PLAINTIFF'S EXHIBIT

GP-1541

MILFORD JOINT CEMENT PLANT
AIRBORNE ASBESTOS DUST SURVEY

Date Sampled: May 7, 1975

Georgia-Pacific

intracompany memo

to	Mr. [illegible]	location	Milford
from	G. W. [illegible]	location	Tigard
subject	[illegible]	date	May 20, 1975

cc: Mr. J. [illegible] - [illegible]
Mr. [illegible] - Wilmington
Mr. G. P. [illegible] - Marietta

On May 7, 1975, the Milford joint cement plant was monitored for asbestos dust by George [illegible]. The filter cassettes were then sent to Tigard for counting. All the individual samples, then [illegible] highest averages, were below the 5.0 fibers/cc [illegible] currently in effect.

Five representative workers [illegible] sampled during an [illegible] and, in addition, area samples were taken at [illegible] the plant. As at all the joint cement plants [illegible] the highest time weighted average and the [illegible] count. This is the only position which is over the 2.0 [illegible] which will be in effect in July 1976.

A summary of the data as well as individual [illegible] are attached.

[illegible]

GWS:sls

Attachments

GP 09

SGP 0007940

Date: 5/13/75

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 95

FLOW RATE 1.8 l/min

FIELD AREA (a) .00432 mm^2

FILTER AREA (A) 855 mm^2

ELAPSED TIME (t) 259 mins.

VOLUME (V) 466 liters

BLANK COUNT (b) .08 fibers/field

AV. FIBER COUNT (f) .52 fibers/field

0	1	–	1	2	–
	–	–	–	–	–
	–	–	–	1	1
	–	1	–	1	–
	–	–	1	2	1
5	1	–	–	2	1
	1	1	3	1	–
	1	1	–	–	1
	–	–	–	–	–
	–	–	–	–	–
10	–	2	–	2	–
	–	1	–	1	–
	–	–	2	–	1
	3	1	–	1	–
15	1	–	2	–	–
	–	–	1	–	–
	–	–	1	–	–
	–	–	–	–	–
	–	3	2	1	2
20					
SUBTOTALS	8	10	13	14	7

TOTAL 52

Constant $k = \frac{A}{1000\ a}$ 198

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ $\frac{198(.52-.08}{466} = .21$

SGP 0007941

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Milford

Name Johnny R Green

Title Drymix operator

Date 5-7-75

Pump Serial No. B-06-0444

Sampled by George Fowler

Signature George Fowler

LOCATION	Dry mixer	Dry mixer	Dry mixer	Dry mixer	Dry mix
FILTER NO.	77	94	81	91	80
FLOW: Pump Setting	6	6	6	6	6
Liter/min (R)	1.75	1.75	1.75	1.75	1.75
TIME: On	7:09	8:30	9:28	10:36	12:36
Off	8:30	9:28	10:36	12:36	1:50
ELAPSED TIME (min) (t)	81	58	68	80	74
VOLUME, Liters (t x r)	142	102	119	158	130
REMARKS	Uses Face Mask During the time Raw Materials are Being Dumped			OFF 30 min for lunch 12÷12:30	
CONCENTRATION (F) fibers/ml	1.97	1.46	2.50	3.66	3.35

Total Sample Time (T) 471 mins.

$$\text{Time Weight Av. Concentration} = \frac{(t_1F_1) + (t_2\ 2) + (t_3F_3) + \ldots}{T}$$

$$= \frac{(81)(1.97) + 58(1.46) + 68(2.5) + 90(3.66) + 74(2.35) + 40(3.48) + 60(4.0)}{471}$$

$$= \frac{160 + 85 + 170 + 329 + 139 + 242}{471} = \boxed{2.4}$$

George Fowler

SGP 0007942

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Milford

Name Johnny Green

Title Dry mix operator

Date 5-7-75

Pump Serial No. B-06-0444

Sampled by George Foster

Signature George Foster

LOCATION	Dry mixer	Dry mixer			
FILTER NO.	86	98			
FLOW: Pump Setting	6	6			
Liter/min (R)	1.75	1.75			
TIME: On	1:50	2:30			
Off	2:30	3:30			
ELAPSED TIME (min) (t)	40	60			
VOLUME, Liters (t x r)	70	105			
REMARKS					
CONCENTRATION (F) fibers/ml	3.48	4.04			

Total Sample Time (T) _____ mins.

$$\text{Time Weight Av. Concentration} = \frac{(t_1F_1) + (t_2\ _2) + (t_3F_3) + \ldots}{T}$$

SGP 0007943

Date: 5/[illegible]/75

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 77

ELAPSED TIME (t) 81 mins.

FLOW RATE 1.75 l/min

VOLUME (V) 142 liters

FIELD AREA (a) .00432 mm^2

BLANK COUNT (b) .08 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 1.49 fibers/field

0	4	1	1	3	
	2	3	1	1	
	2	3	2	1	
	1	1	1	2	
	—	5	1	2	
5	1	1	1	2	
	—	3	—	1	
	2	3	1	1	
	3	1	—	—	
	—	1	1	3	
10	2	2	2		
	4	1	—		
	—	2	2		
	1	1	4		
15	4	1	2		
	1	2	2		
	—	—	1		
	2	2	2		
	—	—	2		
20					
SUBTOTALS	29	33	26	16	

TOTAL 104

1.49
70 | 104
70
3 40
2[illegible]
6[illegible]

Constant $k = \frac{A}{1000\ a}$ 198

Fiber Concentration (F) $= \frac{k\ (f-b)}{V}$ $\frac{198(1.49-.08)}{142} = \boxed{1.97}$

SGP 0007944

Date: 5/14/25

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 94

ELAPSED TIME (t) 58 mins.

FLOW RATE 1.75 l/min

VOLUME (V) 102 liters

FIELD AREA (a) .0432 mm^2

BLANK COUNT (b) .08 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) .83 fibers/field

0	3	—	2	1	1
	—	—	1	1	1
	1	1	—	2	1
	—	2	—	—	4
	—	2	2	2	1
5	—	—	2	—	—
	3	—	—	1	—
	1	1	1	1	1
	1	—	—	—	—
	—	1	—	—	—
10	1	1	—	1	—
	1	—	2	1	—
	1	—	1	—	2
	1	1	1	3	—
15	2	1	1	1	—
	2	1	—	1	1
	—	—	—	1	1
	—	2	2	1	1
	—	2	3	—	2
20					
SUBTOTALS	17	15	18	17	16

TOTAL 83

Constant $k = \frac{A}{1000\ a}$ 198

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ $\frac{198(.83-.08)}{102} = 1.46$

Date: 5/14/75

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 81 | ELAPSED TIME (t) 68 mins.

FLOW RATE 1.75 l/min | VOLUME (V) 119 liters

FIELD AREA (a) .00432 mm^2 | BLANK COUNT (b) .08 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) 1.58 fibers/field

0	2	2	4	1	
	1	–	3	2	
	1	4	–	2	
	2	–	3	–	
	3	1	4	1	
5	1	1	1	1	
	1	1	–	1	
	3	–	–	1	
	2	1	1	2	
	2	3	1	3	
10	1	1	–	4	
	1	1	2	1	
	1	–	3	2	
	3	1	1	2	
15	1	3	2	2	
	5	3	–	1	
	–	3	2	2	
	1	1	1	3	
	2	1	4	3	
20					
SUBTOTALS	33	27	32	34	TOTAL 126

1.5
50 | 124
8
44
40
4

Constant k = $\frac{A}{1000\ a}$ = 198

Fiber Concentration (F) = $\frac{k\ (f-b)}{V} = \frac{198\ (1.58 - .08)}{119} = 2.5$

Date: 5/...

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 91

FLOW RATE 1.75 l/min

FIELD AREA (a) .00432 mm^2

FILTER AREA (A) 855 mm^2

ELAPSED TIME (t) 90 mins.

VOLUME (V) 158 liters

BLANK COUNT (b) 16 fibers/field

AV. FIBER COUNT (f) 3.0 fibers/field

0	2	4			
	1	1			
	1	5			
	3	2			
	3	2			
5	1	3			
	2	8			
	3	6			
	2	3			
	2	3			
10	2	3			
	5	1			
	5	4			
	4	6			
15	2	3			
	1	4			
	2	3			
	5	2			
	9	3			
20					
SUBTOTALS	54	66			

TOTAL 120

Constant $k = \frac{A}{1000\ a}$ 198

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ $\frac{198\ (3.0 - .09}{158} = 3.66$

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 80 | ELAPSED TIME (t) 74 mins.

FLOW RATE 1.75 l/min | VOLUME (V) 130 liters

FIELD AREA (a) .00422 mm^2 | BLANK COUNT (b) .08 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) 2.28 fibers/field

0	5	—	4		
	3	2	1		
	5	2	2		
	2	2	3		
	3	2	2		
5	1	3	5		
	1	2	3		
	—	—	1		
	4	—	5		
	1	2	5		
10	1	1	1		
	6	4	2		
	5	2	1		
	—	4	2		
15	3	2	2		
	6	5	4		
	2	—	1		
	3	—	4		
20	3	1	1		
SUBTOTALS	54	34	49		

TOTAL 137

Constant $k = \frac{A}{1000\ a} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ $\frac{198(2.28-.08)}{130} = 3.3$

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 86 | ELAPSED TIME (t) 40 mins.

FLOW RATE 1.75 l/min | VOLUME (V) 70 liters

FIELD AREA (a) .00432 mm^2 | BLANK COUNT (b) .08 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) 1.31 fibers/field

0	2	—	2	—	
	1	2	3	—	
	3	1	2	1	
	—	3	3	1	
	—	2	—	2	
5	3	—	2	1	
	—	—	1	—	
	1	5	1	2	
	4	2	2	1	
	4	1	2	3	
10	1	1	2	1	
	—	—	—	1	
	2	2	—	—	
	—	1	—	—	
15	1	3	—	4	
	—	—	3	1	
	1	1	—	4	
	—	2	2	1	
20	2	4	1	1	
SUBTOTALS	25	30	26	24	TOTAL 105

Constant k = $\frac{A}{1000\ a}$ = 198

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ = $\frac{198\ (1.31-.08)}{70}$ = 3.48

SGP 0007949

Date: 5/13

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 78 | ELAPSED TIME (t) 214 mins.

FLOW RATE 1.8 l/min | VOLUME (V) 385 liters

FIELD AREA (a) .00432 mm^2 | BLANK COUNT (b) .08 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) 1.56 fibers/field

0	2	5	2	1	2
	1	5	1	1	3
	2	1	—	2	—
	7	1	4	—	2
	1	3	2	3	2
5	3	1	1	—	1
	3	2	2	2	1
	3	4	1	3	2
	1	2	—	1	2
	—	2	1	—	3
10	1	3	—	—	4
	2	—	1	1	1
	2	1	—	1	2
	2	2	1	3	1
15	3	1	—	2	1
	—	1	1	—	1
	1	1	2	1	1
	1	3	1	2	—
20	2	2	3	3	1
SUBTOTALS	34	40	23	26	30

TOTAL 156

Constant $k = \frac{A}{1000\ a} = \frac{855}{.00432 \times 1000} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ $\frac{198\ (1.56 - .08)}{385} = 0.76$

SGP 0007950

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 98 — ELAPSED TIME (t) 60 mins.

FLOW RATE 1.75 l/min — VOLUME (V) 105 liters

FIELD AREA (a) .01432 mm^2 — BLANK COUNT (b) .08 fibers/field

FILTER AREA (A) 855 mm^2 — AV. FIBER COUNT (f) 2.22 fibers/field

0	3	2	2		
	0	5	1		
	3	3	2		
	4	2	3		
	3	3	4		
5	1	1	2		
	1	2	2		
	3	2	2		
	2	3	4		
	3	1	2		
10	4	2	1		
	1	1	2		
	3	2	2		
	2	1	3		
15	2	4	2		
	3	4	1		
	—	6	2		
	3	—	4		
20	1	4	2		
SUBTOTALS	42	48	43		TOTAL 133

2.22
60 | 133
120
130
120
100

Constant $k = \frac{A}{1000\ a}$ 198

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ $\frac{198(2.22-.08)}{105} = 4.04$

SGP 0007951

MILFORD, VIRGINIA, JOINT CEMENT PLANT
AIRBORNE ASBESTOS DUST SURVEY

Date Sampled: May 7, 1975

Name	Location or Job Title	Time Weighted Average fiber/ml	Filter No.	Elapsed Time mins.	Individual Cc fiber/ml
Lester Taylor	Wet Mix Operator	0.59	87	109	0.36
			79	98	2.07
			90	99	0.55
			82	163	0.13
Johnny R. Green	Dry Mixer	2.4	77	81	1.97
			94	58	1.46
			81	68	2.50
			91	90	3.66
			80	74	3.35
			86	40	3.48
			98	60	4.04
Johnnie J. Green	Stacker	0.46	78	214	0.76
			95	259	0.21
Bradley B. Lane	Lid Placer	1.3	85	203	1.46
			88	260	1.22
Kenneth Atkins	Fork Truck Operator	0.24	76	408	0.26
			83	60	0.10
Area Samples	Warehouse		94	197	0.43
	Dry Blending		89	121	1.28
	Dry Blending		99	60	0.82
	Wet Mixer		92	95	0.68
	Office		97	35	0.13

Date: 5/2/15

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 97 BLANK

ELAPSED TIME (t) — mins.

FLOW RATE — l/min

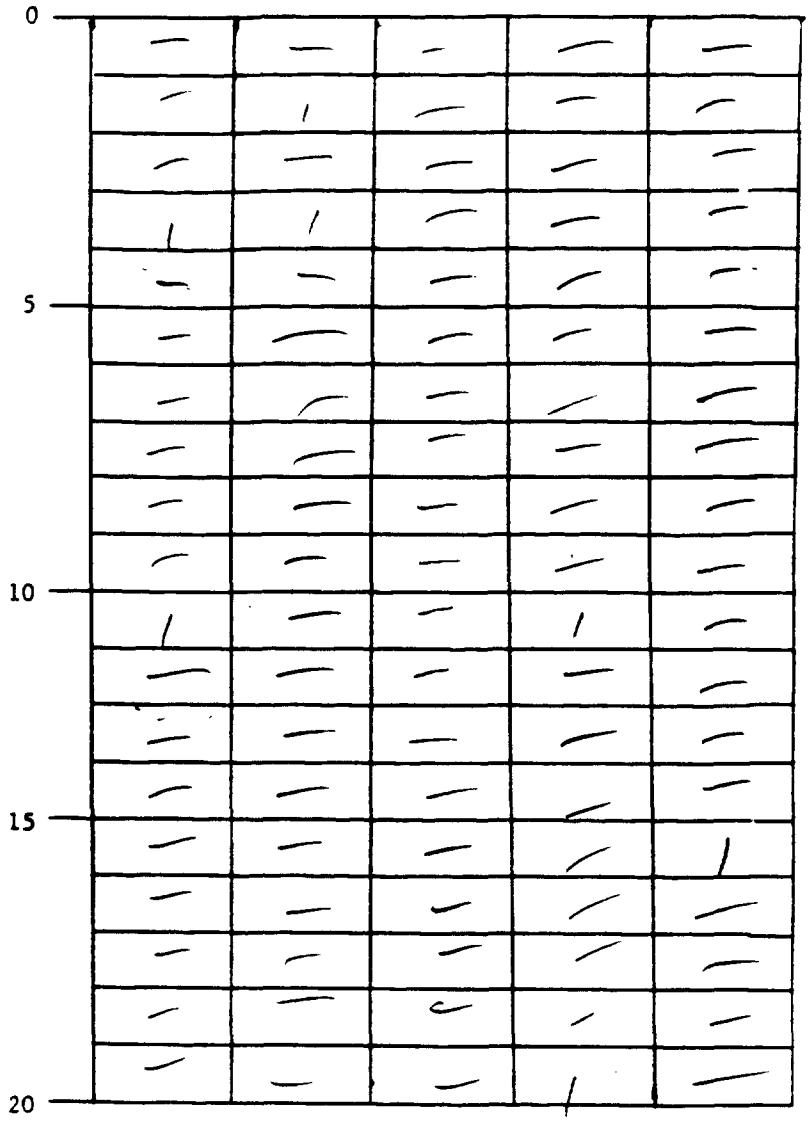
VOLUME (V) — liters

FIELD AREA (a) — mm^2

BLANK COUNT (b) — fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) .07 fibers/field



SUBTOTALS

TOTAL 7

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$

Date: 5/12/95

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 96 Blank

ELAPSED TIME (t) — mins.

FLOW RATE — l/min

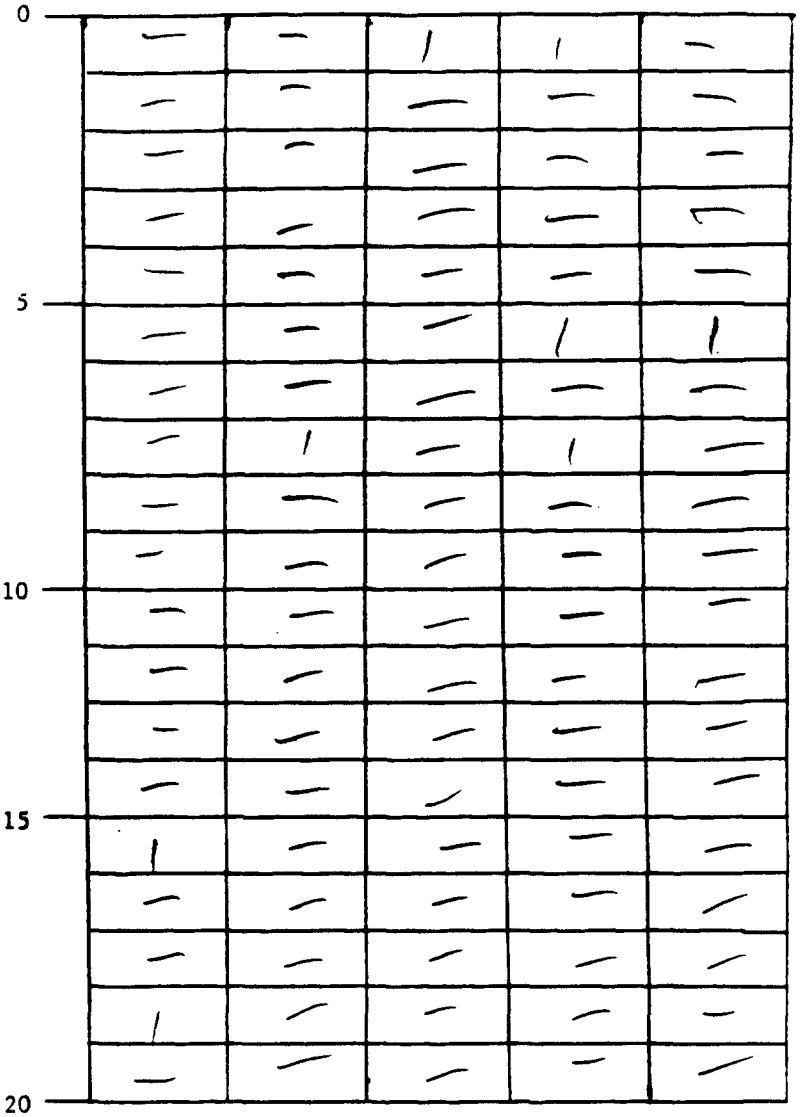
VOLUME (V) — liters

FIELD AREA (a) — mm^2

BLANK COUNT (b) fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) .08 fibers/field



SUBTOTALS

TOTAL 5

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Milford

Name Environment

Title

Date 5-7-75

Pump Serial No. B-06-0423

Sampled by George Fowler

Signature

LOCATION	Warehouse	Dry Blending Area	Dry Blending Area	Wet Mix Area	Office
FILTER NO.	84	89	99	92	97?
FLOW: Pump Setting	6	6	6	6	6
Liter/min (R)	1.7	1.7	1.7	1.7	1.7
TIME: On	7:27	10:44	12:45	1:45	3:30
Off	10:44	12:05	1:45	3:30	4:05
ELAPSED TIME (min) (t)	197	121	60	95	35
VOLUME, Liters (t x r)	335	206	102	162	60
REMARKS					
CONCENTRATION (F) fibers/ml	.43	1.28	.82	.68	.13

Total Sample Time (T) _____ mins.

Time Weight Av. Concentration = $\frac{(t_1F_1) + (t_2\ _2) + (t_3F_3) + \ldots}{T}$

George Green

SGP 0007955

Date: 5/11/07

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 92 | ELAPSED TIME (t) 95 mins.

FLOW RATE 1.7 l/min | VOLUME (V) 162 liters

FIELD AREA (a) [illegible] mm² | BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm² | AV. FIBER COUNT (f) .64 fibers/field

0	1	1	—	1	1
	2	2	—	—	—
	1	2	—	2	—
	3	—	—	—	1
	3	—	—	—	—
5	1	1	—	1	—
	—	—	—	—	1
	—	—	1	1	1
	—	—	—	1	1
	—	—	1	—	—
10	—	1	—	2	1
	1	—	—	1	1
	—	2	2	—	—
	2	1	—	2	2
15	—	1	3	1	1
	1	—	—	—	2
	—	1	2	—	—
	—	1	1	—	—
20	1		—	—	1
SUBTOTALS	16	13	10	12	13

TOTAL 64

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ $\frac{197(.64-.08}{162} = .68$

SGP 0007956

Date: 5/12/22

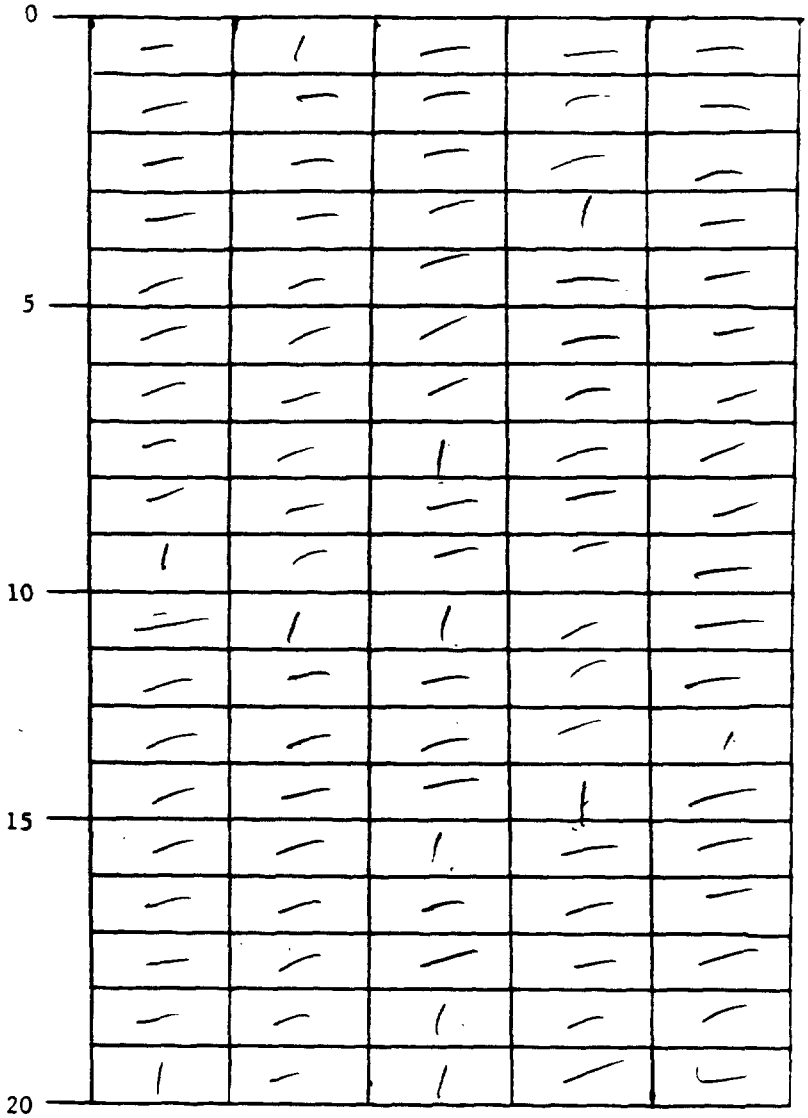
ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 97 | ELAPSED TIME (t) 30 mins.

FLOW RATE 1.7 l/min | VOLUME (V) 60 liters

FIELD AREA (a) .0432 mm^2 | BLANK COUNT (b) 0.3 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) .12 fibers/field



SUBTOTALS

TOTAL 12

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ $\frac{198(.12-.03)}{60} = .13$

Date: 4/[illegible]

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. S4

ELAPSED TIME (t) 197 mins.

FLOW RATE 1.7 l/min

VOLUME (V) 335 liters

FIELD AREA (a) _____ mm^2

BLANK COUNT (b) .08 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) .80 fibers/field

0	—	—	—	6	—
	—	1	2	1	—
	1	2	—	1	—
	1	—	2	1	—
	—	—	—	—	2
5	1	1	2	—	—
	—	1	2	—	1
	—	1	—	—	2
	1	1	—	2	3
	—	—	—	1	2
10	1	1	—	1	1
	—	1	—	2	3
	1	—	—	1	2
	2	2	—	1	—
15	1	—	1	—	1
	1	—	1	2	2
	1	—	2	1	—
	2	—	—	1	—
20	1	—	2	—	1
SUBTOTALS	14	11	14	21	20

TOTAL 80

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ $\frac{195(.80-.08)}{335} = .43$

SGP 0007958

Date: 1/[illegible]

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 89 | ELAPSED TIME (t) 121 mins.

FLOW RATE 1.7 l/min | VOLUME (V) 206 liters

FIELD AREA (a) .0432 mm^2 | BLANK COUNT (b) .05 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) 1.41 fibers/field

0	4	—	1	..	
	3	—	3	2	
	3	1	4	2	
	1	—	—	2	
	3	2	2	3	
5	1	1	2	2	
	1	5	1	2	
	1	2	1	—	
	2	3	2	2	
	4	—	—	4	
10	1	—	1	3	
	1	1	1	2	
	—	—	2	1	
	2	2	—	1	
15	1	3	—	2	
	—	2	—	1	
	—	3	1	1	
	2	3	2	—	
20	1	3	—	—	
SUBTOTALS	31	31	23	28	TOTAL 113

1.4
113
50
30

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$

$\frac{198\ (1.41 - .05)}{206} = 1.28$

Date: 5/1/95

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 99 | ELAPSED TIME (t) 60 mins.

FLOW RATE 1.7 l/min | VOLUME (V) 102 liters

FIELD AREA (a) .00432 mm^2 | BLANK COUNT (b) .08 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) .50 fibers/field

0	2	1	1	—	2
	1	—	—	1	1
	—	—	—	—	1
	1	—	—	—	—
	—	1	1	—	—
5	2	—	—	—	2
	1	1	—	1	—
	1	1	—	—	2
	—	1	—	1	—
	1	—	—	—	—
10	1	1	—	1	—
	—	—	—	—	1
	1	—	—	1	2
	—	—	1	2	—
15	1	—	—	—	—
	—	—	—	—	—
	1	1	1	—	—
	1	1	—	—	—
20	—	1	1	—	1
SUBTOTALS	14	12	5	7	12

TOTAL 50

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ $\frac{1.95(.50-.08)}{102} = .52$

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Milford
Name LESTER TAYLOR
Title wet mix operator

Date 5-7-75
Pump Serial No. B-08-0490
Sampled by George Fowler
Signature

LOCATION	wet mix	wet mix	wet mix		
FILTER NO.	87	79	90	82	
FLOW: Pump Setting	6	6	6	6	
Liter/min (R)	1.7	1.7	1.7	1.7	
TIME: On	7:21	9:00	10:38	12:47	
Off	9:00	10:38	12:47	3:30	
ELAPSED TIME (min) (t)	109	98	99	163	
VOLUME, Liters (t x r)	185	167	168	277	
REMARKS			-30 min for lunch - 12 to 12:30		
CONCENTRATION (F) fibers/ml	0.36	2.07	0.55	0.13	

Total Sample Time (T) 469 mins.

Time Weight Av. Concentration = $\frac{(t_1F_1) + (t_2\ 2) + (t_3F_3) + \ldots}{T}$

$= \frac{(109)(.36)+(98(2.07)+(99)(.55)+(163)(.13)}{469}$

$= \frac{39 + 203 + 54 + 21}{469} = .59$

SGP 0007961

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 87 | ELAPSED TIME (t) 109 mins.

FLOW RATE 1.7 l/min | VOLUME (V) 185 liters

FIELD AREA (a) .0042 mm^2 | BLANK COUNT (b) .08 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) .42 fibers/field

0	1	—	—	—	—
	—	1	—	—	—
	1	—	1	1	2
	—	—	1	1	—
	—	1	5	1	1
5	1	—	1	—	—
	—	1	1	—	—
	—	—	—	—	—
	1	—	—	1	—
	—	1	—	1	—
10	—	1	1	1	—
	—	2	—	1	1
	—	—	1	—	—
	—	2	—	—	—
15	—	—	—	—	1
	1	1	1	1	—
	—	—	—	—	—
	1	—	—	—	—
20	—	—	1	—	—
SUBTOTALS	6	10	13	8	5

TOTAL 42

Constant k = $\frac{A}{1000\ a}$ = 198

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ $\frac{198(.42-.08)}{185}$ = .36

SGP 0007962

Date: 5/15/15

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 82 | ELAPSED TIME (t) 163 mins.

FLOW RATE 1.75 l/min | VOLUME (V) 277 liters

FIELD AREA (a) .00432 mm^2 | BLANK COUNT (b) .08 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) .26 fibers/field

0	1	—	2	—	1
	—	—	—	1	2
	—	—	—	1	1
	—	1	—	—	—
	1	—	—	1	—
5	—	—	—	—	—
	—	—	—	—	—
	—	2	1	—	—
	1	1	1	1	—
	—	—	—	—	—
10	—	—	—	—	—
	—	—	—	—	1
	—	—	1	—	—
	—	—	—	—	—
15	—	—	—	—	—
	—	—	—	—	—
	—	1	—	1	—
	—	—	—	1	—
20	1	—	1	—	—
SUBTOTALS					TOTAL 26

Constant k = $\frac{A}{1000\ a}$ 198

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ = $\frac{198\ (.26-.08)}{277}$ = .13

SGP 0007963

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 90 | ELAPSED TIME (t) 99 mins.

FLOW RATE 1.7 l/min | VOLUME (V) 168 liters

FIELD AREA (a) .00432 mm^2 | BLANK COUNT (b) .08 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) .55 fibers/field

0	–	–	3	1	–
	–	–	–	1	1
	–	2	–	1	1
	–	2	–	1	–
	–	–	1	1	–
5	–	1	1	–	1
	–	–	1	–	–
	1	1	1	1	1
	1	–	–	–	–
	–	2	–	–	1
10	–	–	1	–	1
	1	–	–	1	1
	2	1	–	–	–
	–	1	1	–	2
15	2	–	–	1	1
	–	–	–	–	–
	–	1	1	1	1
	1	–	1	–	1
	–	2	1	–	1
20					
SUBTOTALS	8	13	12	9	13

TOTAL 55

Constant $k = \frac{A}{1000\ a}$ 198

Fiber Concentration $(F) = \frac{k\ (f-b)}{V} = \frac{198\ (.55-.08)}{168} = .55$

SGP 0007964

Date: 5/15/75

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 29

ELAPSED TIME (t) 98 mins.

FLOW RATE 1.7 l/min

VOLUME (V) 167 liters

FIELD AREA (a) .00421 mm^2

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 1.83 fibers/field

0	—	1	2		
	2	1	2		
	2	2	1		
	1	2	3		
	2	3	1		
5	10	1	3		
	—	3	—		
	2	2	—		
	5	2	1		
	1	2	4		
10	1	2	3		
	2	—	—		
	2	1	3		
	5	2	7		
15	2	2	1		
	1	3	—		
	—	3	—		
	4	2	—		
20	—	2	1		
SUBTOTALS	42	36	32		

TOTAL 110

1.83
60) 110.0
60
500

Constant k = $\frac{A}{1000\ a}$ = 198

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ $\frac{198(1.83-.09)}{167}$ = 2.07

SGP 0007965

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Milford

Name Bradley Barbee Laine

Title Lid placer

Date 5-7-75

Pump Serial No. B-06-0165

Sampled by George Fowler

Signature George Fowler

LOCATION	Lid Placer	Lid Placer			
FILTER NO.	85	88			
FLOW: Pump Setting	6	6			
Liter/min (R)	2.0	2.0			
TIME: On	7:17	10:40			
Off	10:40	3:30			
ELAPSED TIME (min) (t)	203	260			
VOLUME, Liters (t x r)	406	520			
REMARKS	using FACE mask	Pump off 30 minutes for lunch. 12 to 12:30			
CONCENTRATION (F) fibers/ml	1.46	1.22			

Total Sample Time (T) 462 mins.

Time Weight Av. Concentration = $\frac{(t_1F_1) + (t_2 2) + (t_3F_3) + \ldots}{T}$

$\frac{203(1.46) + (260)(122)}{462} = \frac{296 + 317}{462}$ 1.3

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 85

ELAPSED TIME (t) 207 mins.

FLOW RATE 2.0 l/min

VOLUME (V) 406 liters

FIELD AREA (a) .00432 mm^2

BLANK COUNT (b) .08 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 3.08 fibers/field

0	6	4			
	2	2			
	~~20~~	4			
	1	3			
	2	1			
5	3	1			
	1	6			
	1	2			
	3	2			
	2	6			
10	2	5			
	2	8			
	2	4			
	3	4			
15	5	4			
	2	2			
	3	4			
	4	6			
20	6	3			
SUBTOTALS	52	71			

TOTAL 123

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ $\frac{198(3.08-.08)}{406} = 1.46$

Date: 5/[illegible]/[illegible]

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 88 — ELAPSED TIME (t) 260 mins.

FLOW RATE 2.0 l/min — VOLUME (V) 520 liters

FIELD AREA (a) [illegible] mm² — BLANK COUNT (b) 0.08 fibers/field

FILTER AREA (A) 855 mm² — AV. FIBER COUNT (f) 3.28 fibers/field

0	5	3			
	3	2			
	3	5			
	5	4			
	2	4			
5	2	4			
	3	3			
	3	2			
	4	2			
	3	6			
10	4	3			
	3	—			
	5	3			
	5	4			
15	4	3			
	3	2			
	3	4			
	2	7			
	4	4			
20					
SUBTOTALS	66	65			

TOTAL 131

Constant $k = \frac{A}{1000\ a} = 198$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V} = \frac{198\ (3.28-.08)}{520} = 1.22$

SGP 0007968

AIRBORNE ASBESTOS FIBER SAMPLING

→ KENNETH ATKINS

Plant Milford

Name JENNETT ATKINS

Title Fork Truck operator

Date 5-7-75

Pump Serial No. B-06-0288

Sampled by George Fowler

Signature George Fowler

LOCATION	Wharehouse fork Truck	Wharehouse Fork Truck			
FILTER NO.	76	83			
FLOW: Pump Setting	6	6			
Liter/min (R)	1.7	1.7			
TIME: On	7:72	2:30			
Off	2:30	3:30			
ELAPSED TIME (min) (t)	408	60			
VOLUME, Liters (t x r)	693	102			
REMARKS	pump off 30 minutes for lunch 12 to 12:30				
CONCENTRATION (F) fibers/ml	.26	.10			

Total Sample Time (T) 468 mins.

Time Weight Av. Concentration = $\frac{(t_1F_1) + (t_2\ 2) + (t_3F_3) + \ldots}{T}$

$\frac{(408)(.26) + (60)(.10)}{468} = \frac{106 + 6}{468}$

$= \boxed{.24}$ fibers/ml

SGP 0007969

Date: 5/16/95

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 76

FLOW RATE 1.7 l/min

FIELD AREA (a) .00432 mm^2

FILTER AREA (A) 855 mm^2

ELAPSED TIME (t) 408 mins.

VOLUME (V) 693 liters

BLANK COUNT (b) .08 fibers/field

AV. FIBER COUNT (f) .93 fibers/field

0	3	2	/	6	—
	—	1	2	1	—
	1	—	2	1	3
	1	2	2	1	—
	—	1	4	1	5
5	5	—	1	—	—
	1	—	1	—	—
	1	2	—	1	3
	1	3	—	—	1
	3	—	—	3	1
10	1	1	1	2	2
	—	—	2	1	3
	1	2	2	3	—
	—	2	—	—	2
15	—	—	1	1	1
	1	—	1	1	3
	3	—	1	1	—
	1	2	—	—	1
20	2	1	1	—	2
SUBTOTALS	25	19	21	23	25

TOTAL 93

Constant $k = \frac{A}{1000\ a}$ 199

Fiber Concentration $(F) = \frac{k\ (f-b)}{V} = \frac{199(.93-.08)}{639} \sqrt{.26}$

SGP 0007970

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Milford

Name JOHNIE JGREEN

Title STACKER operator

Date 5-7-75

Pump Serial No. B-06-0305

Sampled by George Fowler

Signature George Fowler

LOCATION	STACKER	STACKER			
FILTER NO.	78	95			
FLOW: Pump Setting	6	6			
Liter/min (R)	1.8	1.8			
TIME: On	7:07	10:41			
Off	10:41	3:30			
ELAPSED TIME (min) (t)	214	259			
VOLUME, Liters (t x r)	385	466			
REMARKS		-30 min for lunch 12-12.30			
CONCENTRATION (F) fibers/ml	0.76	.21			

Total Sample Time (T) 473 mins.

Time Weight Av. Concentration = $\frac{(t_1F_1) + (t_2\ 2) + (t_3F_3) + \ldots}{T}$

$\frac{(.76)(214) + (.21)(259)}{473} = \frac{162 + 54}{473}$

= 0.46

George Fowler

SGP 0007971

MILFORD JOINT CEMENT PLANT
AIRBORNE ASBESTOS DUST SURVEY

Date Sampled: May 7, 1975

SGP 0007972

Georgia-Pacific

intracompany memo

to	Mr. H. W. Scharf	location	Milford
from	G. W. Green	location	Tigard
subject	AIRBORNE ASBESTOS SURVEY OF MILFORD, VIRGINIA, JOINT CEMENT PLANT	date	May 20, 1975

cc: Mr. J. R. Hurd - Portland
Mr. H. W. Peele - Wilmington
Mr. G. F. Fowler - Marietta

On May 7, 1975, the Milford joint cement plant was monitored for asbestos dust by George Fowler. The filter cassettes were then sent to Tigard for counting. All the individual samples, thus all the time weighted averages, were below the 5.0 fibers/ml maximum currently in effect.

Five representative workers were sampled during an entire work shift and, in addition, area samples were taken at various locations throughout the plant. As at all the joint cement plants surveyed, the dry mixer man recorded the highest time weighted average and the highest individual count. This is the only position which is over the 2.0 fibers/ml maximum which will be in effect in July 1976.

A summary of the data as well as individual records and count worksheets are attached.

G. W. G.

GWG:elz

Attachments

GP 09

MILFORD, VIRGINIA, JOINT CEMENT PLANT
AIRBORNE ASBESTOS DUST SURVEY

Date Sampled: May 7, 1975

Name	Location or Job Title	Time Weighted Average fiber/ml	Filter No.	Elapsed Time mins.	Individual Co fiber/ml
Lester Taylor	Wet Mix Operator	0.59	87	109	0.36
			79	98	2.07
			90	99	0.55
			82	163	0.13
Johnny R. Green	Dry Mixer	2.4	77	81	1.97
			94	58	1.46
			81	68	2.50
			91	90	3.66
			80	74	3.35
			86	40	3.48
			98	60	4.04
Johnnie J. Green	Stacker	0.46	78	214	0.76
			95	259	0.21
Bradley B. Lane	Lid Placer	1.3	85	203	1.46
			88	260	1.22
Kenneth Atkins	Fork Truck Operator	0.24	76	408	0.26
			83	60	0.10
Area Samples	Warehouse		94	197	0.43
	Dry Blending		89	121	1.28
	Dry Blending		99	60	0.82
	Wet Mixer		92	95	0.68
	Office		97	35	0.13

Date: [illegible]

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 9- BLANK

ELAPSED TIME (t) — mins.

FLOW RATE — l/min

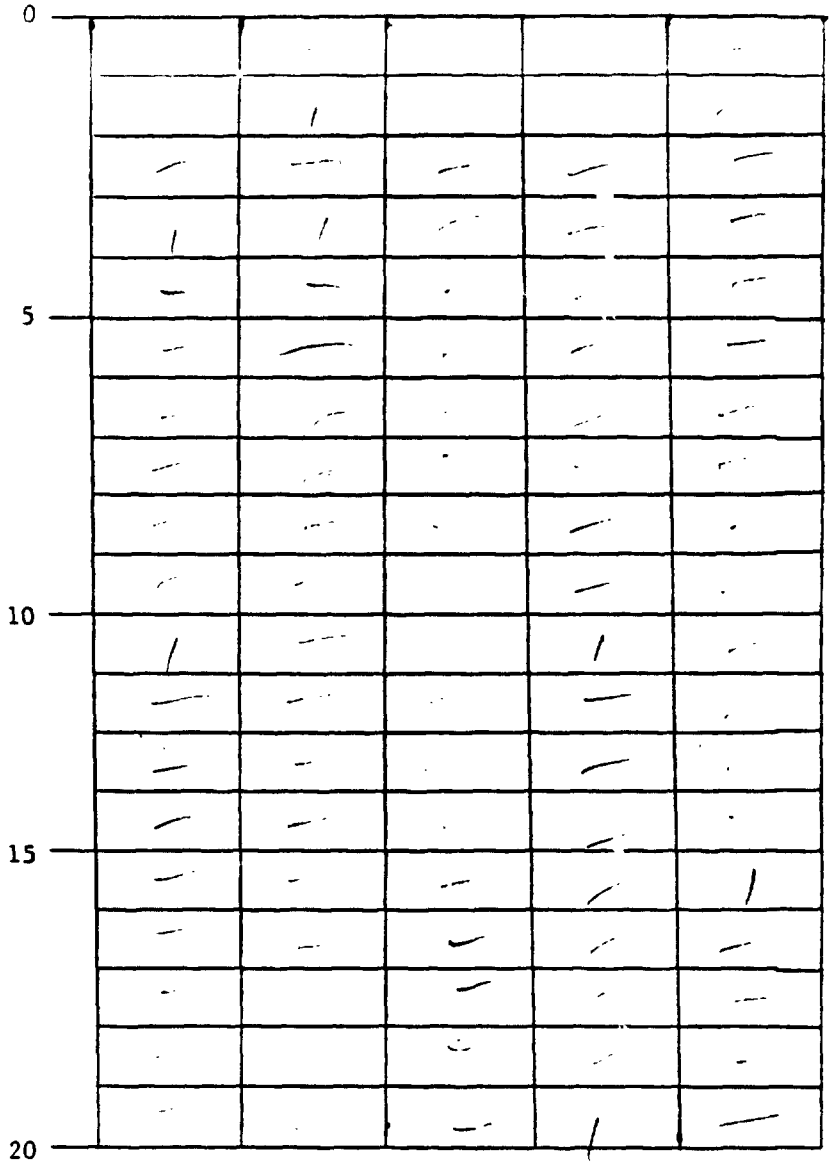
VOLUME (V) — liters

FIELD AREA (a) ---- mm^2

BLANK COUNT (b) ---- fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) .07 fibers/field



SUBTOTALS

TOTAL 7

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$

Date: 1/ /1

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 9b Blank

ELAPSED TIME (t) — mins.

FLOW RATE — l/min

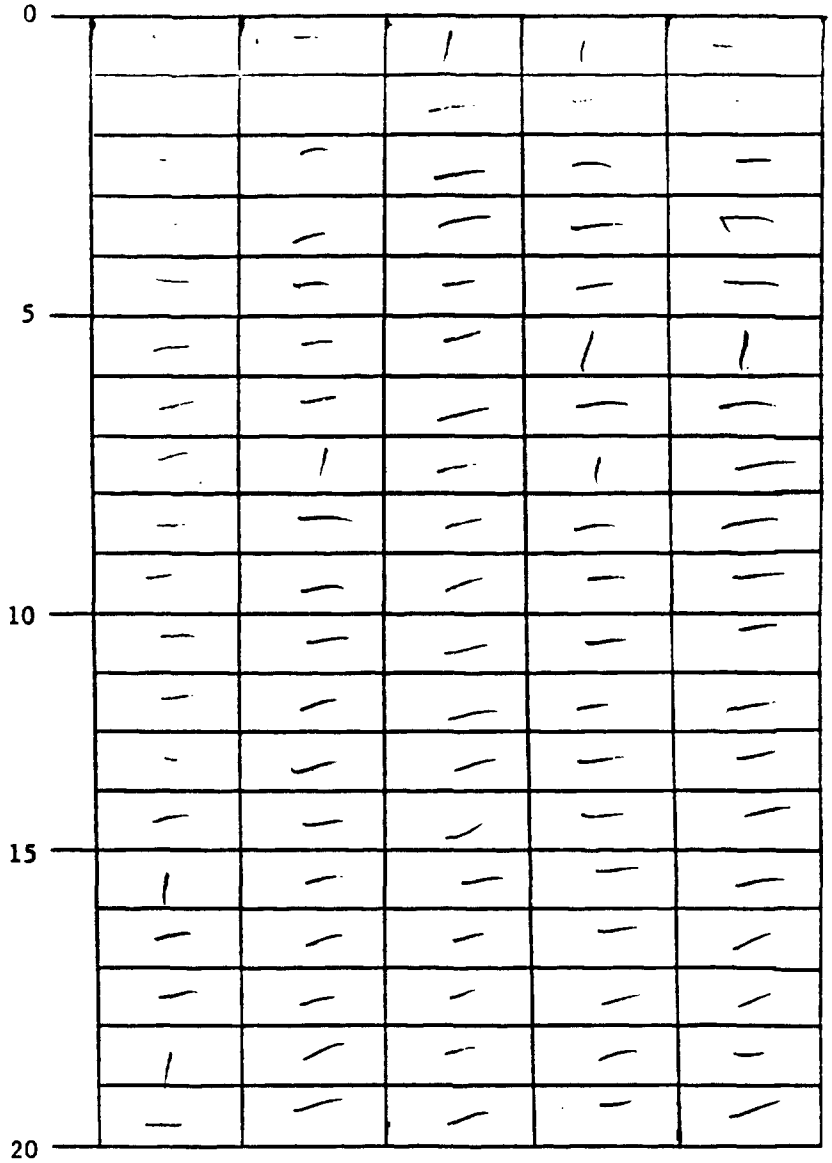
VOLUME (V) — liters

FIELD AREA (a) — mm^2

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) .08 fibers/field



SUBTOTALS

TOTAL 8

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$

AIRBORNE ASBESTOS FIBER SAMPLING

Plant milford

Name ENVIRONMENT

Title

Date 5-7-75

Pump Serial No. B-06-042

Sampled by George Fowler

Signature

LOCATION	Warehouse	DRY Blending AREA	DRY Blending AREA	WET MIX AREA	OFFICE
FILTER NO.	84	89	99	92	47
FLOW: Pump Setting	6	6	6	6	6
Liter/min (R)	1.7	1.7	1.7	1.7	1.7
TIME: On	7:27	10:44	12:45	1:45	3:30
Off	10:44	12:06 12:45	1:45	3:30	4:05
ELAPSED TIME (min) (t)	197	121	60	95	35
VOLUME, Liters (t x r)	335	206	102	162	60
REMARKS					
CONCENTRATION (F) fibers/ml	.43	1.28	.01	.00	.12

Total Sample Time (T) _____ mins.

$$\text{Time Weight Av. Concentration} = \frac{(t_1F_1) + (t_2\ _2) + (t_3F_3) + \ldots}{T}$$

SGP 0007977

Date: [illegible]

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 92

ELAPSED TIME (t) 91 mins.

FLOW RATE 1.7 l/min

VOLUME (V) [illegible] liters

FIELD AREA (a) [illegible] mm^2

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) .64 fibers/field

0	1	1	—	1	1
	2	2	—	—	—
	1	2	—	2	—
	2	—	—	—	1
	3	—	—	—	—
5	1	1	—	1	—
	—	—	—	—	1
	—	—	1	1	1
	—	—	—	1	1
	—	—	1	—	—
10	—	1	—	2	1
	1	—	—	1	1
	—	2	2	—	—
	2	1			
15	—	1	2	1	1
	1	—	—	—	2
	—	1	2	—	—
	—	1	1	—	—
20	1		—	—	1
SUBTOTALS	16	13	10	12	13

TOTAL 64

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ [illegible] = .68

SGP 0007978

Date: 5/[illegible]

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. [illegible]

ELAPSED TIME (t) _____ mins.

FLOW RATE [illegible] l/min

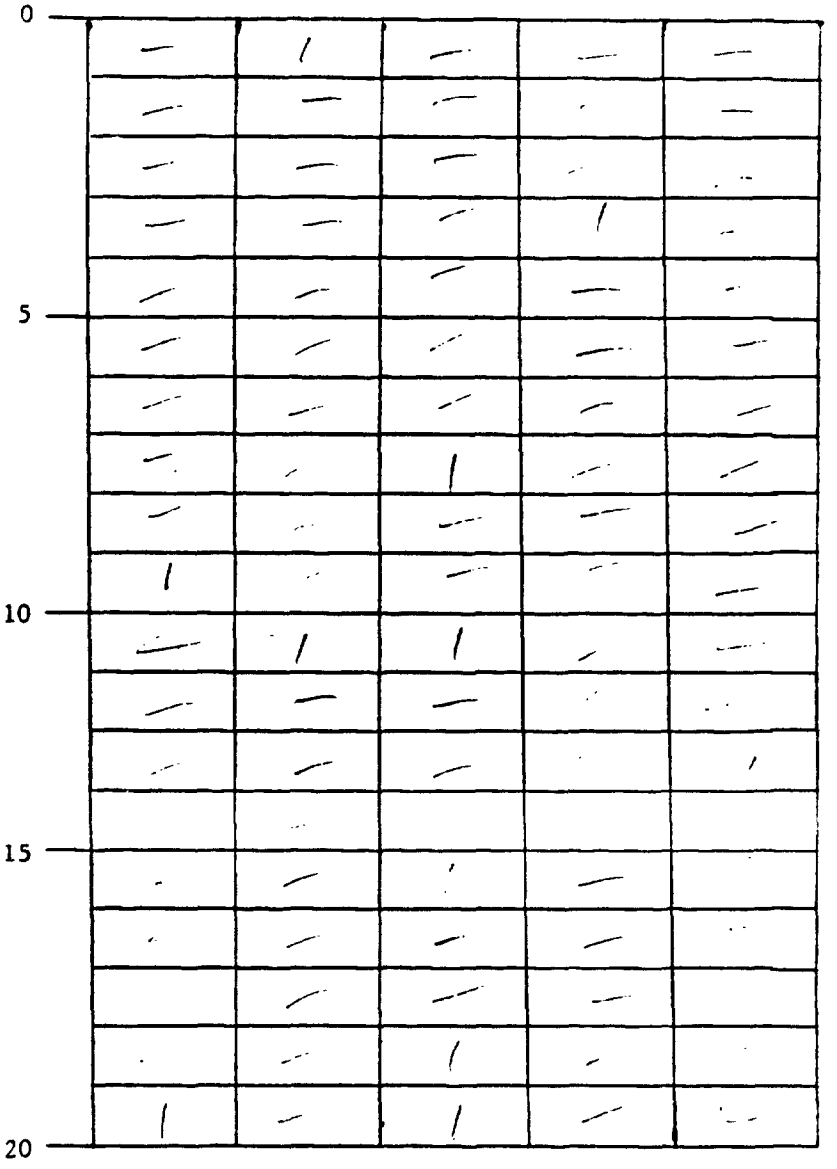
VOLUME (V) _____ liters

FIELD AREA (a) [illegible] mm^2

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) [illegible] fibers/field



SUBTOTALS

TOTAL [illegible]

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ [illegible] .13

Date: [illegible]

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. S4 | ELAPSED TIME (t) 197 mins.

FLOW RATE 1.7 l/min | VOLUME (V) [illegible] liters

FIELD AREA (a) _____ mm^2 | BLANK COUNT (b) [illegible] fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) .80 fibers/field

0	–	–	–	6	–
	–	1	2	1	–
	1	2	–	1	–
	1	–	2	1	–
	–	–	–	–	2
5	1	1	2	–	–
	–	1	2	–	1
	–	1	–	–	2
	1	1	–	2	3
	–	–	–	1	2
10	1	1	–	1	1
	–	1	–	2	3
	1	–	–	1	2
			–		
15	1	–	1	–	1
	1	–	1	2	2
	1	–	2	1	–
	2	–	–	1	–
20	1	–	2	–	1
SUBTOTALS	14	11	14	21	20

TOTAL [illegible]

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ [illegible]

SGP 0007980

Date: /

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 89

ELAPSED TIME (t) 121 mins.

FLOW RATE 1.7 l/min

VOLUME (V) [illegible] liters

FIELD AREA (a) [illegible] mm^2

BLANK COUNT (b) [illegible] fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 1.41 fibers/field

0	4	—	1	—	
	3	—	3	2	
	3	1	4	2	
	1	[illegible]	—	2	
	3	[illegible]	2	[illegible]	
5	1	1	2	[illegible]	
	1	5	1	2	
	1	2	1	—	
	2	[illegible]	2	2	
	4	—	—	[illegible]	
10	1	—	1	3	
	1	1	1	—	
	—	—	2	1	
	[illegible]		[illegible]	[illegible]	
15	1	[illegible]	—	2	
	—	2	—	1	
	—	[illegible]	1	1	
	2	[illegible]	2	—	
	1	[illegible]	—	—	
20					
SUBTOTALS	31	31	23	28	

TOTAL 117

1.4

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$

$\frac{195 \times 1.41 - [illegible]}{[illegible]}$ 1.28

SGP 0007981

Date: [illegible]

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 99

ELAPSED TIME (t) 60 mins.

FLOW RATE 1.7 l/min

VOLUME (V) 102 liters

FIELD AREA (a) .00432 mm^2

BLANK COUNT (b) .03 fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) .50 fibers/field

0	2	0	1	–	2
	1	–	–	1	1
	–	–	–	–	1
	1	–	–	–	–
	–	1	1	–	–
5	2	–	–	–	2
	1	1	–	1	–
	1	1	–	–	2
	–	1	–	1	–
	1	–	–	–	–
10	1	1	–	1	–
	–	–	–	–	1
	1	–	–	1	2
	–	–	1		
15	1	–	–	–	–
	–	–	–	–	–
	1	1	1	–	–
	1	1	–	–	–
20	–	1	1	–	1
SUBTOTALS	19	12	5	7	12

TOTAL 50

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ [illegible] = .52

SGP 0007982

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Milford

Name LESTER TAYLOR

Title wet mix operator

Date 5-7-75

Pump Serial No. B-08-0490

Sampled by George E. Fowler

Signature _____

LOCATION	wet mix	wet mix	wet mix		
FILTER NO.	87	79	90	82	
FLOW: Pump Setting	6	6	6	6	
Liter/min (R)	1.7	1.7	1.7	1.7	
TIME: On	7:21	9:00	10:38	12:47	
Off	9:00	10:38	12:47	3:30	
ELAPSED TIME (min) (t)	109	98	99	163	
VOLUME, Liters (t x r)	185	167	168	277	
REMARKS			- 3 [illegible] for lunch 12 to 12:30		
CONCENTRATION (F) fibers/ml	0.36	2.07	[illegible]	.13	

Total Sample Time (T) 469 mins.

$$\text{Time Weight Av. Concentration} = \frac{(t_1F_1) + (t_2\ _2) + (t_3F_3) + \ldots}{T}$$

$$= \frac{(109)(.36)+(98)(2.07)+(99)(.55)=[illegible]}{469}$$

$$= \frac{39 + 203 + 54 + 21}{} = \boxed{.59}$$

SGP 0007983

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 87 | ELAPSED TIME (t) 1 1 mins.

FLOW RATE 1.7 l/min | VOLUME (V) 1 . liters

FIELD AREA (a) (0)922 mm^2 | BLANK COUNT (b) . fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) .92 fibers/field

0	1	—	—	—	—
	—	1	—	—	—
	1	—	1	1	2
	—	—	1	1	—
	—	1	5	1	1
5	1	—	1	—	—
	—	1	1	—	—
	—	—	—	—	—
	1	—	—	1	—
	—	1	—	1	—
10	—	1	1	1	—
	—	2	—	1	1
	—	—	1	—	—
		2	—	—	
15	—	—	—	—	1
	1	1	1	1	—
	—	—	—	—	—
	1	—	—	—	—
20	—	—	1	—	—
SUBTOTALS	6	10	13	8	5

TOTAL 42

Constant k = $\frac{A}{1000\ a}$ = 1.93

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ 1.93(.92 - 0) / 1 = .36

SGP 0007984

Date: 5/1/11

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 62 | ELAPSED TIME (t) 163 mins.

FLOW RATE 1.75 l/min | VOLUME (V) 277 liters

FIELD AREA (a) .00432 mm^2 | BLANK COUNT (b) [illegible] fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) [illegible] fibers/field

0	1	—	2	—	1
	—	—	—	1	2
	—	—	—	1	1
	—	1	—	—	—
	1	—	—	1	—
5	—	—	—	—	—
	—	—	—	—	—
	—	2	1	—	—
	1	1	1	1	—
	—	—	—	—	—
10	—	—	—	—	—
	—	—	—	—	1
	—	—	1	—	—
15		—	—	—	—
		—	—	—	—
		1	—	1	
		—	—	1	
20	1	—	1	—	—

SUBTOTALS TOTAL 77

Constant k = $\frac{A}{1000\ a}$ = 198

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ = $\frac{198\ (.2-.08)}{277}$ = .13

SGP 0007985

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 90 | ELAPSED TIME (t) 99 mins.

FLOW RATE 1.7 l/min | VOLUME (V) 168 liters

FIELD AREA (a) .00432 mm^2 | BLANK COUNT (b) .08 fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) .55 fibers/field

0	–	–	3	1	–
	–	–	–	1	1
	–	2	–	1	1
	–	2	–	1	–
	–	–	1	1	–
5	–	1	1	–	1
	–	–	1	–	–
	1	1	1	1	1
	1	–	–	–	–
	–	2	–	–	1
10	–	–	1	–	1
	1	–	–	1	1
	2	1	–	–	–
	–	1			
15	2	–	–	1	1
	–	–	–	–	–
	–	1	1	1	1
	1	–	1	–	1
	–	2	1	–	
20					
SUBTOTALS	8	13	12	9	13

TOTAL 55

Constant $k = \frac{A}{1000\ a}$ 198

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ = $\frac{198\ (.55-.08)}{168}$ = .55

SGP 0007986

Date: 5/[illegible]

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 79 | ELAPSED TIME (t) [illegible] mins.

FLOW RATE 1.7 l/min | VOLUME (V) 167 liters

FIELD AREA (a) .00821 mm^2 | BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) 1.53 fibers/field

0	—	1	2		
	2	1	2		
	2	2	1		
	1	2	3		
	2	3	1		
5	10	1	3		
	—	3	—		
	2	2	—		
	5	2	1		
	1	2	4		
10	1	2	3		
	2	—	—		
	2	1	3		
			1		
15	2	2	1		
	1	3	—		
	—	3	—		
	4	2	—		
20	—	2	1		
SUBTOTALS	42	36	32		TOTAL 110

1.53

Constant k = $\frac{A}{1000\ a}$ = 19?

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ 19 × (1.53 − .00) / 167 = 2.07

SGP 0007987

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Milford

Date 5-7-75

Name Bradley Barbee Lane

Pump Serial No. B-06-0165

Title Lid placer

Sampled by George Fowler

Signature George Fowler

LOCATION	Lid Placer	Lid Placer			
FILTER NO.	85	88			
FLOW: Pump Setting	6	6			
Liter/min (R)	2.0	2.0			
TIME: On	7:17	10:40			
Off	10:40	3:30			
ELAPSED TIME (min) (t)	203	260			
VOLUME, Liters (t x r)	406	520			
REMARKS	using FACE MASK	Pump off for 30 minutes for lunch. 12 to 12:30			
CONCENTRATION (F) fibers/ml	1.46	1.[illegible]			

Total Sample Time (T) 462 mins.

$$\text{Time Weight Av. Concentration} = \frac{(t_1F_1) + (t_2\ _2) + (t_3F_3) + \ldots}{T}$$

$$\frac{203(1.46) + (260)(1.2[illegible])}{462} = 296 + 31[illegible] \quad 1.3$$

SGP 0007988

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 85

ELAPSED TIME (t) [illegible] mins.

FLOW RATE 2.0 l/min

VOLUME (V) [illegible] liters

FIELD AREA (a) [illegible] mm^2

BLANK COUNT (b) [illegible] fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) [illegible] fibers/field

0	6	4			
	2	2			
	3	4			
	1	3			
	2	1			
5	3	1			
	1	6			
	1	2			
	3	2			
	2	6			
10	2	5			
	2	8			
	2	4			
15	5	4			
	2	2			
	3	4			
	4	6			
	6	3			
20					
SUBTOTALS	52	71			

TOTAL 123

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$

SGP 0007989

Date: [illegible]

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 89

ELAPSED TIME (t) [illegible] mins.

FLOW RATE 2.0 l/min

VOLUME (V) [illegible] liters

FIELD AREA (a) [illegible] mm^2

BLANK COUNT (b) [illegible] fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) [illegible] fibers/field

0	5	3			
	3	2			
	3	5			
	5	4			
	2	4			
5	2	4			
	3	3			
	3	2			
	4	2			
	3	6			
10	4	3			
	3	—			
	5	3			
15	4	3			
	3	2			
	3	4			
	2	3			
20	4	4			
SUBTOTALS	66	65			TOTAL 131

Constant k = $\frac{A}{1000\ a}$ = 198

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ = [illegible] = 1.2

SGP 0007990

AIRBORNE ASBESTOS FIBER SAMPLING

→ KENNETH ATKINS

Plant Milford

Name JENNETTE ATKINS

Title Fork Truck operator

Date 5-7-75

Pump Serial No. B-06-0283

Sampled by George Fowler

Signature George Fowler

LOCATION	Wharehouse Fork Truck	Wharehouse Fork Truck			
FILTER NO.	76	81			
FLOW: Pump Setting	6	6			
Liter/min (R)	1.7	1.7			
TIME: On	7:12	2:30			
Off	2:30	3:30			
ELAPSED TIME (min) (t)	408	60			
VOLUME, Liters (t x r)	693	102			
REMARKS	Pump off 30 minutes for lunch 12:00 to 12:30				
CONCENTRATION (F) fibers/ml	.24	.10			

Total Sample Time (T) 468 mins.

$$\text{Time Weight Av. Concentration} = \frac{(t_1F_1) + (t_2\ _2) + (t_3F_3) + \ldots}{T}$$

$$\frac{(408)(.24) + 60}{468} = \frac{106 + 6}{1}$$

$$= \boxed{.241}$$

SGP 0007991

Date: 5/1/-5

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 76 | ELAPSED TIME (t) [illegible] mins.

FLOW RATE 1.7 l/min | VOLUME (V) [illegible] liters

FIELD AREA (a) .00132 mm^2 | BLANK COUNT (b) [illegible] fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) .73 fibers/field

0	3	2	/	6	—
	—	1	2	1	—
	1	—	2	1	3
	1	2	2	1	—
	—	1	4	1	3
5	5	—	1	—	—
	1	—	1	—	—
	1	2	—	1	3
	1	3	—	—	1
	3	—	—	3	1
10	1	1	1	2	2
	—	—	2	1	3
	1	2	2	3	—
15		—	1	1	1
	1	—	1	1	3
	3	—	1	1	—
	1	2	—	—	1
20	2	1	1	—	2
SUBTOTALS		19	21	23	25

TOTAL 93

Constant k = $\frac{A}{1000\ a}$ (97)

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ = [illegible] .26

SGP 0007992

Date: [illegible]

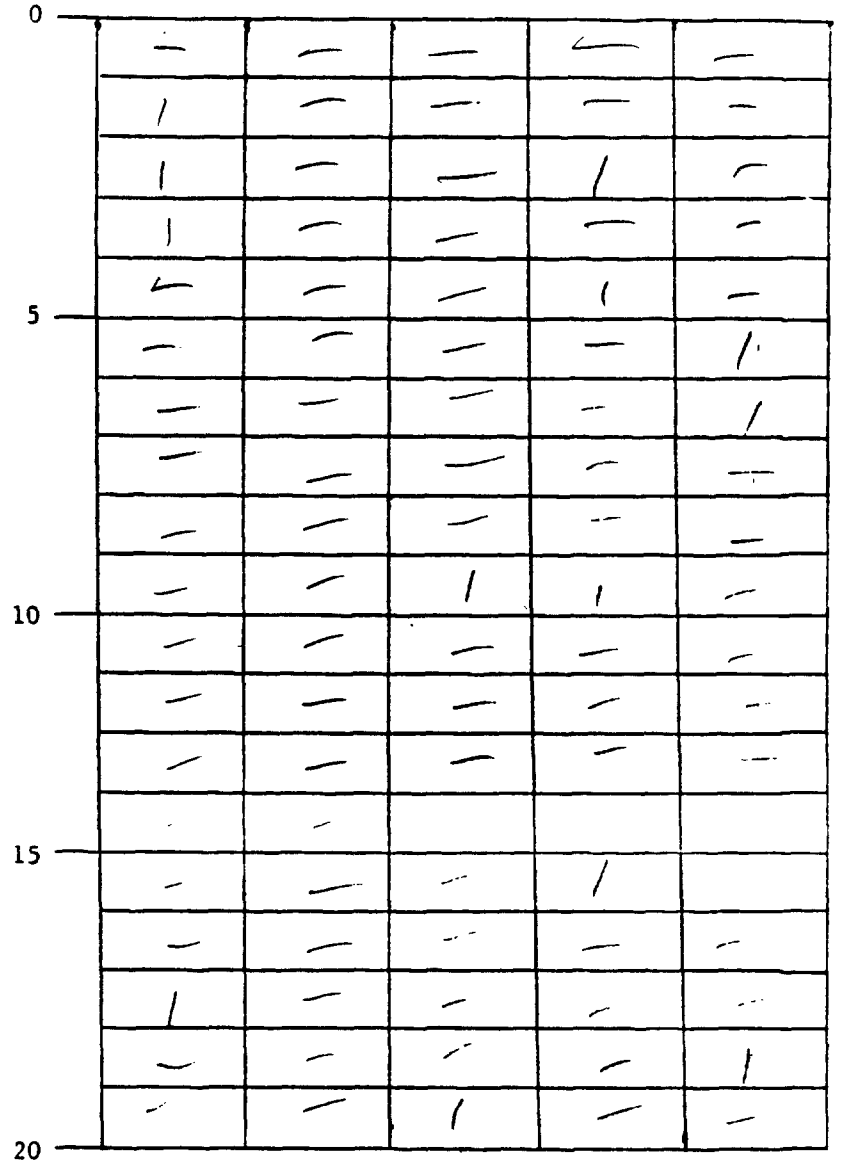
ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 83 | ELAPSED TIME (t) _____ mins.

FLOW RATE 17 l/min | VOLUME (V) [illegible] liters

FIELD AREA (a) [illegible] mm^2 | BLANK COUNT (b) [illegible] fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) .17 fibers/field



SUBTOTALS

TOTAL 17

Constant $k = \frac{A}{1000\ a}$

Fiber Concentration $(F) = \frac{k\ (f-b)}{V} =$ [illegible] = 1.10/

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Milford

Name JOHNIE JARELL

Title STACKER operator

Date 5-7-75

Pump Serial No. B-04-0305

Sampled by George Fowler

Signature George Fowler

LOCATION	STACKER	STACKER			
[illegible] NO.	78	95			
FLOW: Pump Setting	6	6			
Liter/min (?)	1.8	1.8			
TIME: On	7:07	10:41			
Off	10:41	3:30			
ELAPSED TIME (min) (t)	214	259			
VOLUME, Liters (t x r)	385	466			
REMARKS		-30 min. for lunch 12-12:30			
CONCENTRATION (F) fibers/ml	[illegible]	[illegible]			

Total Sample Time (T) 473 mins.

Time Weight Av. Concentration = $\frac{(t_1F_1) + (t_2\ 2) + (t_3F_3) + \ldots}{T}$

$\frac{.76(\text{[illegible]}) + (.21)(\text{[illegible]})}{473}$

= 0.46

SGP 0007994

Date: 5/[illegible]

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 95

ELAPSED TIME (t) [illegible] mins.

FLOW RATE [illegible] l/min

VOLUME (V) [illegible] liters

FIELD AREA (a) [illegible] mm^2

BLANK COUNT (b) [illegible] fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) [illegible] fibers/field

0	1	—	1	2	—
	—	—	—	—	—
	—	—	—	1	1
	—	1	—	1	—
	—	—	1	2	1
5	1	—	—	2	1
	1	1	3	1	—
	1	1	—	—	1
	—	—	—	—	—
	—	—	—	—	—
10	—	2	—	2	—
	—	1	—	1	—
	—	—	2	—	1
		1			
15	1	—	[illegible]	—	—
	—	—	1	—	—
	—	—	1	—	—
	—	—	—	—	—
20	—	3	2	1	2
SUBTOTALS	8	10	13	14	7

TOTAL [illegible]

Constant $k = \frac{A}{1000\ a}$ 198

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ [illegible] .71

SGP 0007995

Date: 5/...

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 79

ELAPSED TIME (t) _____ mins.

FLOW RATE 1.8 l/min

VOLUME (V) _____ liters

FIELD AREA (a) [illegible] mm^2

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 1.56 fibers/field

0	2	4	2	1	2
	1	5	1	1	2
	2	1	—	2	—
	1	1	9	—	2
	1	3	—	3	2
5	3	1	1	—	1
	3	2	2	2	1
	3	9	1	3	2
	1	2	—	1	2
	—	2	1	—	3
10	1	3	—	—	9
	2	—	1	1	1
	2	1	—	1	2
15	3	1	—		1
	—	1	1	—	1
	1	1	2	1	1
	1	3	1	2	—
20	2	2	3	—	1
SUBTOTALS	34	40	23	26	30

TOTAL 156

Constant k = $\frac{A}{1000\ a}$ = [illegible] = 19

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ 19 (1.56 - [illegible]) = 0.76

SGP 0007996

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Milford

Name Johnny R Green

Title Drymix operator

Date 5-7-75

Pump Serial No. B-06-0444

Sampled by George Fowler

Signature George Fowler

LOCATION	DRY mixer	DRY mixer	Dry mixer	DRY Mixer	DRY mixe
FILTER NO.	77	94	81	91	80
FLOW: Pump Setting	6	6	6	6	6
Liter/min (R)	1.75	1.7	1.7	1.7	
TIME: On	7:09	8:30	9:28	10:36	12:36
Off	8:30	9:28	10:36	12:36	1:50
ELAPSED TIME (min) (t)	81	58	68	90	74
VOLUME, Liters (t x r)	142	102	119	158	130
REMARKS	Uses Face mask during the time RAW MATERIALS ARE Being Dumped				
CONCENTRATION (F) fibers/ml	1.97	1.46			

Total Sample Time (T) 471 mins.

Time Weight Av. Concentration = $\frac{(t_1F_1) + (t_2\ 2) + (t_3F_3) + \ldots}{T}$

$\frac{(81)(1.97) + 58(1.46) + 68(2.5) + 90(\ldots)}{471}$

$\frac{160 + 85 + 170 + 329 + \ldots}{\ldots} = 2.4$

SGP 0007997

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Milford
Name Johnny Green
Title Dry mix operator

Date 5-7-75
Pump Serial No. B-06-0444
Sampled by George Fowler
Signature George Fowler

LOCATION	Dry mixer	Dry mixer			
FILTER NO.	86	98			
FLOW: Pump Setting	6	6			
Liter/min (R)	1.7	[illegible]			
TIME: On	1:50	2:30			
Off	2:30	3:30			
ELAPSED TIME (min) (t)	40	60			
VOLUME, Liters (t x r)	70	105			
REMARKS					
CONCENTRATION (F) fibers/ml	3.48	4.09			

Total Sample Time (T) _____ mins.

$$\text{Time Weight Av. Concentration} = \frac{(t_1F_1) + (t_2\ _2) + (t_3F_3) + \ldots.}{T}$$

SGP 0007998

Date: 5

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 77

ELAPSED TIME (t) [illegible] mins.

FLOW RATE [illegible] l/min

VOLUME (V) [illegible] liters

FIELD AREA (a) [illegible] mm^2

BLANK COUNT (b) [illegible] fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) [illegible] fibers/field

0	4	1	1	[illegible]	
	2	3	1	1	
	2	3	2	1	
	1	1	1	2	
	—	5	1	2	
5	1	1	1	2	
	—	3	—	1	
	2	3	1	1	
	3	1	—	—	
	—	1	1	3	
10	2	2	2		
	4	1	—		
	—	2	2		
	1	[illegible]	[illegible]		
15	4	1	2		
	1	2	2		
	—	—	1		
	2	2	2		
	—	—	2		
20					
SUBTOTALS	29	33	26	[illegible]	

TOTAL [illegible]

Constant $k = \frac{A}{1000\ a}$ 198

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ $\frac{198(1.49-[illegible])}{[illegible]}$ $\boxed{1.[illegible]}$

SGP 0007999

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 94 | ELAPSED TIME (t) _____ mins.

FLOW RATE 1.75 l/min | VOLUME (V) 102 liters

FIELD AREA (a) [illegible] mm^2 | BLANK COUNT (b) [illegible] fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) 1 fibers/field

0	3	—	2	1	1
	—	—	1	1	1
	1	1	—	2	1
	—	2	—	—	4
	—	2	2	2	1
5	—	—	2	—	—
	3	—	—	1	—
	1	1	1	1	1
	1	—	—	—	—
	—	1	—	—	—
10	1	1	—	1	—
	1	—	2	1	—
	1	—	1	—	2
	1	1	1		
15	2	1	1	1	—
	2	1	—	1	1
	—	—	—	1	1
	—	2	2	1	1
20	—	2	3	—	2
SUBTOTALS	17	15	18	17	16

TOTAL [illegible]

Constant $k = \frac{A}{1000\ a}$ [illegible]

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ [illegible] = 1.46

SGP 0008000

Date: 7 5/1[illegible]

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 81 — ELAPSED TIME (t) 6[illegible] mins.

FLOW RATE [illegible] 1/min — VOLUME (V) 11[illegible] liters

FIELD AREA (a) [illegible] mm^2 — BLANK COUNT (b) [illegible] fibers/field

FILTER AREA (A) 855 mm^2 — AV. FIBER COUNT (f) 1.5[illegible] fibers/field

0	2	2	4	1	
	1	–	3	2	
	1	4	–	2	
	2	–	3	–	
	3	1	4	1	
5	1	1	1	1	
	1	1	–	1	
	3	–	–	1	
	2	1	1	2	
	2	3	1	3	
10	1	1	–	4	
	1	1	2	1	
	1	–	3	2	
	3	1	4		
15	1	3	2	3	
	5	3	–	1	
	–	3	2	2	
	1	1	1	3	
	2	1	4	3	
20					
SUBTOTALS	33	27	32	34	TOTAL 126

1.5

Constant k = $\frac{A}{1000\ a}$ = 1[illegible]

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ = $\frac{1[illegible](1.5[illegible] - [illegible])}{11[illegible]}$ = 2.5[illegible]

SGP 0008001

Date: [illegible]

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 91 | ELAPSED TIME (t) [illegible] mins.

FLOW RATE [illegible] l/min | VOLUME (V) [illegible] liters

FIELD AREA (a) [illegible] mm^2 | BLANK COUNT (b) [illegible] fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) [illegible] fibers/field

0	7	[illegible]			
	1	1			
	1	5			
	3	2			
	3	2			
5	1	3			
	2	3			
	3	6			
	2	3			
	2	3			
10	2	3			
	5	1			
	5	4			
15	2	3			
	1	4			
	2	3			
	5	2			
20	3	2			
SUBTOTALS	51	66			

TOTAL [illegible]

Constant k = $\frac{A}{1000\ a}$ 1.78

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ 1.78 ([illegible] − .03) / 1 = 2.66

SGP 0008002

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 80

ELAPSED TIME (t) 74 mins.

FLOW RATE 1.75 l/min

VOLUME (V) 130 liters

FIELD AREA (a) [illegible] mm^2

BLANK COUNT (b) [illegible] fibers/field

FILTER AREA (A) 855 mm^2

AV. FIBER COUNT (f) 2.28 fibers/field

0	5	—	4		
	3	2	1		
	5	2	2		
	2	2	3		
	3	2	2		
5	1	3	5		
	1	2	3		
	—	—	1		
	4	—	5		
	1	2	5		
10	1	1	1		
	6	4	2		
	5	2	1		
	—	1	[illegible]		
15	3	3	2		
	6	5	4		
	2	—	1		
	3	—	4		
	3	1	1		
20					
SUBTOTALS	54	34	49		

TOTAL 137

Constant $k = \frac{A}{1000\ a}$ - 198

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ $\frac{198(2.28-.1)}{130}$ [illegible]

SGP 0008003

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. [illegible] ELAPSED TIME (t) [illegible] mins.

FLOW RATE 1.2[illegible] l/min VOLUME (V) [illegible] liters

FIELD AREA (a) .00432 mm^2 BLANK COUNT (b) .0[illegible] fibers/field

FILTER AREA (A) 855 mm^2 AV. FIBER COUNT (f) 1.[illegible] fibers/field

0	2	—	2	—	
	1	2	—	—	
	—	1	2	1	
	—	—	3	1	
	—	2	—	—	
5	3	—	2	1	
	—	—	1		
	1	5	1		
	4	2	2	1	
	4	1	2	2	
10	1	1	2	1	
	—	—	—	1	
	2	2	—	—	
		1			
15	1	3	—	4	
	—	—	2	1	
	1	1	—	2	
	—	2	2		
20	2	4	1	1	
SUBTOTALS	[illegible]	[illegible]	26	22	TOTAL [illegible]

Constant k = $\frac{A}{1000\ a}$ = 178

Fiber Concentration (F) = $\frac{k\ (f-b)}{V}$ = $\frac{178 \cdot 1.31}{70}$ = 3.4[illegible]

SGP 0008004

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 93 | ELAPSED TIME (t) 1.5 mins.

FLOW RATE 1.75 l/min | VOLUME (V) 1.05 liters

FIELD AREA (a) .00122 mm^2 | BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm^2 | AV. FIBER COUNT (f) 2.27 fibers/field

0	3	2	2		
	0	5	1		
	3	3	2		
	4	2	3		
	3	3	4		
5	1	1	2		
	1	2	2		
	3	2	2		
	2	3	4		
	3	1	2		
10	4	2	1		
	1	1	2		
	3	2	2		
	2	1	2		
15	2	4	2		
	3	4	1		
	—	6	2		
	3	—	4		
20	1	4	2		
SUBTOTALS	42	48	43		TOTAL 133

Constant $k = \frac{A}{1000\ a}$ 175

Fiber Concentration $(F) = \frac{k\ (f-b)}{V}$ 175(2.27 - 0) / 1.05 = 404

SGP 0008005