

Institute of Paper Science and Technology

BASE-LINE
2ND HALF, 1992

CONTINUOUS BASE-LINE STUDY (MODIFIED)
(MILL CORRUGATING MEDIUM DATA FOR JUL-AUG, SEPT-OCT, NOV-DEC, 1992)

A Progress Report

to

THE CONTAINERBOARD & KRAFT PAPER GROUP

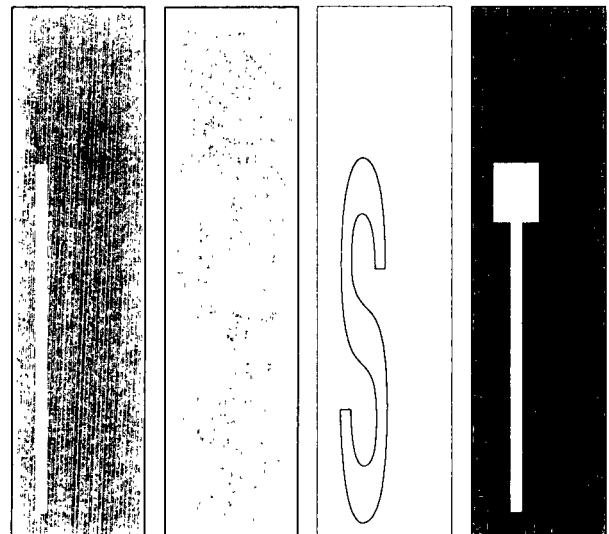
OF THE

AMERICAN FOREST AND PAPER ASSOCIATION

Project 3815-93

Report Seventy-Six

March 1, 1993



Atlanta, Georgia

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Containerboard and Kraft Paper Group
For Periods Jul-Aug, Sep-Oct, Nov-Dec 1992

SUMMARY

Moist @ reel
Percent

	JUL-AUG		SEP-OCT		NOV-DEC	
	Total	Recycled	Total	Recycled	Total	Recycled
26 Max	9.5	9.2	9.4	9.1	9.6	9.2
Min	5.9	5.5	5.9	5.5	6.7	5.5
Avg	7.5 (34)	7.3 (13)	7.4 (35)	7.2 (15)	7.5 (36)	7.3 (16)
Stddev	.7	1.3	.9	1.2	.7	1.2
<hr/>						
33 Max	9.6	9.0	9.6	9.1	9.6	9.3
Min	6.0	5.6	6.0	5.5	6.7	5.4
Avg	7.5 (28)	7.4 (12)	7.6 (27)	7.3 (12)	7.6 (27)	7.4 (12)
Stddev	.8	1.2	.9	1.2	.8	1.2
<hr/>						
40 Max	9.8	9.0	10.0	9.2	9.9	9.3
Min	6.1	8.4	6.2	6.8	6.8	5.5
Avg	7.9 (12)	8.8 (3)	7.9 (13)	8.5 (4)	7.9 (13)	8.5 (5)
Stddev	1.0	.3	1.1	1.0	1.0	1.7

Max. and Min. values are current machine averages.

Avg. is current C.K.P.G. average, number of machines is indicated in parentheses.

Stddev is the standard deviation of current machine averages.

Containerboard and Kraft Paper Group
For Periods Jul-Aug, Sep-Oct, Nov-Dec 1992

SUMMARY

Adjusted Basis Weight
Lbs/M Sq Ft

	JUL-AUG		SEP-OCT		NOV-DEC	
	Total	Recycled	Total	Recycled	Total	Recycled
26 Max	27.1	27.7	27.4	27.7	26.8	27.7
Min	25.3	25.7	25.6	25.7	25.5	25.2
Avg	26.3 (36)	26.5 (14)	26.2 (38)	26.4 (16)	26.2 (37)	26.4 (15)
Stddev	.3	.6	.3	.6	.3	.7
<hr/>						
33 Max	33.2	35.3	33.3	35.0	33.5	35.6
Min	32.2	32.8	32.3	32.7	32.2	32.7
Avg	33.2 (30)	33.5 (12)	33.2 (28)	33.4 (12)	33.3 (28)	33.5 (11)
Stddev	.2	.9	.2	.8	.3	1.0
<hr/>						
40 Max	40.3	39.7	40.2	40.2	40.2	40.5
Min	39.0	39.6	39.1	39.3	38.7	39.5
Avg	39.9 (14)	39.6 (3)	39.8 (15)	39.7 (4)	39.9 (14)	39.8 (4)
Stddev	.4	.1	.4	.4	.5	.5

Max. and Min. values are current machine averages.

Avg. is current C.K.P.G. average, number of machines is indicated in parentheses.

Stddev is the standard deviation of current machine averages.

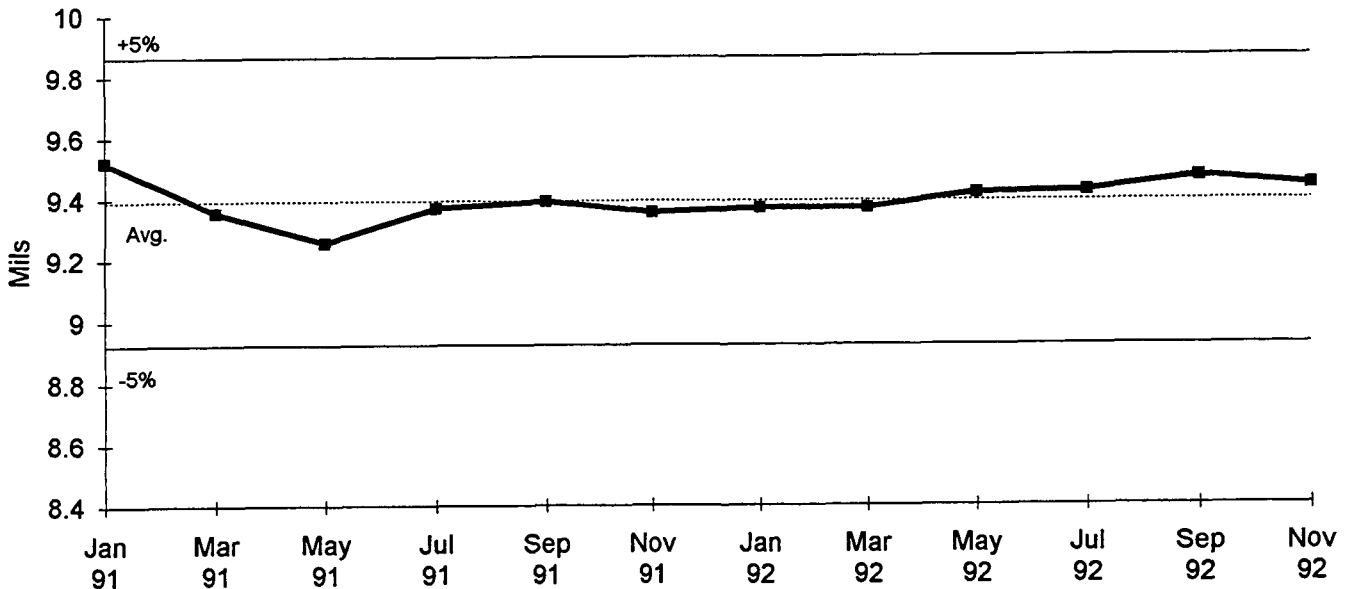
Containerboard and Kraft Paper Group
For Periods Jul-Aug, Sep-Oct, Nov-Dec 1992

SUMMARY

Caliper
Mils

	JUL-AUG		SEP-OCT		NOV-DEC	
	Total	Recycled	Total	Recycled	Total	Recycled
26 Max	11.2	11.1	11.7	11.2	11.4	11.1
Min	7.9	8.0	7.9	7.8	8.1	7.9
Avg	9.4 (29)	9.7 (13)	9.5 (30)	9.7 (14)	9.4 (30)	9.7 (14)
Stddev	.9	.9	1.0	1.0	.9	.9
33 Max	13.7	13.5	13.9	13.6	13.4	13.6
Min	10.0	10.4	10.7	10.4	10.3	10.1
Avg	11.7 (25)	11.8 (11)	11.7 (24)	11.8 (11)	11.7 (24)	11.7 (11)
Stddev	1.1	1.0	1.0	1.1	1.0	1.1
40 Max	15.1	15.4	15.6	15.6	15.7	14.7
Min	11.9	12.8	12.5	12.0	12.4	12.1
Avg	13.7 (10)	14.1 (2)	13.7 (11)	14.0 (3)	13.6 (12)	13.5 (4)
Stddev	1.0	1.9	1.0	1.9	1.0	1.1

26# Caliper

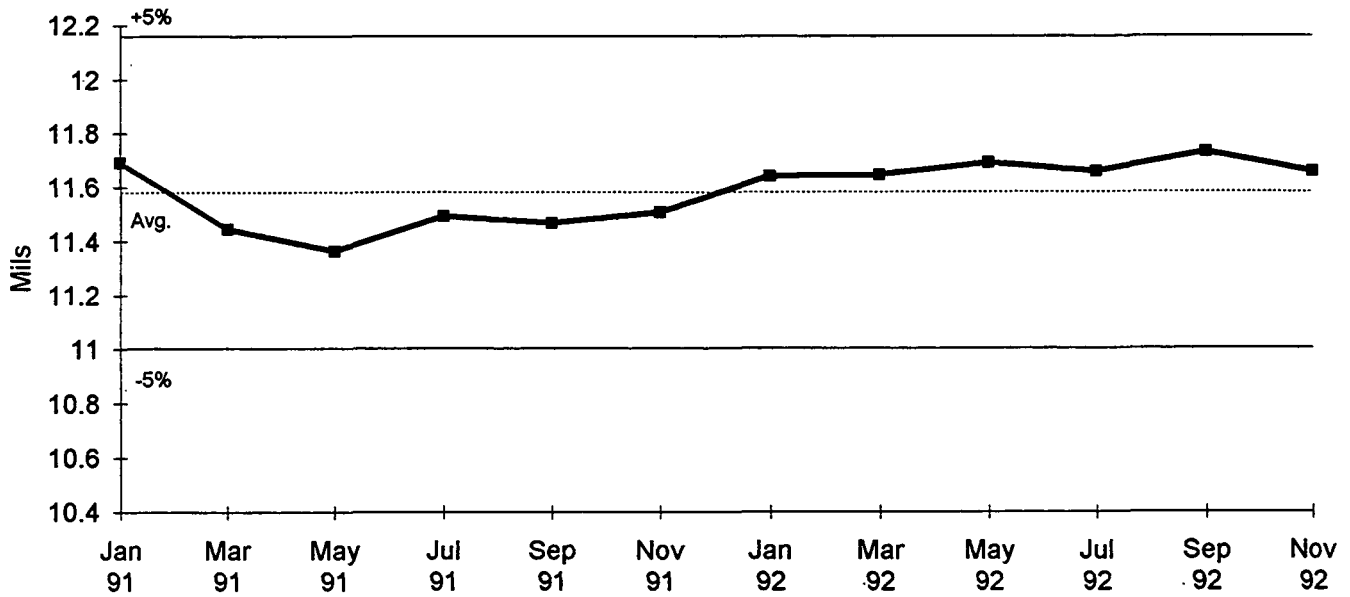


Max. and Min. values are current machine averages.

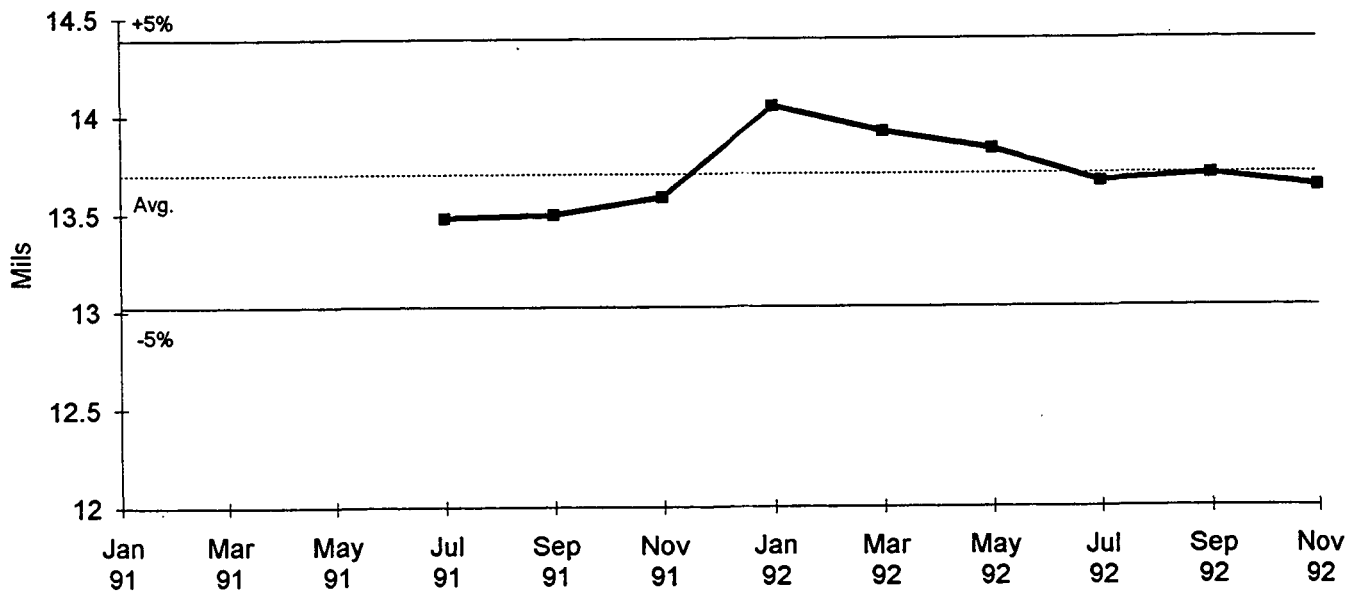
Avg. is current C.K.P.G. average, number of machines is indicated in parentheses.

Stddev is the standard deviation of current machine averages.

33# Caliper



40# Caliper



Max. and Min. values are current machine averages.

Avg. is current C.K.P.G. average, number of machines is indicated in parentheses.

Stddev is the standard deviation of current machine averages.

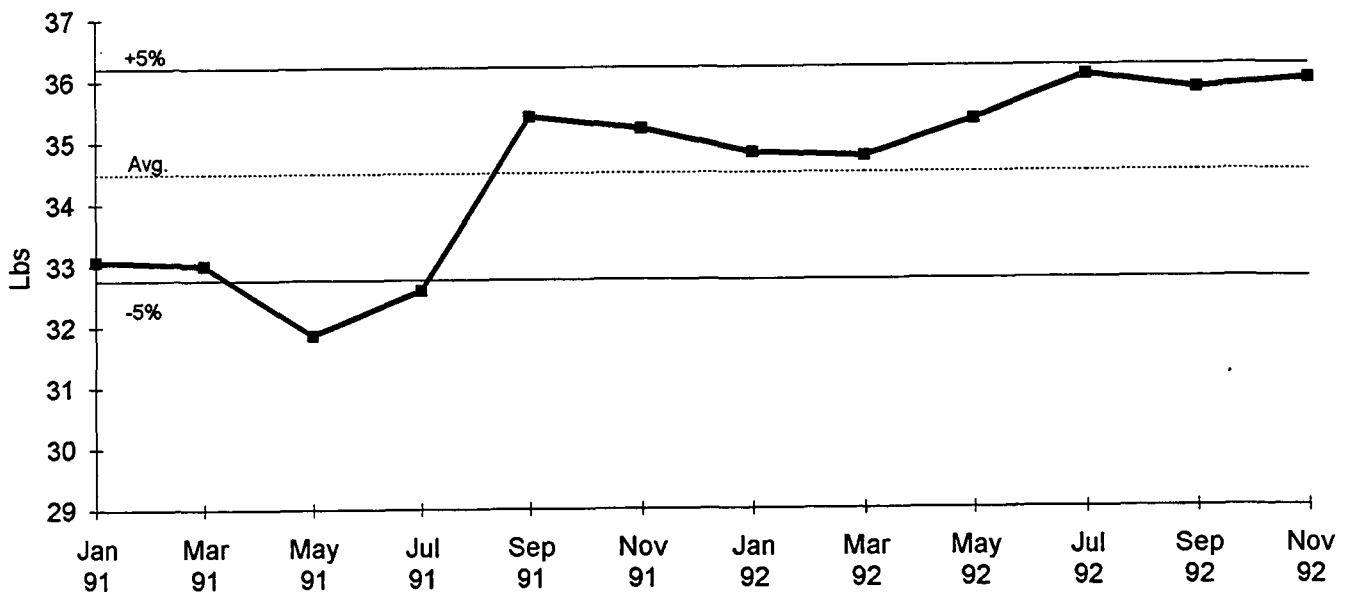
Containerboard and Kraft Paper Group
For Periods Jul-Aug, Sep-Oct, Nov-Dec 1992

SUMMARY

CD Ring Crush
Lbs

	JUL-AUG		SEP-OCT		NOV-DEC	
	Total	Recycled	Total	Recycled	Total	Recycled
26 Max	45.0	36.2	42.5	38.5	43.0	39.1
Min	29.0	30.8	30.5	28.5	30.0	29.0
Avg	36.1 (21)	34.0 (6)	35.8 (23)	33.7 (9)	36.0 (22)	33.6 (8)
Stddev	3.8	2.3	3.4	3.5	3.2	3.2
33 Max	63.0	60.2	65.7	61.9	62.7	63.0
Min	51.0	40.7	51.0	41.0	51.5	46.2
Avg	55.8 (18)	51.4 (6)	56.2 (19)	51.9 (7)	56.0 (17)	53.3 (6)
Stddev	4.0	6.8	5.0	7.3	3.9	5.7
40 Max	93.9	82.6	89.2	83.1	80.4	84.1
Min	69.0	60.0	70.0	56.0	71.5	58.7
Avg	77.6 (9)	71.3 (2)	75.7 (10)	73.1 (3)	74.7 (10)	71.3 (4)
Stddev	7.7	16.0	6.4	14.3	3.7	11.5

26# CD Ring Crush

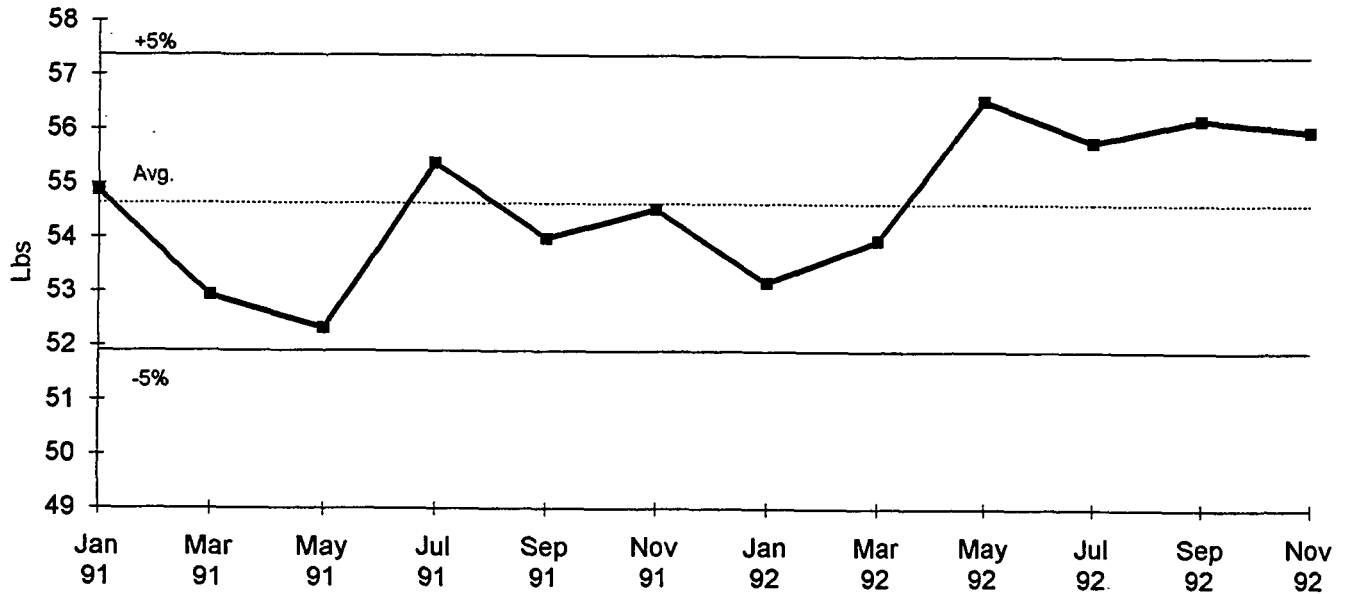


Max. and Min. values are current machine averages.

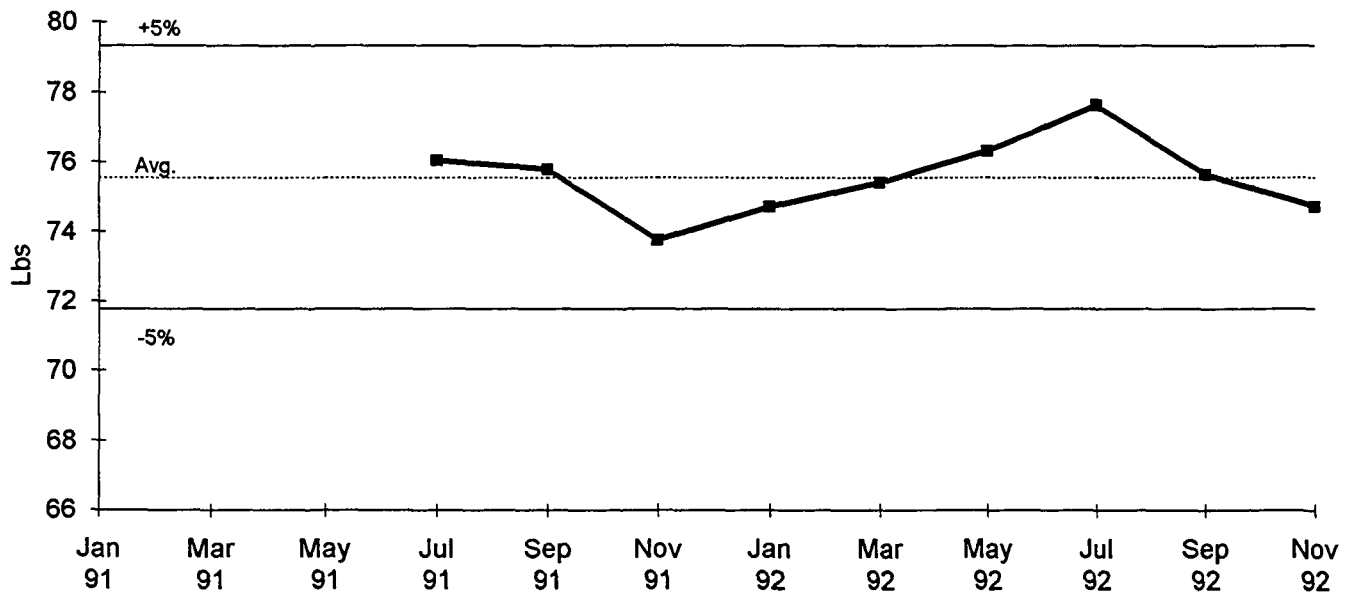
Avg. is current C.K.P.G. average, number of machines is indicated in parentheses.

Stddev is the standard deviation of current machine averages.

33# CD Ring Crush



40# CD Ring Crush



Max. and Min. values are current machine averages.

Avg. is current C.K.P.G. average, number of machines is indicated in parentheses.

Stdev is the standard deviation of current machine averages.

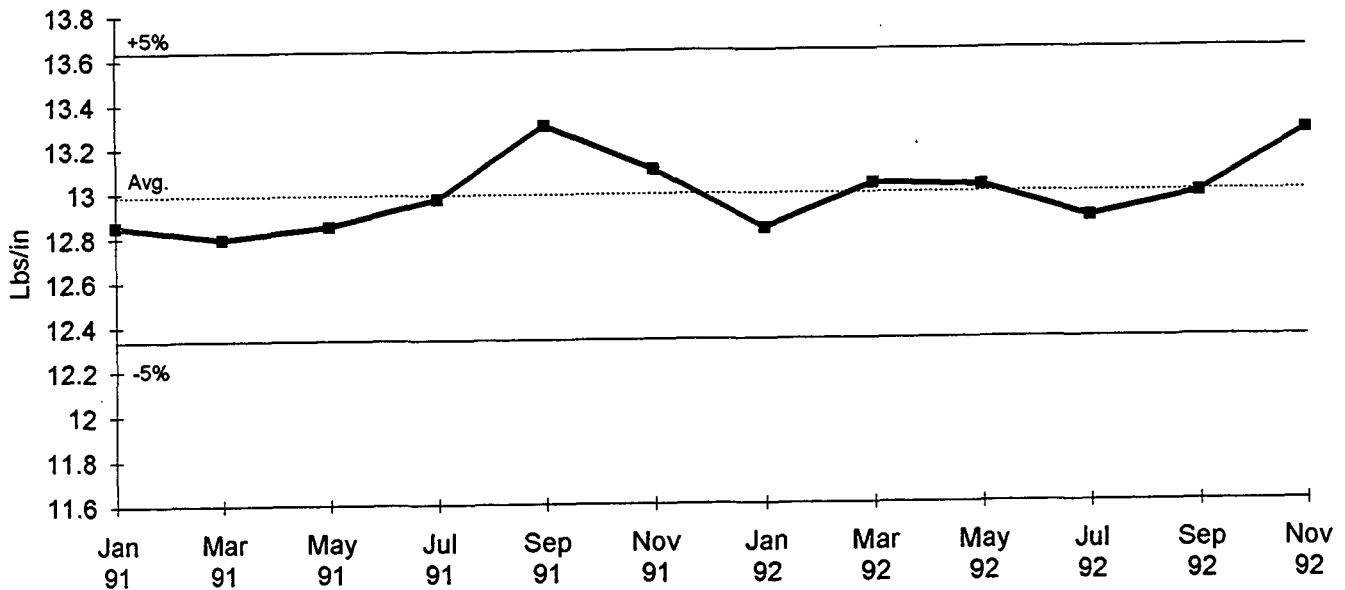
Containerboard and Kraft Paper Group
For Periods Jul-Aug, Sep-Oct, Nov-Dec 1992

SUMMARY

CD Short Span Comp
Lbs/in

	JUL-AUG		SEP-OCT		NOV-DEC	
	Total	Recycled	Total	Recycled	Total	Recycled
26 Max	17.0	13.2	17.8	13.5	17.4	13.5
Min	11.9	11.5	12.5	11.2	12.1	11.2
Avg	12.9 (20)	12.1 (8)	13.0 (20)	12.2 (10)	13.3 (20)	12.5 (10)
Stddev	1.5	.6	1.6	.6	1.6	.7
33 Max	18.6	17.0	18.8	17.8	19.3	18.1
Min	15.3	14.1	16.2	12.9	16.3	13.2
Avg	16.2 (17)	15.3 (7)	16.5 (15)	15.5 (7)	16.9 (16)	16.1 (7)
Stddev	1.1	1.3	.9	1.8	1.0	1.8
40 Max	24.5	21.0	23.6	21.9	23.2	21.6
Min	19.9	18.6	20.8	19.6	21.0	20.4
Avg	21.6 (7)	20.2 (2)	21.7 (8)	21.1 (3)	21.7 (8)	21.0 (3)
Stddev	1.9	1.7	1.1	1.3	.8	.6

26# CD Short Span Comp

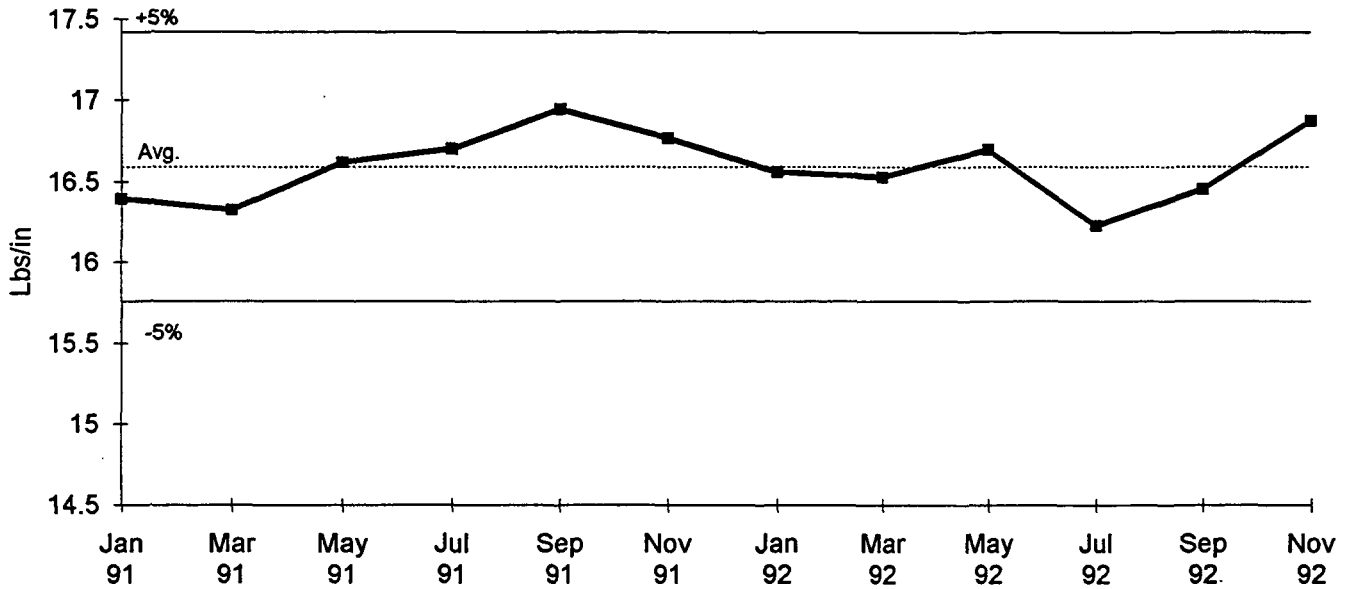


Max. and Min. values are current machine averages.

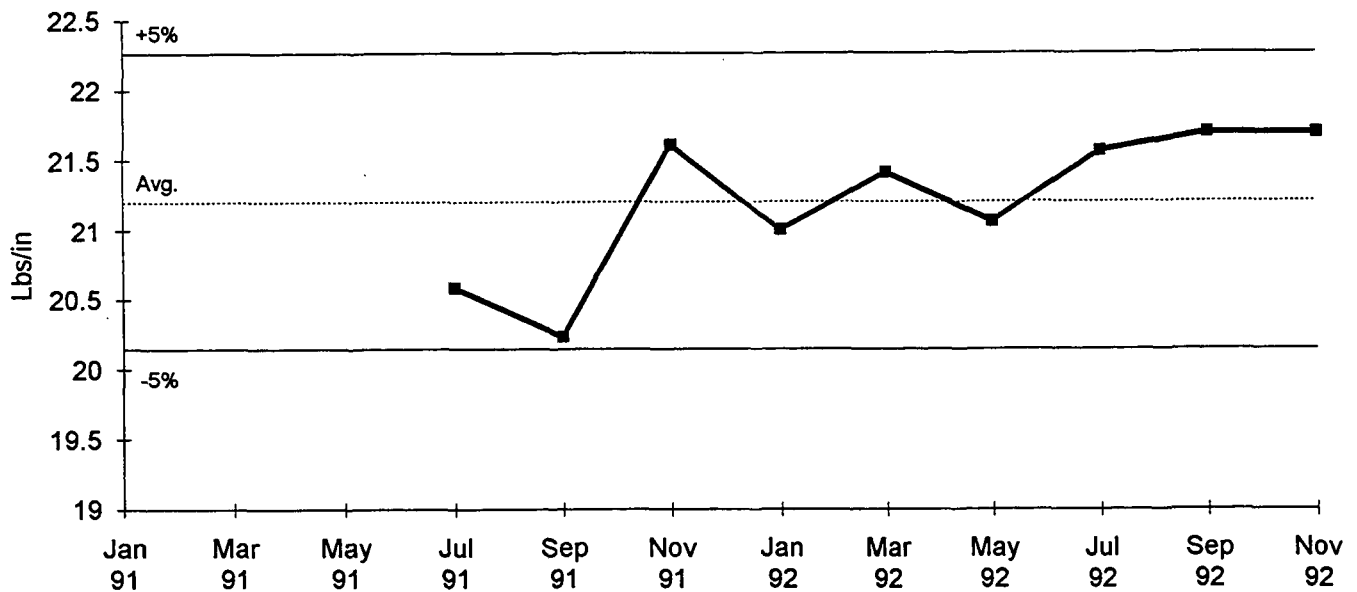
Avg. is current C.K.P.G. average, number of machines is indicated in parentheses.

Stddev is the standard deviation of current machine averages.

33# CD Short Span Comp



40# CD Short Span Comp



Max. and Min. values are current machine averages.

Avg. is current C.K.P.G. average, number of machines is indicated in parentheses.

Stddev is the standard deviation of current machine averages.

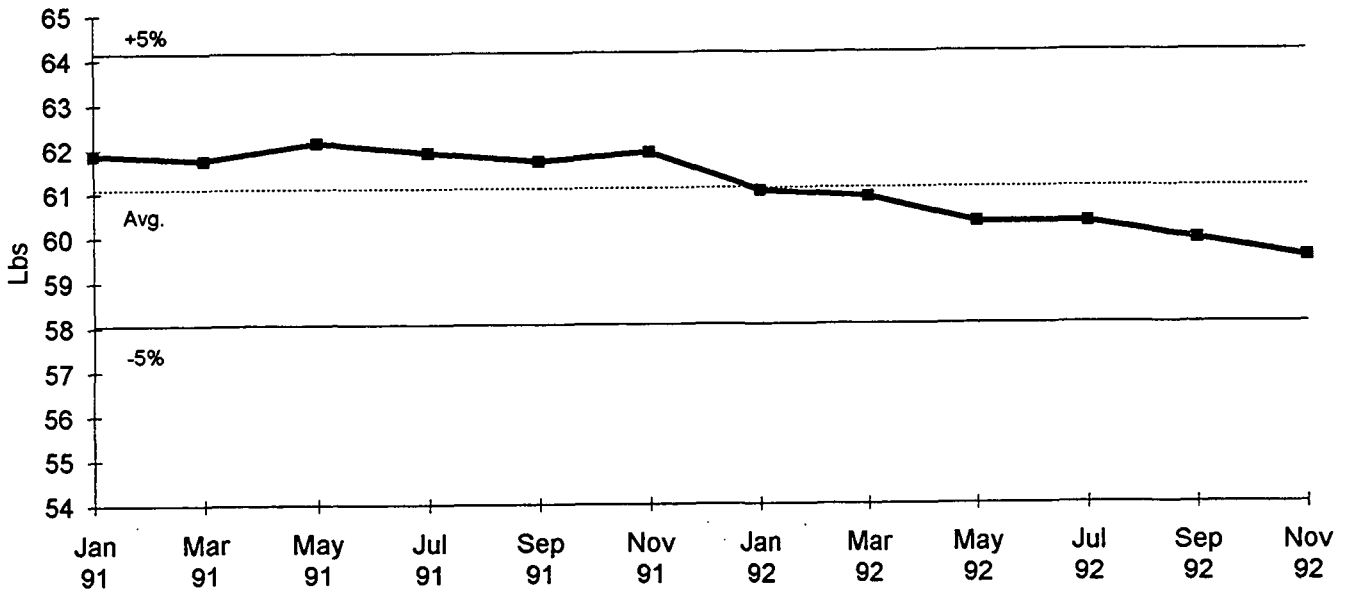
Containerboard and Kraft Paper Group
For Periods Jul-Aug, Sep-Oct, Nov-Dec 1992

SUMMARY

Concora
Lbs

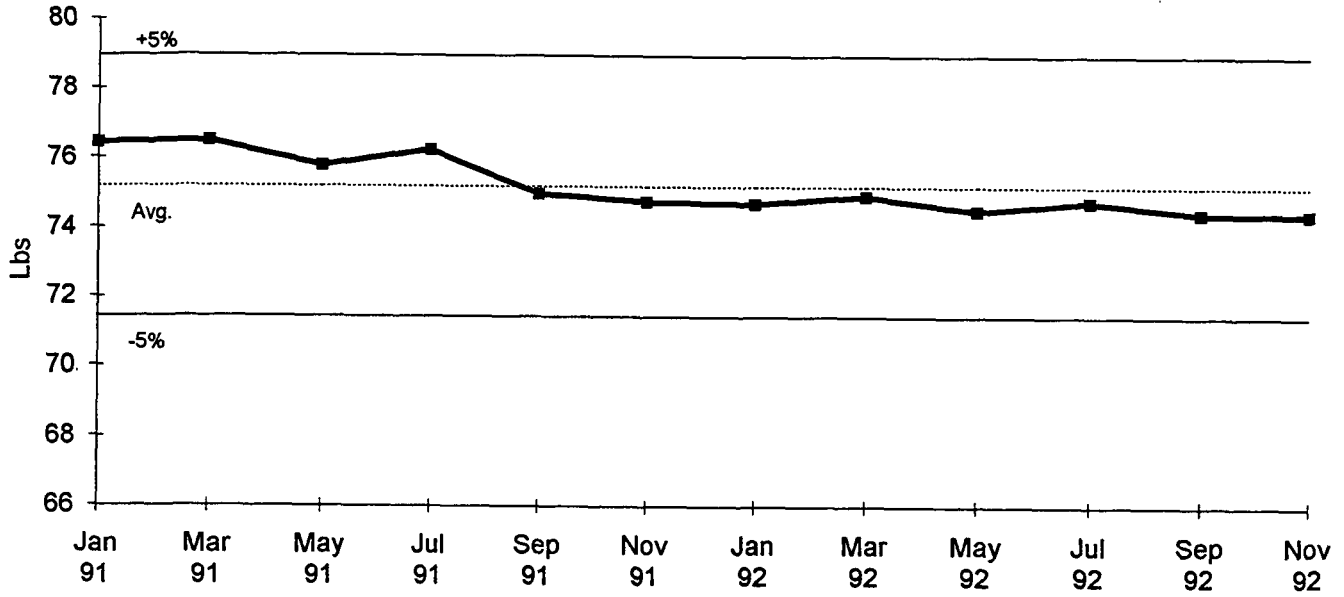
	JUL-AUG		SEP-OCT		NOV-DEC	
	Total	Recycled	Total	Recycled	Total	Recycled
26 Max	67.0	67.1	67.5	66.6	68.4	68.8
Min	56.0	49.0	50.1	42.8	49.5	39.2
Avg	60.3 (37)	59.3 (14)	59.9 (38)	58.7 (16)	59.5 (38)	58.4 (16)
Stddev	2.6	4.4	3.7	5.7	4.4	6.5
33 Max	82.5	86.9	81.0	86.4	79.5	89.9
Min	67.0	67.5	54.5	67.8	62.0	69.1
Avg	74.7 (28)	76.0 (11)	74.4 (27)	76.4 (11)	74.4 (27)	77.6 (11)
Stddev	4.3	6.5	6.4	6.2	4.9	7.0
40 Max	90.0	84.1	97.0	84.5	91.8	85.9
Min	69.5	75.5	52.0	76.5	64.5	76.5
Avg	79.5 (13)	80.9 (3)	79.6 (13)	81.9 (3)	80.1 (13)	82.3 (4)
Stddev	6.2	4.7	11.8	4.1	7.6	4.2

26# Concora

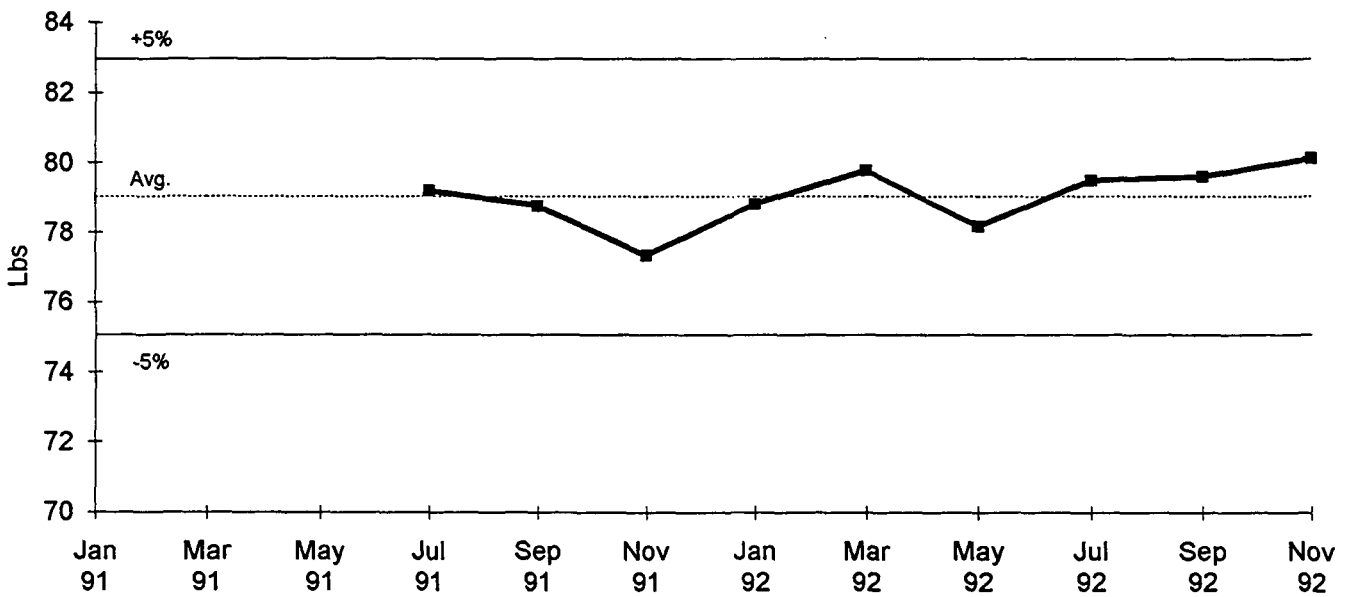


Max. and Min. values are current machine averages.
Avg. is current C.K.P.G. average, number of machines is indicated in parentheses.
Stddev is the standard deviation of current machine averages.

33# Concora



40# Concora



Max. and Min. values are current machine averages.

Avg. is current C.K.P.G. average, number of machines is indicated in parentheses.

Stddev is the standard deviation of current machine averages.

INTRODUCTION

The continuous base-line study (modified) is a compilation of bimonthly averages of mill test data obtained routinely on 26 lb, 33-lb, and 40 lb. corrugating medium manufactured in the member mills of C.K.P.G. Mill data are included for moisture content, basis weight, caliper, Concora, C.D. ring crush, and C.D. STFI tests made on the production of individual machines which produced at least 500 tons of one of the three major grade weights during a given period.

Participating mills are asked to report reel moisture content, basis weight, and moisture content corresponding to the basis weight measurement. The latter two measurements are used to compute the adjusted basis weight corresponding to a moisture content of 7.8%. Only the reel moisture content and the adjusted basis weight are included in the report.

PRESENTATION OF DATA

For the three major grade weights of corrugating Medium referred to earlier, data on conditioning and testing environments, mill test averages for moisture content, adjusted basis weight, caliper, Concora, C.D. ring crush, and C.D. STFI are compiled in the following tables.

	Description
I-II-III	Mill Test Averages on 26-lb Corrugating Medium
IV-V-VI	Mill Test Averages on 33-lb Corrugating Medium
VII-VIII-IX	Mill Test Averages on 40-lb Corrugating Medium
X	Data on Conditioning and Testing Environments

The procedure used in calculating cumulative machine averages, machines indexes, and C.K.P.G. indexes are described in the appendix.

In the tables, an (R) following a company code indicates medium manufactured from recycled fibers.

Table I

AVERAGES OF MILL QUALITY DATA FOR JUL-AUG 1992

26 #

Code	Moist @ reel Percent			Adjusted Basis Weight Lbs/M Sq Ft			Caliper Mils		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
A1		6.9			26.1			7.7	
B3	7.4	7.5	100.0	26.6	26.6	101.5			
C2	7.2	7.1	97.3	26.3	26.0	100.4			
C4 (R)	5.7	5.8	77.0	26.3	26.3	100.4	9.6	9.4	102.1
D3 (R)	6.9	7.0	93.2	27.0	26.9	103.1	10.7	10.6	113.8
E1	7.8	7.8	105.4	26.1	26.1	99.6	9.3	9.3	98.9
G1 (R)	5.5	5.6	74.3	27.7	27.7	105.7	10.0	9.8	106.4
G3		6.5		26.2	26.3	100.0	7.9	8.3	84.0
G4	6.9	7.2	93.2	26.2	26.2	100.0	8.9	9.2	94.7
H1	7.3	7.3	98.6	26.0	26.0	99.2	9.4	9.7	100.0
H2 (R)	8.9	8.8	120.3	25.7	25.7	98.1	9.5	9.2	101.1
H3	7.8	7.8	105.4	26.0	26.1	99.2	9.5	9.7	101.1
I4	8.2	8.1	110.8	25.8	25.8	98.5	9.6	9.6	102.1
J2	7.7	6.5	104.1	26.1	26.1	99.6	8.6	8.5	91.5
J3	8.4	8.1	113.5	26.1	26.1	99.6	8.5	8.6	90.4
J4 (R)	7.0	6.6	94.6	26.1	26.5	99.6	9.0	9.2	95.7
K1	7.8		105.4	26.0		99.2			
K2 (R)	5.9	6.0	79.7	27.6	27.6	105.3	9.5	9.6	101.1
L4 (R)	7.0	6.9	94.6	26.2	26.2	100.0	8.0	8.3	85.1
M2 (R)	8.4	8.5	113.5	26.2	26.3	100.0	10.5	10.3	111.7
M3	7.0	7.3	94.6	27.1	26.4	103.4			
N1				26.2	26.2	100.0	9.0	8.9	95.7
N4	7.2	7.2	97.3	26.0	25.9	99.2	9.0	9.0	95.7
P1	7.9	7.8	106.8	26.3	26.3	100.4	11.2	11.1	119.1
P2	5.9	5.8	79.7	26.2	26.1	100.0	10.4	10.1	110.6
P3 (R)	7.6	7.6	102.7	26.1	26.1	99.6	11.1	11.0	118.1
Q4 (R)	9.0	8.2	121.6	26.7	26.6	101.9			
R2	7.5		101.4	26.0		99.2			
S1	7.2	7.3	97.3	26.1	26.1	99.6	8.5	8.5	90.4
S3	9.5	9.4	128.4	25.3	25.5	96.6	9.1	8.8	96.8
T2 (R)		7.0		26.3	26.3	100.4	8.8	8.6	93.6
U1 (R)	9.2	9.1	124.3	26.1	25.7	99.6	9.2	9.1	97.9
V1	7.9	7.0	106.8		26.0				
V3	7.7		104.1	26.0		99.2			
W2 (R)	7.0	6.9	94.6	25.9	25.9	98.9	9.5	9.4	101.1
W4	8.8	7.3	118.9	26.1	26.1	99.6	7.9	7.5	84.0
Y1	7.2	7.2	97.3	26.1	26.1	99.6	10.2	10.1	108.5
Z4 (R)	6.8	7.0	91.9	27.1	27.0	103.4	10.9	11.1	116.0
CKPG-M	7.5	7.4	101.4	26.3	26.2	100.4	9.4	9.4	100.0
(R)	7.3			26.5			9.7		

Notes A and B are given in the appendix.

Table I (cont.)

AVERAGES OF MILL QUALITY DATA FOR JUL-AUG 1992

26 #

Code	CD Ring Crush Lbs			CD Short Span Comp Lbs/in			Concora Lbs		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
A1					13.8			74.6	
B3	29.0	29.2	83.3	11.9	12.8	91.5	56.0	56.8	91.4
C2	45.0	42.4	129.3				60.5	59.8	98.7
C4 (R)	36.2	37.2	104.0				62.4	64.6	101.8
D3 (R)							56.0	58.4	91.4
E1				14.0	13.5	107.7	58.5	57.6	95.4
G1 (R)				11.9	12.1	91.5	56.4	55.5	92.0
G3	36.8	35.7	105.7		13.7		57.1	58.4	93.1
G4	32.0	32.5	92.0	12.7	12.6	97.7	58.0	57.7	94.6
H1	36.5	40.0	104.9	12.0	12.3	92.3	63.5	60.3	103.6
H2 (R)				12.4	12.3	95.4	57.3	57.2	93.5
H3				13.5	13.1	103.8	58.0	57.0	94.6
I4	33.7	35.2	96.8				62.0	61.4	101.1
J2				17.0	16.4	130.8	61.0	65.6	99.5
J3				12.9	12.7	99.2	63.5	66.3	103.6
J4 (R)	36.2	32.2	104.0	12.7	11.8	97.7	61.8	60.6	100.8
K1	37.2		106.9				61.5		100.3
K2 (R)				11.5	11.9	88.5	56.3	55.6	91.8
L4 (R)				11.9		91.5	63.4	62.6	103.4
M2 (R)	32.5	32.0	93.4				63.1	62.9	102.9
M3	41.0	37.6	117.8				59.0	62.1	96.2
N1				11.9	12.1	91.5	60.5	60.1	98.7
N4	38.4	37.7	110.3	14.2	13.5	109.2	62.4	61.1	101.8
P1	39.0	35.7	112.1	12.8	12.7	98.5	63.0	61.7	102.8
P2							61.6	61.9	100.5
P3 (R)	35.6	36.6	102.3				67.1	66.3	109.5
Q4 (R)	32.5	33.0	93.4	11.9	13.0	91.5	59.5	60.8	97.1
R2	37.7		108.3				59.5		97.1
S1	34.0	32.5	97.7	13.7	13.4	105.4	59.0	58.6	96.2
S3							67.0	66.2	109.3
T2 (R)	30.8	30.9	88.5				49.0	53.9	79.9
U1 (R)				13.2	12.3	101.5	60.0	60.7	97.9
V1	35.0	39.5	100.6				61.0	60.8	99.5
V3	39.7		114.1				60.9		99.3
W2 (R)		28.4		11.6	12.0	89.2	60.1	61.0	98.0
W4				15.6	15.6	120.0	63.0	73.6	102.8
Y1	37.3	38.1	107.2				64.2	64.7	104.7
Z4 (R)							58.2	60.0	94.9
CKPG-M (R)	36.1 34.0	34.8	103.7	12.9 12.1	13.0	99.2	60.3 59.3	61.3	98.4

Notes A and B are given in the appendix.

Table II

AVERAGES OF MILL QUALITY DATA FOR SEP-OCT 1992

26 #

Code	Moist @ reel Percent			Adjusted Basis Weight Lbs/M Sq Ft			Caliper Mils		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
A1		6.9			26.1			7.7	
B3 (R)	7.4	7.5	100.0	26.7	26.6	101.9			
C2	7.3	7.1	98.6	26.1	26.0	99.6			
C4 (R)	5.6	5.8	75.7	26.7	26.3	101.9	9.8	9.5	104.3
D3 (R)	6.9	7.0	93.2	26.9	26.9	102.7	10.9	10.5	116.0
E1	7.8	7.8	105.4	26.1	26.1	99.6	9.3	9.3	98.9
F4 (R)	7.2		97.3	26.1		99.6	8.7		92.6
G1 (R)	5.5	5.6	74.3	27.7	27.7	105.7	9.9	9.9	105.3
G3		6.5		26.5	26.3	101.1	8.5	8.2	90.4
G4	7.0	7.2	94.6	26.1	26.2	99.6	9.1	9.1	96.8
H1	7.2	7.3	97.3	26.1	26.0	99.6	9.4	9.6	100.0
H2 (R)	8.8	8.8	118.9	25.7	25.7	98.1	9.6	9.3	102.1
H3	7.8	7.8	105.4	26.0	26.1	99.2	9.6	9.6	102.1
I4	8.3	8.2	112.2	25.7	25.8	98.1	9.7	9.6	103.2
J2	7.9	6.7	106.8	26.1	26.1	99.6	8.0	8.5	85.1
J3	8.8	8.2	118.9	26.1	26.1	99.6	8.4	8.6	89.4
J4 (R)	7.0	6.6	94.6	26.1	26.4	99.6	9.1	9.2	96.8
K1	7.8	7.8	105.4	26.0	26.0	99.2			
K2 (R)	6.0	5.9	81.1	27.6	27.6	105.3	9.5	9.6	101.1
L4 (R)	6.9	6.9	93.2	26.2	26.2	100.0	7.8	8.1	83.0
M2 (R)	8.5	8.5	114.9	26.2	26.3	100.0	11.2	10.4	119.1
M3	6.5	7.2	87.8	27.4	26.5	104.6			
N1				26.2	26.2	100.0	8.9	8.9	94.7
N4	7.1	7.2	95.9	26.1	25.9	99.6	9.1	9.0	96.8
P1	8.0	7.8	108.1	26.5	26.3	101.1	11.7	11.3	124.5
P2	5.9	5.8	79.7	26.2	26.1	100.0	10.6	10.2	112.8
P3 (R)	7.7	7.6	104.1	26.1	26.1	99.6	11.2	10.9	119.1
Q4 (R)	9.1	8.3	123.0	26.3	26.7	100.4			
R2	7.5	7.5	101.4	26.1	26.0	99.6			
S1	7.1	7.3	95.9	26.1	26.1	99.6	8.7	8.4	92.6
S3	9.4	9.4	127.0	25.6	25.4	97.7	9.0	8.8	95.7
T2 (R)		7.0		25.9	26.3	98.9	8.9	8.7	94.7
U1 (R)	9.1	9.1	123.0	26.0	25.8	99.2	9.1	9.1	96.8
V1	6.1	7.2	82.4	25.9	26.0	98.9			
V3	7.6	7.7	102.7	26.0	26.0	99.2			
W2 (R)	7.0	6.9	94.6	25.9	25.9	98.9	9.5	9.4	101.1
W4	8.6	7.6	116.2	26.1	26.1	99.6	7.9	7.6	84.0
Y1	7.2	7.2	97.3	26.0	26.1	99.2	10.3	10.1	109.6
Z4 (R)	6.7	6.9	90.5	27.1	27.1	103.4	11.0	11.2	117.0
CKPG-M (R)	7.4 7.2	7.4	100.0	26.2 26.4	26.2	100.0	9.5 9.7	9.4	101.1

Notes A and B are given in the appendix.

Table II (cont.)

AVERAGES OF MILL QUALITY DATA FOR SEP-OCT 1992

26 #

Code	CD Ring Crush Lbs			CD Short Span Comp Lbs/in			Concora Lbs		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
A1					13.8			74.6	
B3 (R)	28.5	29.4	80.7	12.4	12.4	95.4	54.5	56.7	89.3
C2	42.5	42.8	120.4				59.5	59.9	97.5
C4 (R)	36.1	36.9	102.3				66.6	64.2	109.2
D3 (R)							55.9	57.8	91.6
E1				13.4	13.6	103.1	59.5	57.6	97.5
F4 (R)	34.0		96.3	12.2		93.8	58.0		95.1
G1 (R)				11.7	12.1	90.0	56.9	55.7	93.3
G3	37.1	36.2	105.1		14.0		50.1	58.1	82.1
G4	30.5	32.4	86.4	12.8	12.6	98.5	56.5	57.8	92.6
H1	38.0	39.5	107.6		12.4		64.0	61.3	104.9
H2 (R)				12.2	12.3	93.8	55.3	57.1	90.7
H3				13.3	13.2	102.3	57.5	57.1	94.3
I4	33.5	34.7	94.9				61.2	61.6	100.3
J2				17.8	16.5	136.9	60.0	64.9	98.4
J3				13.9	12.8	106.9	65.0	65.7	106.6
J4 (R)	35.7	32.8	101.1	12.6	11.9	96.9	61.3	60.4	100.5
K1	37.5	37.2	106.2				62.0	61.5	101.6
K2 (R)				11.9	11.8	91.5	57.2	55.7	93.8
L4 (R)				12.3	11.9	94.6	63.9	62.7	104.8
M2 (R)	31.0	32.1	87.8				63.1	62.9	103.4
M3	41.0	38.3	116.1				59.0	61.5	96.7
N1				12.7	12.1	97.7	60.0	60.2	98.4
N4	40.3	38.3	114.2	14.6	13.7	112.3	66.0	61.1	108.2
P1	39.0	36.3	110.5	12.5	12.8	96.2	61.0	61.9	100.0
P2							62.1	61.8	101.8
P3 (R)	38.5	36.3	109.1				66.3	66.6	108.7
Q4 (R)	33.5	33.3	94.9	12.2	12.9	93.8	60.0	60.6	98.4
R2	38.0	37.7	107.6				59.8	59.5	98.0
S1	31.5	33.3	89.2	13.2	13.5	101.5	59.0	58.6	96.7
S3							67.5	66.4	110.7
T2 (R)	30.2	30.7	85.6				42.8	52.5	70.2
U1 (R)				13.5	12.4	103.8	60.5	60.6	99.2
V1	37.0	38.8	104.8				58.0	60.8	95.1
V3	39.2	39.7	111.0				60.9	60.9	99.8
W2 (R)	29.0	29.4	82.2	11.2	11.8	86.2	60.8	60.9	99.7
W4				15.4	15.7	118.5	63.5	71.3	104.1
Y1	38.5	37.7	109.1				63.6	64.6	104.3
Z4 (R)							58.1	59.4	95.2
CKPG-M	35.8	35.3	101.4	13.0	13.0	100.0	59.9	61.0	98.2
(R)	33.7			12.2			58.7		

Notes A and B are given in the appendix.

Table III

AVERAGES OF MILL QUALITY DATA FOR NOV-DEC 1992

26 #

Code	Moist @ reel Percent			Adjusted Basis Weight Lbs/M Sq Ft			Caliper Mils		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
A1		6.9			26.1			7.7	
B3 (R)	7.5	7.3	101.4	26.7	26.6	101.9			
C2	7.3	7.1	98.6	26.0	26.1	99.2			
C4 (R)	5.6	5.7	75.7	26.3	26.4	100.4	9.7	9.5	103.2
D3 (R)	7.0	7.0	94.6	26.6	26.9	101.5	10.9	10.6	116.0
E1	7.8	7.8	105.4	26.0	26.1	99.2	9.2	9.3	97.9
F4 (R)	7.2	7.2	97.3	26.1	26.1	99.6	8.8	8.7	93.6
G1 (R)	5.5	5.5	74.3	27.7	27.7	105.7	9.9	9.9	105.3
G3		6.6		26.8	26.2	102.3	8.7	8.3	92.6
G4	7.3	7.1	98.6	26.1	26.2	99.6	9.3	9.1	98.9
H1	7.2	7.3	97.3	26.1	26.0	99.6	9.4	9.5	100.0
H2 (R)	9.0	8.8	121.6	25.7	25.7	98.1	9.5	9.3	101.1
H3	7.8	7.8	105.4	26.0	26.0	99.2	9.4	9.6	100.0
I4	8.3	8.2	112.2	25.8	25.8	98.5	9.7	9.6	103.2
J2	7.9	6.9	106.8	26.1	26.1	99.6	8.2	8.4	87.2
J3	8.8	8.3	118.9	26.1	26.1	99.6	8.5	8.6	90.4
J4 (R)	7.0	6.7	94.6	26.1	26.3	99.6	9.2	9.2	97.9
K1	7.8	7.8	105.4	26.0	26.0	99.2			
K2 (R)	6.0	5.9	81.1	27.6	27.6	105.3	9.5	9.6	101.1
L4 (R)	7.0	6.9	94.6	26.3	26.2	100.4	7.9	8.0	84.0
M2 (R)	8.4	8.5	113.5	26.2	26.2	100.0	10.7	10.5	113.8
M3	7.8	6.9	105.4	26.2	26.7	100.0			
N1				26.2	26.2	100.0	9.2	8.9	97.9
N4	7.1	7.2	95.9	26.1	25.9	99.6	9.1	9.0	96.8
P1	7.9	7.8	106.8	26.6	26.3	101.5	11.4	11.4	121.3
P2	6.7	5.8	90.5	26.1	26.2	99.6	10.7	10.2	113.8
P3 (R)	7.6	7.6	102.7	26.1	26.1	99.6	10.5	11.0	111.7
Q4 (R)	9.0	8.6	121.6	26.3	26.6	100.4			
R2	7.5	7.5	101.4	26.0	26.0	99.2			
S1	7.3	7.2	98.6	26.2	26.1	100.0	8.3	8.5	88.3
S3	9.6	9.4	129.7	25.5	25.4	97.3	9.1	8.9	96.8
T2 (R)	6.7	6.9	90.5	25.2	26.1	96.2	8.5	8.7	90.4
U1 (R)	9.2	9.1	124.3		25.9		8.9	9.1	94.7
V1	8.0	7.0	108.1	25.7	26.0	98.1			
V3	7.6	7.7	102.7	26.0	26.0	99.2			
W2 (R)	7.0	7.0	94.6	25.9	25.9	98.9	9.5	9.4	101.1
W4	8.7	7.9	117.6	26.1	26.1	99.6	8.1	7.7	86.2
Y1	7.2	7.2	97.3	26.0	26.1	99.2	10.4	10.1	110.6
Z4 (R)	6.6	6.9	89.2	27.2	27.1	103.8	11.1	10.9	118.1
CKPG-M (R)	7.5 7.3	7.4	101.4	26.2 26.4	26.2	100.0	9.4 9.7	9.4	100.0

Notes A and B are given in the appendix.

Table III (cont.)

AVERAGES OF MILL QUALITY DATA FOR NOV-DEC 1992

26 #

Code	CD Ring Crush Lbs			CD Short Span Comp Lbs/in			Concora Lbs		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
A1					13.6			73.8	
B3 (R)	29.0	29.3	81.9	13.5	12.4	103.8	55.5	56.3	91.4
C2	43.0	42.8	121.5				58.0	59.8	95.6
C4 (R)	35.6	36.8	100.6				67.5	64.2	111.2
D3 (R)							54.5	57.1	89.8
E1				13.7	13.7	105.4	59.0	57.9	97.2
F4 (R)	32.0	34.0	90.4	11.8	12.2	90.8	58.0	58.0	95.6
G1 (R)				12.2	12.0	93.8	56.6	55.9	93.2
G3	37.0	36.4	104.5				52.2	56.5	86.0
G4	30.0	32.2	84.7	12.1	12.8	93.1	54.5	57.5	89.8
H1	37.5	39.3	105.9		12.4		63.5	62.3	104.6
H2 (R)				12.5	12.1	96.2	56.1	56.9	92.4
H3				13.2	13.1	101.5	57.0	57.3	93.9
I4	34.9	34.2	98.6				61.2	61.7	100.8
J2				17.4	16.8	133.8	62.0	63.8	102.1
J3				14.2	13.0	109.2	66.0	65.8	108.7
J4 (R)	34.7	33.1	98.0	12.4	12.0	95.4	60.0	60.5	98.8
K1	36.5	37.3	103.1				61.7	61.7	101.6
K2 (R)				12.2	11.8	93.8	57.4	56.0	94.6
L4 (R)				12.5	12.1	96.2	62.6	63.0	103.1
M2 (R)	32.0	32.0	90.4				62.4	63.0	102.8
M3	39.0	38.8	110.2				49.5	60.6	81.5
N1				12.6	12.2	96.9	61.5	60.2	101.3
N4	38.3	37.5	108.2	14.2	13.8	109.2	68.4	62.2	112.7
P1	40.5	37.5	114.4	13.4	12.8	103.1	62.0	61.7	102.1
P2							61.5	61.8	101.3
P3 (R)	39.1	36.7	110.5				68.8	66.7	113.3
Q4 (R)	33.0	33.3	93.2	13.1	12.7	100.8	59.5	60.4	98.0
R2	37.0	37.9	104.5				59.5	59.6	98.0
S1	32.5	32.7	91.8	13.4	13.4	103.1	58.0	58.5	95.6
S3							65.0	67.0	107.1
T2 (R)	30.3	30.4	85.6				39.2	50.0	64.6
U1 (R)				13.4	12.7	103.1	58.0	60.6	95.6
V1	38.0	37.8	107.3				57.5	60.4	94.7
V3	38.5	39.4	108.8				61.6	60.9	101.5
W2 (R)		30.0		11.2	11.6	86.2	60.9	60.7	100.3
W4				15.9	15.6	122.3	63.5	69.3	104.6
Y1	38.3	37.9	108.2				63.0	64.4	103.8
Z4 (R)							58.0	59.1	95.6
CKPG-M (R)	36.0 33.6	35.4	101.7	13.3 12.5	13.0	102.3	59.5 58.4	60.7	98.0

Notes A and B are given in the appendix.

Table IV

AVERAGES OF MILL QUALITY DATA FOR JUL-AUG 1992

33 #

Code	Moist @ reel Percent			Adjusted Basis Weight Lbs/M Sq Ft			Caliper Mils		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
C4 (R)	5.6	5.6	74.7	34.0	33.3	102.7	12.2	11.8	105.2
D3 (R)	7.1	7.0	94.7	33.6	33.6	101.5	12.6	12.6	108.6
E1	7.8	7.8	104.0	33.1	33.0	100.0	12.0	11.8	103.4
G1 (R)	5.6	5.4	74.7	35.3	35.5	106.6	12.2	12.3	105.2
G3		6.9		32.8	32.8	99.1	10.0	10.4	86.2
G4	6.8	7.2	90.7	33.2	33.2	100.3	10.5	11.3	90.5
H1	7.4	7.4	98.7	33.0	33.0	99.7	11.7	12.1	100.9
I4	8.2	8.1	109.3	33.2	32.9	100.3	12.0	11.8	103.4
J2		6.5			33.1			10.9	
J3	8.5	8.3	113.3	33.1	33.1	100.0	11.1	11.3	95.7
J4 (R)	7.0	6.9	93.3	33.1	33.1	100.0	11.0	11.1	94.8
K1	7.6		101.3	33.0		99.7			
K2 (R)	6.5	6.5	86.7	35.1	35.1	106.0	12.6	12.7	108.6
L4 (R)	7.0	7.0	93.3	33.4	33.1	100.9	10.4	10.0	89.7
M2 (R)	8.5	8.5	113.3	32.8	33.1	99.1	10.8	10.5	93.1
M3	7.4	6.8	98.7	32.9	32.9	99.4			
N1				33.1	33.0	100.0	11.0	10.9	94.8
N4	7.1	7.3	94.7	33.1	32.7	100.0	11.1	11.2	95.7
P1	8.0	7.8	106.7	33.1	33.3	100.0	13.7	13.3	118.1
P2	6.0	6.0	80.0	33.1	33.0	100.0	12.7	12.6	109.5
P3 (R)	8.3	8.2	110.7	32.9	32.9	99.4	13.0	13.2	112.1
Q4 (R)	9.0	8.5	120.0	32.8	32.8	99.1			
R2	7.3		97.3	33.2		100.3			
S1	7.3	7.2	97.3	33.1	33.1	100.0	10.5	10.6	90.5
S3	9.6	9.3	128.0	32.2	32.3	97.3	11.3	11.1	97.4
U1 (R)	9.0	8.8	120.0	33.0	32.6	99.7	11.1	11.1	95.7
V3	7.7		102.7	33.0		99.7			
W2 (R)	7.0	6.7	93.3	32.9	33.0	99.4	11.0	11.0	94.8
W4	9.0	7.4	120.0	33.1	33.1	100.0	10.5	9.7	90.5
Y1	7.5	7.5	100.0	33.0	33.2	99.7	13.3	12.7	114.7
Z4 (R)	6.5	6.9	86.7	34.4	34.1	103.9	13.5	13.3	116.4
CKPG-M (R)	7.5 7.4	7.5	100.0	33.2 33.5	33.1	100.3	11.7 11.8	11.6	100.9

Notes A and B are given in the appendix.

Table IV (cont.)

AVERAGES OF MILL QUALITY DATA FOR JUL-AUG 1992

33 #

Code	CD Ring Crush Lbs			CD Short Span Comp Lbs/in			Concora Lbs		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
C4 (R)	54.3	56.7	99.6				74.6	72.7	99.5
D3 (R)							86.9	88.1	115.9
E1				18.3	17.1	109.6	74.0	70.6	98.7
G1 (R)				14.2	14.5	85.0	67.5	67.7	90.0
G3	54.0	53.2	99.1		17.3		67.0	67.6	89.3
G4	53.0	50.9	97.2	16.5	16.7	98.8	70.5	70.5	94.0
H1	60.0	61.9	110.1	16.0	16.8	95.8	75.0	70.9	100.0
I4	63.0	60.7	115.6				78.1	77.8	104.1
J2					19.2			69.0	
J3				15.3	15.5	91.6	68.5	68.6	91.3
J4 (R)	54.4	52.0	99.8	16.7	16.1	100.0	72.1	72.6	96.1
K1	59.3		108.8				76.6		102.1
K2 (R)				14.2	14.3	85.0	68.0	69.2	90.7
L4 (R)	40.7	42.9	74.7	14.3		85.6		71.5	
M2 (R)	51.5	51.5	94.5				77.0	77.6	102.7
M3	54.0	53.1	99.1				71.0	74.1	94.7
N1				15.9	16.1	95.2	82.5	79.8	110.0
N4	62.0	59.3	113.8	18.0	17.8	107.8	74.4	73.5	99.2
P1	58.5	57.5	107.3	16.7	16.7	100.0	71.5	72.9	95.3
P2				17.2	17.6	103.0			
P3 (R)	60.2	59.1	110.5				78.6	76.2	104.8
Q4 (R)	47.0	48.3	86.2	16.1	15.6	96.4	71.5	69.1	95.3
R2	59.6		109.4				72.6		96.8
S1	51.0	50.4	93.6	17.8	17.7	106.6	79.0	79.8	105.3
S3							80.5	77.0	107.3
U1 (R)				17.0	16.0	101.8	74.5	74.7	99.3
V3	60.5		111.0				72.9		97.2
W2 (R)		43.5		14.1	14.7	84.4	72.8	75.5	97.1
W4				18.6	20.0	111.4	70.0	79.9	93.3
Y1	61.2	62.9	112.3				75.4	74.2	100.5
Z4 (R)							86.3	85.5	115.1
CKPG-M (R)	55.8 51.4	54.5	102.4	16.2 15.3	16.7	97.0	74.7 76.0	75.0	99.6

Notes A and B are given in the appendix.

Table V

AVERAGES OF MILL QUALITY DATA FOR SEP-OCT 1992

33 #

Code	Moist @ reel Percent			Adjusted Basis Weight Lbs/M Sq Ft			Caliper Mils		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
C4 (R)	5.5	5.6	73.3	33.7	33.5	101.8	11.8	12.0	101.7
D3 (R)	7.0	7.0	93.3	33.4	33.6	100.9	13.0	12.5	112.1
E1	7.8	7.8	104.0	33.0	33.0	99.7	11.9	11.9	102.6
G1 (R)	5.6	5.5	74.7	34.2	35.4	103.3	11.8	12.2	101.7
G3		6.9		33.0	32.8	99.7	10.8	10.3	93.1
G4	7.1	7.2	94.7	33.1	33.2	100.0	11.1	11.1	95.7
H1	7.1	7.4	94.7	33.2	33.0	100.3	11.9	12.0	102.6
I4	8.2	8.2	109.3	33.2	33.0	100.3	12.2	11.9	105.2
J2		6.5			33.1			10.9	
J3	9.0	8.3	120.0	33.1	33.1	100.0	11.3	11.3	97.4
J4 (R)	7.0	6.8	93.3	33.1	33.1	100.0	11.2	11.1	96.6
K1	7.6	7.6	101.3	33.0	33.0	99.7			
K2 (R)	6.5	6.5	86.7	35.0	35.1	105.7	11.9	12.7	102.6
L4 (R)	7.5	7.0	100.0	33.0	33.2	99.7	10.4	10.1	89.7
M2 (R)	8.5	8.5	113.3	32.9	33.0	99.4	10.8	10.5	93.1
M3	9.0	7.0	120.0		32.9				
N1				33.0	33.0	99.7	11.1	10.9	95.7
N4	7.1	7.2	94.7	33.1	32.7	100.0	11.2	11.2	96.6
P1	8.1	7.9	108.0	33.1	33.3	100.0	13.9	13.6	119.8
P2	6.0	6.0	80.0	33.1	33.0	100.0	13.0	12.6	112.1
P3 (R)	8.2	8.2	109.3	33.0	32.9	99.7	13.3	13.1	114.7
Q4 (R)	9.0	8.6	120.0	32.8	32.8	99.1			
R2	7.4	7.3	98.7	33.1	33.2	100.0			
S1	7.3	7.2	97.3	33.3	33.1	100.6	10.7	10.5	92.2
S3	9.6	9.4	128.0	32.3	32.3	97.6	11.1	11.1	95.7
U1 (R)	9.1	8.8	121.3	32.7	32.7	98.8	10.8	11.1	93.1
V3	7.5	7.7	100.0	33.0	33.0	99.7			
W2 (R)	7.0	6.8	93.3	33.4	33.0	100.9	11.0	11.0	94.8
W4		7.6			33.1			9.8	
Y1	7.5	7.5	100.0	33.0	33.1	99.7	12.9	12.8	111.2
Z4 (R)	6.5	6.8	86.7	34.7	34.2	104.8	13.6	13.4	117.2
CKPG-M (R)	7.6 7.3	7.5	101.3	33.2 33.4	33.1	100.3	11.7 11.8	11.6	100.9

Notes A and B are given in the appendix.

Table V (cont.)

AVERAGES OF MILL QUALITY DATA FOR SEP-OCT 1992

33 #

Code	CD Ring Crush Lbs			CD Short Span Comp Lbs/in			Concora Lbs		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
C4 (R)	54.7	55.9	100.0				80.4	73.2	107.5
D3 (R)							86.4	88.0	115.5
E1				17.7	17.3	106.6	71.5	71.1	95.6
G1 (R)				12.9	14.4	77.7	67.8	67.6	90.6
G3	52.5	53.7	96.0		17.4		54.5	66.9	72.9
G4	51.0	51.3	93.2	16.4	16.7	98.8	69.0	70.5	92.2
H1	59.5	61.7	108.8		16.7		74.5	72.1	99.6
I4	62.2	61.4	113.7				75.8	77.6	101.3
J2					19.2			69.0	
J3				16.2	15.5	97.6	69.0	68.6	92.2
J4 (R)	55.7	52.0	101.8	17.1	16.2	103.0	72.4	71.7	96.8
K1	64.8	59.3	118.5				73.4	76.6	98.1
K2 (R)				14.1	14.3	84.9	68.8	68.8	92.0
L4 (R)	41.0	42.4	75.0	15.6	14.3	94.0		71.1	
M2 (R)	51.5	51.6	94.1				76.3	77.4	102.0
M3	62.0	53.3	113.3				81.0	73.5	108.3
N1				17.1	16.0	103.0	76.5	80.0	102.3
N4	65.7	59.6	120.1	18.8	17.9	113.3	78.0	73.4	104.3
P1	60.0	57.7	109.7	16.3	16.8	98.2	69.5	72.8	92.9
P2				17.9	17.5	107.8			
P3 (R)	61.9	59.5	113.2				76.1	77.0	101.7
Q4 (R)	50.0	48.3	91.4	15.8	15.7	95.2	70.5	69.4	94.3
R2	59.7	59.6	109.1				74.4	72.6	99.5
S1	51.0	51.3	93.2	17.8	17.9	107.2	78.0	79.7	104.3
S3							80.5	77.8	107.6
U1 (R)				17.8	16.2	107.2	74.0	74.7	98.9
V3	59.4	60.5	108.6				76.7	72.9	102.5
W2 (R)	43.0	43.5	78.6	13.8	14.4	83.1	73.2	74.9	97.9
W4					20.1			77.6	
Y1	60.9	62.5	111.3				77.2	74.4	103.2
Z4 (R)							85.5	85.3	114.3
CKPG-M	56.2	54.7	102.7	16.5	16.6	99.4	74.4	74.8	99.5
(R)	51.9			15.5			76.4		

Notes A and B are given in the appendix.

Table VI

AVERAGES OF MILL QUALITY DATA FOR NOV-DEC 1992

33 #

Code	Moist @ reel Percent			Adjusted Basis Weight Lbs/M Sq Ft			Caliper Mils		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
C4 (R)	5.4	5.6	72.0	33.7	33.5	101.5	11.9	12.0	101.7
D3 (R)	6.9	7.1	92.0	33.6	33.6	101.2	13.1	12.6	112.0
E1	7.8	7.8	104.0	32.9	33.0	99.1	11.9	11.9	101.7
G1 (R)	5.6	5.5	74.7	35.6	35.1	107.2	12.0	12.1	102.6
G3		6.9		33.0	32.8	99.4	10.4	10.4	88.9
G4	6.9	7.1	92.0	33.5	33.2	100.9	12.1	11.1	103.4
H1	7.4	7.3	98.7	33.2	33.0	100.0	11.8	11.9	100.9
I4	8.2	8.2	109.3	33.1	33.0	99.7	12.2	11.9	104.3
J2		6.5			33.1			10.9	
J3	9.0	8.5	120.0	33.1	33.1	99.7	11.2	11.2	95.7
J4 (R)	7.0	6.9	93.3	33.1	33.1	99.7	11.1	11.2	94.9
K1	7.6	7.6	101.3	33.1	33.0	99.7			
K2 (R)	6.5	6.5	86.7	35.1	35.1	105.7	11.7	12.5	100.0
L4 (R)	6.9	7.1	92.0	33.4	33.2	100.6	10.1	10.2	86.3
M2 (R)	8.5	8.5	113.3	32.8	33.0	98.8	10.7	10.6	91.5
M3	7.1	7.1	94.7	33.0	33.0	99.4			
N1				33.0	33.0	99.4	11.4	11.0	97.4
N4	7.1	7.2	94.7	33.1	32.7	99.7	11.2	11.2	95.7
P1	8.1	7.9	108.0	33.4	33.2	100.6	13.4	13.7	114.5
P2	6.7	6.0	89.3	33.1	33.1	99.7	13.2	12.7	112.8
P3 (R)	8.2	8.2	109.3	32.9	32.9	99.1	12.5	13.1	106.8
Q4 (R)	9.0	8.7	120.0	32.7	32.8	98.5			
R2	7.2	7.3	96.0	33.2	33.2	100.0			
S1	7.4	7.3	98.7	33.2	33.1	100.0	10.3	10.6	88.0
S3	9.6	9.5	128.0	32.2	32.3	97.0	11.2	11.1	95.7
U1 (R)	9.3	8.9	124.0		32.7		10.9	11.0	93.2
V3	7.7	7.6	102.7	33.0	33.0	99.4			
W2 (R)	7.0	6.9	93.3	33.0	33.1	99.4	11.0	11.0	94.0
W4	8.9	7.7	118.7	33.1	33.1	99.7	10.4	9.8	88.9
Y1		7.5			33.1			12.8	
Z4 (R)	6.7	6.8	89.3	34.0	34.2	102.4	13.6	13.4	116.2
CKPG-M (R)	7.6 7.4	7.5	101.3	33.3 33.5	33.2	100.3	11.7 11.7	11.7	100.0

Notes A and B are given in the appendix.

Table VI (cont.)

AVERAGES OF MILL QUALITY DATA FOR NOV-DEC 1992

33 #

Code	CD Ring Crush Lbs			CD Short Span Comp Lbs/in			Concora Lbs		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
C4 (R)	55.3	55.4	100.4				82.2	74.6	110.0
D3 (R)							89.9	87.8	120.3
E1				17.5	17.5	106.1	71.0	70.9	95.0
G1 (R)				13.6	14.0	82.4	69.1	67.7	92.5
G3	51.5	53.6	93.5				62.0	63.7	83.0
G4	53.0	51.4	96.2	16.3	16.6	98.8	68.5	69.9	91.7
H1	58.5	61.3	106.2		16.8		75.5	73.2	101.1
I4	62.7	62.2	113.8				74.6	77.5	99.9
J2					19.2			69.0	
J3				16.6	15.7	100.6	67.0	69.1	89.7
J4 (R)	53.6	52.6	97.3	16.6	16.3	100.6	70.9	71.9	94.9
K1	57.4	62.0	104.2				73.6	75.0	98.5
K2 (R)				14.8	14.2	89.7	70.7	68.8	94.6
L4 (R)	46.2	42.1	83.8	16.8	14.9	101.8		71.3	
M2 (R)	52.0	51.7	94.4				77.4	77.2	103.6
M3	57.0	54.4	103.4				70.5	74.0	94.4
N1				17.2	16.1	104.2	75.5	79.0	101.1
N4	61.5	62.1	111.6	17.9	18.0	108.5	78.0	74.0	104.4
P1	61.5	58.9	111.6	16.9	16.7	102.4	70.5	72.5	94.4
P2				18.0	17.6	109.1			
P3 (R)	63.0	60.1	114.3				80.1	77.1	107.2
Q4 (R)	50.0	48.6	90.7	18.1	15.7	109.7	71.0	69.6	95.0
R2	58.7	59.7	106.5				74.6	73.5	99.9
S1	51.5	50.4	93.5	19.0	17.7	115.2	78.0	79.1	104.4
S3							79.5	78.9	106.4
U1 (R)				16.7	16.5	101.2	73.5	74.8	98.4
V3	58.5	59.9	106.2				73.6	74.8	98.5
W2 (R)		44.2		13.2	14.2	80.0	72.5	74.6	97.1
W4				19.3	19.9	117.0	65.0	75.2	87.0
Y1		62.3						74.9	
Z4 (R)							86.1	86.7	115.3
CKPG-M (R)	56.0 53.3	55.1	101.6	16.9 16.1	16.5	102.4	74.4 77.6	74.7	99.6

Notes A and B are given in the appendix.

Table VII

AVERAGES OF MILL QUALITY DATA FOR JUL-AUG 1992

40 #

Code	Moist @ reel Percent			Adjusted Basis Weight Lbs/M Sq Ft			Caliper Mils		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
C4		5.8			40.1			13.9	
E1	7.8	7.8	98.7	40.2	40.0	101.0	14.1	14.2	102.2
G3		7.1		39.7	39.6	99.7	11.9	12.5	86.2
I4	8.3	8.3	105.1	39.6	39.6	99.5	14.2	13.8	102.9
K1	7.6		96.2	40.1		100.8			
L4		7.1			40.0			11.4	
N1				40.1	40.0	100.8	13.4	13.1	97.1
N4	6.9	7.3	87.3	40.1	40.0	100.8	13.5	13.3	97.8
P1		7.9			40.3			15.4	
P2	6.1	6.1	77.2	40.0	40.0	100.5	15.1	15.0	109.4
P3 (R)	8.4	8.4	106.3	39.7	39.8	99.7	15.4	15.4	111.6
Q4 (R)	9.0	8.7	113.9	39.6	39.7	99.5			
R2	7.2		91.1	40.3		101.3			
S1	7.3	7.3	92.4	40.1	40.2	100.8	12.4	12.7	89.9
S3	9.8	9.9	124.1	39.0	39.0	98.0	13.9	13.5	100.7
U1 (R)	8.9	8.6	112.7	39.6	39.7	99.5	12.8	13.4	92.8
V3	7.7		97.5	40.0		100.5			
CKPG-M	7.9	7.9	100.0	39.9	39.8	100.3	13.7	13.8	99.3
(R)	8.8			39.6			14.1		

Notes A and B are given in the appendix.

Table VII (cont.)

AVERAGES OF MILL QUALITY DATA FOR JUL-AUG 1992

40 #

Code	CD Ring Crush Lbs			CD Short Span Comp Lbs/in			Concora Lbs		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
C4		72.5						71.6	
E1				23.1	21.1	109.5	81.5	74.4	103.6
G3	73.5	72.6	97.6		21.4		69.5	72.4	88.3
I4	79.8	79.3	106.0				81.0	79.9	102.9
K1	80.6		107.0				78.3		99.5
L4		58.4							
N1				19.9	19.8	94.3	77.0	79.1	97.8
N4	93.9	87.7	124.7	24.5	23.0	116.1	86.4	85.7	109.8
P1		78.1			21.0			76.2	
P2				20.4	21.2	96.7			
P3 (R)	82.6	80.6	109.7				84.1	82.3	106.9
Q4 (R)	60.0	63.0	79.7	18.6	18.5	88.2	75.5	76.8	95.9
R2	79.3		105.3				73.0		92.8
S1	69.0	68.0	91.6	22.1	21.9	104.7	90.0	95.3	114.4
S3							80.5	76.5	102.3
U1 (R)				21.0	20.6	99.5	83.0	83.5	105.5
V3	80.1		106.4				73.4		93.3
CKPG-M	77.6	75.3	103.1	21.6	21.1	102.4	79.5	78.7	101.0
(R)	71.3			20.2			80.9		

Notes A and B are given in the appendix.

Table VIII

AVERAGES OF MILL QUALITY DATA FOR SEP-OCT 1992

40 #

Code	Moist @ reel Percent			Adjusted Basis Weight Lbs/M Sq Ft			Caliper Mils		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
C4		5.8			40.1			13.9	
E1	7.8	7.8	98.7	40.1	40.0	100.8	14.4	14.2	104.3
G3		7.1		39.7	39.6	99.7	13.0	12.3	94.2
I4	8.3	8.3	105.1	39.5	39.6	99.2	14.3	13.8	103.6
K1	7.6	7.6	96.2	40.1	40.1	100.8			
L4 (R)	6.8	7.1	86.1	40.2	40.0	101.0	12.0	11.4	87.0
N1				39.9	40.0	100.3	13.4	13.2	97.1
N4	6.7	7.2	84.8	40.1	40.1	100.8	13.2	13.3	95.7
P1		8.0			40.3			15.7	
P2	6.2	6.1	78.5	40.2	40.0	101.0	15.6	15.0	113.0
P3 (R)	8.4	8.4	106.3	39.9	39.8	100.3	15.6	15.4	113.0
Q4 (R)	9.2	8.8	116.5	39.3	39.7	98.7			
R2	7.2	7.2	91.1	40.2	40.3	101.0			
S1	7.3	7.3	92.4	40.1	40.2	100.8	12.5	12.6	90.6
S3	10.0	9.8	126.6	39.1	39.0	98.2	13.4	13.6	97.1
U1 (R)	8.8	8.7	111.4	39.7	39.7	99.7	12.9	13.2	93.5
V3	7.7	7.7	97.5	39.9	40.0	100.3			
CKPG-M	7.9	7.9	100.0	39.8	39.8	100.0	13.7	13.8	99.3
(R)	8.5			39.7			14.0		

Notes A and B are given in the appendix.

Table VIII (cont.)

AVERAGES OF MILL QUALITY DATA FOR SEP-OCT 1992

40 #

Code	CD Ring Crush Lbs			CD Short Span Comp Lbs/in			Concora Lbs		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
C4		72.5						71.6	
E1				21.3	21.6	100.5	83.0	75.7	105.2
G3	71.5	73.1	94.3		21.3		52.0	71.2	65.9
I4	79.8	79.6	105.3				81.1	79.4	102.8
K1	76.4	80.6	100.8				76.5	78.3	97.0
L4 (R)	56.0	58.4	73.9	19.6		92.5			
N1				22.2	19.7	104.7	76.0	78.7	96.3
N4	89.2	89.4	117.7	23.6	23.3	111.3	91.2	85.8	115.6
P1		77.9			21.0			76.2	
P2				20.8	21.0	98.1			
P3 (R)	83.1	81.0	109.6				82.1	82.7	104.1
Q4 (R)	61.5	62.3	81.1	19.6	18.5	92.5	76.5	76.5	97.0
R2	78.6	79.3	103.7				74.9	73.0	94.9
S1	70.0	68.3	92.3	22.4	22.0	105.7	97.0	93.5	122.9
S3							81.0	76.3	102.7
U1 (R)				21.9	20.7	103.3	84.5	83.4	107.1
V3	80.6	80.1	106.3				80.7	73.4	102.3
CKPG-M (R)	75.7 73.1	75.8	99.9	21.7 21.1	21.2	102.4	79.6 81.9	78.9	100.9

Notes A and B are given in the appendix.

Table IX

AVERAGES OF MILL QUALITY DATA FOR NOV-DEC 1992

40 #

Code	Moist @ reel Percent			Adjusted Basis Weight Lbs/M Sq Ft			Caliper Mils		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
C4 (R)	5.5	5.8	69.6	40.3	40.1	101.3	12.5	13.9	90.6
E1	7.8	7.8	98.7	40.0	40.0	100.5	14.3	14.2	103.6
G3		7.2		39.7	39.6	99.7	12.7	12.5	92.0
I4	8.3	8.3	105.1	39.5	39.6	99.2	14.4	14.1	104.3
K1		7.6			40.1				
L4 (R)	6.4	7.1	81.0	40.5	40.1	101.8	12.1	11.6	87.7
N1				40.0	40.0	100.5	13.8	13.3	100.0
N4	7.2	7.1	91.1	40.1	40.1	100.8	13.4	13.3	97.1
P1		8.0			40.3			15.8	
P2	6.8	6.1	86.1	40.2	40.1	101.0	15.7	15.1	113.8
P3 (R)	8.4	8.4	106.3	39.8	39.8	100.0	14.7	15.4	106.5
Q4 (R)	9.1	8.9	115.2	39.5	39.6	99.2			
R2	7.2	7.2	91.1	40.2	40.2	101.0			
S1	7.2	7.3	91.1	40.1	40.2	100.8	12.4	12.6	89.9
S3	9.9	9.9	125.3	38.7	39.0	97.2	13.5	13.6	97.8
U1 (R)	9.3	8.7	117.7		39.7		12.9	13.2	93.5
V3	7.7	7.7	97.5	40.0	39.9	100.5			
CKPG-M (R)	7.9 8.5	7.9	100.0	39.9 39.8	39.8	100.3	13.6 13.5	13.8	98.6

Notes A and B are given in the appendix.

Table IX (cont.)

AVERAGES OF MILL QUALITY DATA FOR NOV-DEC 1992

40 #

Code	CD Ring Crush Lbs			CD Short Span Comp Lbs/in			Concora Lbs		
	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B	Cur Avg	Cum Avg	Ind *B
C4 (R)	71.5	72.5	94.3				81.6	71.6	103.3
E1				22.0	21.7	102.8	86.0	76.1	108.9
G3	71.5	72.6	94.3				64.5	66.4	81.6
I4	80.0	79.9	105.5				75.4	79.4	95.4
K1		78.5						77.4	
L4 (R)	58.7	57.6	77.4	20.4	19.6	95.3			
N1				22.0	20.3	102.8	76.5	77.7	96.8
N4	80.4	89.4	106.1	21.8	23.4	101.9	91.8	86.7	116.2
P1		78.7			21.2			76.6	
P2				21.0	20.9	98.1			
P3 (R)	84.1	81.4	110.9				85.9	82.6	108.7
Q4 (R)	61.5	62.1	81.1	21.6	18.9	100.9	76.5	76.5	96.8
R2	77.3	78.9	102.0				76.2	73.9	96.5
S1	73.5	68.8	97.0	23.2	22.1	108.4	81.5	94.4	103.2
S3							82.0	77.4	103.8
U1 (R)				20.9	20.9	97.7	84.5	83.6	107.0
V3	79.1	80.3	104.4				80.0	77.0	101.3
CKPG-M (R)	74.7 71.3	75.8	98.5	21.7 21.0	21.4	101.4	80.1 82.3	79.0	101.4

Notes A and B are given in the appendix.

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

TABLE X
Data on Conditioning and Testing Environments
JAN-FEB, MAR-APR, MAY-JUN, 1992

Code	Conditioned before testing?	Tested under Controlled Conditions?	Temperature (Degrees Celsius)	Relative Humidity (%)
A1	No	No		
B3	No	No		
C1	No	No		
C2	No	No		
C4	Yes	Yes	23	50
D3	No	Yes	22	50
E1	Yes	Yes	22	50
F2	No	No		
F4	No	No		
G1	No	No		
G3	No	No		
G4	Yes	Yes	20	50
H1	Yes	Yes	23	50
H2	No	No		
H3	Yes	Yes	22	50
I4	No	No		
J2	No	No		
J3	No	No		
J4	No	No		
K1	No	No		
K2	No	No		
L4	No	No		
M2	Yes	Yes	23	50
M3	No	No		
N1	No	No		
N4	Yes	Yes	23	50
O1	No	No		
P1	No	Yes	21	50
P2	No	No		
P3	Yes	Yes	21	50
Q4	No	No		
R2	No	No		
S1	Yes	Yes	23	50
S3	No	Yes		
T2	No	No		
U1	No	No		
V1	No	No		
V3	No	No		
W2	Yes	Yes		50
W4	No	No		
Y1	No	No		
Z4	No	Yes	22	50

APPENDIX

NOTES A AND B USED IN TABULATIONS OF MILL DATA

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

NOTE A: Adjusted basis weight (ABW) = reported weight (RBW) adjusted to moisture content 7.8%: $ABW = RBW \{(100 - \text{reported moisture content, \%}) / (100 - 7.8)\}$

NOTE B: Machine index (%) =
 $[(\text{current machine average} / \text{cumulative C.K.P.G. average}) * 100]$

Where Cumulative C.K.P.G. average =

$[\text{CCKPGA's for previous six periods, excluding current CCKPGA} / 6]$

C.K.P.G. index (%) =

$[(\text{current C.K.P.G. average} / \text{cumulative C.K.P.G. average}) * 100]$

Where Current C.K.P.G. average =

$[\text{CMA's for current period for all machines} / \text{number of machines}]$

CMA = current machine average for a specific physical property of a specific corrugating medium grade weight obtained during a given period on a specific machine.

CCKPGA = current C.K.P.G. average for a specific physical property of a specific corrugating medium grade weight obtained during a given period.

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