108.5	67.6	68.0	99.4	98.5	68.6	68.2	100.6	98.6	18.6	19.4	95.9	94.4	141	140	100.7	99.3
Q2		7.0				68.4				69.0				21.0				150		
R2	6.1	6.0	101.7	103.4	69.3	69.4	99.8	101.0	69.9	69.6	100.4	100.4	19.8	20.0	99.0	100.5	145	149	97.3	102.1
U2	6.1	6.4	95.3	103.4	69.2	69.6	99.4	100.9	69.4	69.8	99.4	99.7	19.8	19.6	101.0	100.5	136	139	97.8	95.8
V2	6.9	7.2	95.8	116.9	68.3	68.7	99.4	99.6	69.0	69.1	99.8	99.1	20.5	19.8	103.5	104.1	145	144	100.7	102.1
X2	4.2	4.8	87.5	71.2	67.5	68.0	99.3	98.4	70.1	70.1	100.0	100.7	18.8	18.4	102.2	95.4	140	141	99.3	98.6
Y2	4.2	4.4	95.4	71.2	69.4	69.1	100.4	101.2	70.0	69.7	100.4	100.6	19.3	19.4	99.5	98.0	145	144	100.7	102.1
Z2	5.3	4.9	108.2	89.8	69.2	69.6	99.4	100.9	69.4	69.8	99.4	99.7	18.1	18.4	98.4	91.9	146	143	102.1	102.8
A3	6.9	6.8	101.5	116.9	69.3	69.2	100.1	101.0	70.0	69.9	100.1	100.6	19.3	18.9	102.1	98.0	150	156	96.2	105.6
B3	6.7	6.6	101.5	113.6	68.9	68.6	100.4	100.4	69.7	69.5	100.3	100.1	21.4	20.9	102.4	108.6	137	136	100.7	96.5
C3	4.9	3.9	125.6	83.0	67.2	66.5	101.0	98.0	69.3	69.3	100.0	99.6	18.4	19.1	96.3	93.4	141	141	100.0	99.3
FK8G DATA																				
CUR. AV.	6.0				68.6				69.6				19.8				142			
CUM. AV.	5.9				68.6				69.6				19.7				142			
IND. *D	101.7				100.0				100.0				100.5				100.0			

NOTE- NOTES A, B, C, AND D, ARE GIVEN IN APPENDIX.

TABLE XI

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 90 LB FOURDRINIER KRAFT LINERBOARD

JANUARY, 1977

CODE	MOISTURE CONTENT, PERCENT				BASIS WT., LB / M SQ FT				ADJ. BASIS WT.,*A LB / M SQ FT				CALIPER, PT				BURSTING STRENGTH, P S I G			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1		7.0				89.8				90.5				24.5				179		
B1	5.5	5.6	98.2	91.7	89.9	89.5	100.4	100.3	90.2	89.8	100.4	99.3	24.6	25.4	96.8	96.1	180	169	106.5	105.3
C1	6.9	6.7	103.0	115.0	90.2	90.0	100.2	100.7	91.1	91.0	100.1	100.3	25.0	26.1	95.8	97.6	175	174	100.6	102.3
F1	6.9	6.4	107.8	115.0	87.6	87.7	99.9	97.8	88.5	89.0	99.4	97.5	24.7	24.5	100.8	96.5	160	162	98.8	93.6
K1	6.5	6.4	101.6	108.3	90.8	90.9	99.9	101.3	91.1	91.2	99.9	100.3	25.7	27.1	94.8	100.4	172	171	100.6	100.6
L1	6.0	6.2	96.8	100.0	90.2	90.3	99.9	100.7	90.5	90.6	99.9	99.7	25.3	26.4	95.8	98.8	165	165	100.0	96.5
X1	5.1	5.3	96.2	85.0	88.0	88.8	99.1	98.2	90.6	91.2	99.3	99.8	25.6	25.8	99.2	100.0	168	166	101.2	98.2
Z1	3.9	4.2	92.8	65.0	87.9	88.3	99.5	98.1	91.6	91.6	100.0	100.9	26.5	26.5	100.0	103.5	181	177	102.3	105.8
B2		6.1				88.0				89.6				27.2				162		
D2	6.9	7.0	98.6	115.0	90.5	90.4	100.1	101.0	91.4	91.2	100.2	100.7	25.3	25.4	99.6	98.8	167	169	98.8	97.7
I2	5.8	5.4	107.4	96.7	88.5	89.0	99.4	98.8	90.4	91.3	99.0	99.6	26.3	26.0	101.2	102.7	162	179	90.5	94.7
M2	5.9	6.0	98.3	98.3	89.1	89.3	99.8	99.4	91.0	91.1	99.9	100.2	24.3	24.5	99.2	94.9	165	165	100.0	96.5
N2		6.2				89.8				91.4				26.0				164		
V2	7.2	7.4	97.3	120.0	89.3	89.7	99.6	99.7	89.9	90.0	99.9	99.0	26.8	25.3	105.9	104.7	171	172	99.4	100.0
Z2	5.4	4.6	117.4	90.0	90.1	90.6	99.4	100.6	90.4	90.9	99.4	99.6	23.9	24.4	98.0	93.4	176	169	104.1	102.9
A3	6.8	6.9	98.6	113.3	89.9	90.2	99.7	100.3	90.9	91.1	99.8	100.1	25.5	24.6	103.6	99.6	175	184	95.1	102.3
C3		3.8				86.6				90.3				26.0				161		
FKBG DATA CUR. AV.			6.1			89.4				90.6				25.3				170		
CUM. AV.			6.0			89.6				90.8				25.6				171		
IND. *D			101.7			99.8				99.8				98.8				99.4		

NOTE- NOTES A, B, C, AND D, ARE GIVEN IN APPENDIX.

TABLE XII

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 90 LB FOURDRINIER KRAFT LINERBOARD

FEBRUARY, 1977

	MOISTURE CONTENT, PERCENT				BASIS WT., LB / M SQ FT				ADJ. BASIS WT.,*A LB / M SQ FT				CALIPER, PT				BURSTING STRENGTH, P S I G			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
CODE	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1	6.7	7.0	95.7	111.7	89.7	89.8	99.9	100.1	90.8	90.5	100.3	100.0	23.9	24.5	97.6	93.4	179	179	100.0	104.7
B1	5.8	5.6	103.6	96.7	89.9	89.5	100.4	100.3	90.2	89.8	100.4	99.3	25.3	25.5	99.2	98.8	185	170	108.8	108.2
C1	7.0	6.8	102.9	116.7	90.4	90.0	100.4	100.9	91.2	91.0	100.2	100.4	25.4	26.0	97.7	99.2	171	174	98.3	100.0
F1		7.3				87.9				88.4				24.6				164		
K1	6.7	6.4	104.7	111.7	90.5	90.9	99.6	101.0	91.3	91.2	100.1	100.6	26.8	27.0	99.2	104.7	174	172	101.2	101.8
L1	6.0	6.2	98.8	100.0	90.4	90.3	100.1	100.9	90.7	90.6	100.1	99.9	25.1	26.4	95.1	98.0	173	165	104.8	101.2
X1	5.6	5.3	105.7	93.3	88.6	88.8	99.8	98.9	90.7	91.2	99.4	99.9	25.5	25.8	98.8	99.6	169	166	101.8	98.8
Z1	4.0	4.2	95.2	66.7	88.4	88.2	100.2	98.7	92.0	91.7	100.3	101.3	26.4	26.4	100.0	103.1	184	177	104.0	107.6
B2		6.1				88.0				89.6				27.2				162		
D2	6.9	7.0	98.6	115.0	90.4	90.4	100.0	100.9	91.3	91.2	100.1	100.6	25.2	25.5	98.8	98.4	167	169	98.8	97.7
I2	5.5	5.4	101.8	91.7	88.4	88.8	99.5	98.7	90.6	91.1	99.4	99.8	26.0	26.0	100.0	101.6	172	178	96.6	100.6
M2	5.7	5.9	96.6	95.0	88.8	89.2	99.6	99.1	90.8	91.0	99.8	100.0	24.3	24.5	99.2	94.9	164	166	98.8	95.9
N2	6.2	6.2	100.0	103.3	89.8	89.9	99.9	100.2	91.3	91.5	99.8	100.6	25.7	25.7	100.0	100.4	161	163	98.8	94.2
V2	7.1	7.4	95.9	118.3	89.4	89.6	99.8	99.8	90.1	90.0	100.1	99.2	26.5	25.4	104.3	103.5	170	172	98.8	99.4
Z2	5.4	4.7	114.9	90.0	90.8	90.6	100.2	101.3	91.1	90.8	100.3	100.3	23.6	24.3	97.1	92.2	184	170	108.2	107.6
A3	7.1	7.0	101.4	118.3	90.4	90.2	100.2	100.9	91.1	91.1	100.0	100.3	24.7	24.8	99.6	96.5	178	182	97.8	104.1
C3	4.8	3.8	126.3	80.0	87.5	86.6	101.0	97.6	90.4	90.3	100.1	99.6	24.8	26.0	95.4	96.9	163	160	101.9	95.3
FKBG DATA																				
CUR. AV.	6.0				89.6				90.9				25.3				173			
CUM. AV.	6.0				89.6				90.8				25.6				171			
IND. *D	100.0				100.0				100.1				98.8				101.2			

NOTE- NOTES A, B, C, AND D, ARE GIVEN IN APPENDIX.

Data submitted by the participating mills relative to conditioning and testing environments are summarized in Table XIII. The procedures used in calculating adjusted basis weight, cumulative machine averages, machine factors, machine indexes, and F.K.B.G. indexes are described in the Appendix.

It should be explained that the number of machines for which data are compiled in each table for a specified month varies for these reasons: a machine must have (a) produced at least 500 tons of the pertinent grade weight during the specified month, or (b) produced 500 tons of the pertinent grade weight during any one or more of the 12 months prior to the specified month (so that a cumulative average is available), to be included in a given table.

TABLE XIII

DATA ON CONDITIONING AND TESTING ENVIRONMENTS

JANUARY-FEBRUARY, 1977

Code	Conditioning Environment: Are Quality Samples Conditioned Before Testing?	Conditioning Environment: Procedure: Time	Conditioning Environment: Procedure: Temp., °F	Conditioning Environment: Procedure: RH, %	Testing Environment: Are Quality Samples Tested Under Controlled Conditions of Temperature & Humidity?
A1	No	--	--	--	Yes: 72 ± 2°F; 50 ± 1% RH
B1	No	--	--	--	No
C1	No	--	--	--	No
D1	No data submitted for January and February				
E1	No	--	--	--	No
F1	No	--	--	--	No
G1	No	--	--	--	Yes: 73 ± 3°F; 50 ± 2% RH
H1	No	--	--	--	Yes: 73 ± 4°F; 50 ± 10% RH
I1	No data submitted for January and February				
J1	No	--	--	--	Yes: 73 ± 3°F; 50 ± 2% RH
K1	No	--	--	--	Yes: 73 ± 3°F; 52 ± 2% RH
L1	No	--	--	--	Yes: 75 ± 5°F; 50 ± 5% RH
M1	No	--	--	--	No
N1	No	--	--	--	Yes: 73 ± 3.5°F; 50 ± 2% RH
O1	No	--	--	--	Yes: 72 ± 3.5°F; 50 ± 2% RH
P1	No	--	--	--	No
Q1	No	--	--	--	No
R1	No data submitted for January and February				
S1	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
T1	Yes	10 min	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
U1	No	--	--	--	Yes: 73 ± 3.5°F; 50 ± 2% RH
V1	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
W1	No	--	--	--	No
X1	No	--	--	--	No
Y1	No	--	--	--	No
Z1	No	--	--	--	No
A2	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
B2	Yes	10 min	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
C2	Yes	20 min	--	--	Yes: 72 ± 2°F; 50 ± 2% RH
D2	No	--	--	--	No
E2	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
F2	No	--	--	--	No
G2	No	--	--	--	No
H2	No	--	--	--	No
I2	No	--	--	--	No
J2	No	--	--	--	No
K2	Yes	10 min	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
L2	No	--	--	--	Yes: 73 ± 3°F; 50 ± 2% RH
M2	No	--	--	--	Yes: 70 ± 2°F; 50 ± 5% RH
N2	No	--	--	--	No
O2	No	--	--	--	Yes: 73 ± 3°F; 50% RH
P2	Yes	15 min	--	--	Yes: 73 ± 2°F; 50 ± 1% RH
Q2	No	--	--	--	No
R2	No	--	--	--	Yes: 73 ± 3°F; 52 ± 2% RH
S2	No	--	--	--	No
T2	No	--	--	--	Yes: 73 ± 3.5°F; 50 ± 2% RH
U2	No	--	--	--	Yes: 70 ± 2°F; 50 ± 2% RH
V2	No	--	--	--	No
W2	No	--	--	--	No
X2	No	--	--	--	No
Y2	Yes	--	73	50	Yes: 73 ± 2°F; 50 ± 2% RH
Z2	No	--	--	--	No
A3	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
B3	No	--	--	--	Yes: 73 ± 4°F; 50 ± 10% RH
C3	No	--	--	--	No

THE INSTITUTE OF PAPER CHEMISTRY

Gerald R. Kloth

Gerald R. Kloth
Research Fellow
Container Division

APPENDIX

NOTES A, B, C, AND D, USED IN TABULATIONS OF MILL DATA

Notes A, B, C, and D, used in the tables of mill data are given below; these notes define the procedure used injalculating adjusted basis weight, machine factor, machine index, and F.K.B.G. index. It should be stressed that each formula is applicable only to a specific physical property of a specific grade weight of linerboard.

Note A: Adjusted basis weight (ABW) = reported weight (RBW) adjusted to moisture content of 7.8%:

$$\text{ABW} = \text{RBW} \left[\frac{(100 - \text{reported moisture content, \%})}{(100 - 7.8)} \right]$$

Note B: Machine factor (%) $= \left[\frac{\text{Current machine average}}{\text{Cumulative machine average}} \right] \cdot 100$ where

$$\text{Cumulative machine average} = \sum \frac{\text{CMA's}^{a} \text{ for previous 12 months excluding CMA for current month}}{12}$$

Note C: Machine index (%) $= \left[\frac{\text{Current machine average}}{\text{Cumulative F.K.B.G. average}} \right] \cdot 100$ where

$$\text{Cumulative F.K.B.G. average} = \sum \frac{\text{CFKBGA's}^{b} \text{ for previous 12 months excluding CFKBGA for current month}}{12}$$

Note D: F.K.B.G. index (%) $= \left[\frac{\text{Current F.K.B.G. average}}{\text{Cumulative F.K.B.G. average}} \right] \cdot 100$ where

$$\text{Current F.K.B.G. average} = \sum \frac{\text{CMA's}^{a} \text{ for current month for all machines}}{\text{Number of machines}}$$

---

[a] CMA = current machine average for a specific physical property of a specific linerboard grade weight obtained during a given month on a specific machine.

[b] CFKBGA = current F.K.B.G. average for a specific physical property of a specific linerboard grade weight obtained during a given month.