

PLAINTIFF'S EXHIBIT

GP-696

AIRBORNE ASBESTOS SURVEY
AKRON JOINT CEMENT PLANT

October 23, 1975

SGP 0020990

Date: 1-20-76

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 130

ELAPSED TIME (t) Unknown mins.

FLOW RATE 1/min

VOLUME (V) Unknown liters

FIELD AREA (a) mm²

BLANK COUNT (b) fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) 20 fibers/field

0	1	—	—	1	—
	1	—	—	—	—
	—	—	—	—	—
	—	—	—	—	1
	1	—	—	—	—
	—	—	—	—	—
5	—	—	—	—	—
	1	1	—	—	—
	—	—	—	—	—
	—	—	—	1	—
	—	1	1	2	—
10	—	—	—	—	—
	—	—	1	—	—
	—	—	—	—	—
	—	—	1	—	1
15	—	—	—	—	—
	—	—	—	2	1
	—	—	—	—	—
	—	1	—	—	—
20	—	—	—	—	—
SUBTOTALS	5	3	3	6	3
TOTAL <u>20</u>					

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

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

VOID
Time not known.

SGP 0020991

Date: 1-22-76

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 135

ELAPSED TIME (t) 59 mins.

FLOW RATE 1.5 l/min

VOLUME (V) 155 liters

FIELD AREA (a) .00432 mm²

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) 164 fibers/field

0	—	2	1	1	—
	—	—	—	1	—
	—	1	2	1	1
	—	—	2	—	—
	1	1	2	1	1
	—	—	2	1	2
5	2	1	1	1	1
	3	1	—	—	—
	—	—	1	1	1
	—	—	—	—	—
	1	1	—	—	2
10	1	—	—	—	2
	1	—	—	—	—
	2	1	1	—	—
	1	3	1	1	—
15	1	—	—	—	—
	—	—	—	—	1
	—	1	2	—	1
	—	—	—	1	—
	—	2	—	1	—
20	—	—	—	—	—

SUBTOTALS

TOTAL 64

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{198 (.64)}{155} = 1.98$$

SGP 0020992

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 221ELAPSED TIME (t) 15 mins.FLOW RATE 1.5 l/minVOLUME (V) 27 litersFIELD AREA (a) 0.0432 mm²

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm²AV. FIBER COUNT (f) .36 fibers/field

0	<u>2</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	<u>-</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>-</u>
	<u>1</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>1</u>
	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	<u>1</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>1</u>
5	<u>1</u>	<u>2</u>	<u>-</u>	<u>-</u>	<u>-</u>
	<u>-</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>1</u>
	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>2</u>
	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	<u>1</u>	<u>-</u>	<u>2</u>	<u>-</u>	<u>-</u>
10	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1</u>
	<u>1</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>
	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	<u>-</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>-</u>
15	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	<u>1</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>-</u>
	<u>-</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>
	<u>-</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>-</u>
	<u>-</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>-</u>
20					
SUBTOTALS	<u>10</u>	<u>8</u>	<u>4</u>	<u>8</u>	<u>6</u>
TOTAL <u>36</u>					

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{198 (.36)}{27} = 2.64$$

SGP 0020993

Date: 12/15/25

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 216ELAPSED TIME (t) 69 mins.FLOW RATE 1.9 l/minVOLUME (V) 124 litersFIELD AREA (a) 6632 mm²

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm²AV. FIBER COUNT (f) 0.73 fibers/field

		<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>	<u>2</u>
0		<u>2</u>	<u>1</u>	<u>1</u>	<u>—</u>	<u>—</u>
		<u>—</u>	<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>
		<u>1</u>	<u>—</u>	<u>2</u>	<u>—</u>	<u>1</u>
		<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>—</u>
		<u>—</u>	<u>1</u>	<u>3</u>	<u>—</u>	<u>2</u>
5		<u>2</u>	<u>—</u>	<u>1</u>	<u>2</u>	<u>1</u>
		<u>—</u>	<u>1</u>	<u>—</u>	<u>1</u>	<u>3</u>
		<u>1</u>	<u>—</u>	<u>1</u>	<u>1</u>	<u>1</u>
		<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>
		<u>—</u>	<u>1</u>	<u>—</u>	<u>1</u>	<u>2</u>
10		<u>3</u>	<u>—</u>	<u>—</u>	<u>1</u>	<u>1</u>
		<u>—</u>	<u>—</u>	<u>1</u>	<u>2</u>	<u>1</u>
		<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
		<u>3</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>
15		<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>
		<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>
		<u>—</u>	<u>2</u>	<u>—</u>	<u>1</u>	<u>3</u>
		<u>1</u>	<u>2</u>	<u>—</u>	<u>—</u>	<u>1</u>
		<u>1</u>	<u>—</u>	<u>1</u>	<u>1</u>	<u>—</u>
20						
SUBTOTALS		<u>18</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>22</u>
						TOTAL <u>73</u>

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

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

$$\frac{198(73)}{124} = 1.17$$

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. _____

ELAPSED TIME (t) 178 mins.

FLOW RATE 1.8 l/min

VOLUME (V) 320 liters

FIELD AREA (a) _____ mm²

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) .32 fibers/field

0					
5					
10					
15					
20					

SUBTOTALS

TOTAL _____

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

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

$$\frac{198 (.32)}{320} = .20$$

Date: 1-13-76

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 223ELAPSED TIME (t) 31 mins.FLOW RATE 1.8 l/minVOLUME (V) 55.8 litersFIELD AREA (a) 222 ~~222~~ 432 mm²BLANK COUNT (b) - fibers/fieldFILTER AREA (A) 855 mm²AV. FIBER COUNT (f) .28 fibers/field

0	—	—	—	—	2
	—	—	—	—	1
	1	1	1	—	—
	1	—	—	—	—
	—	—	—	—	—
	1	—	—	—	—
5	—	—	—	2	—
	—	—	—	—	—
	—	—	1	—	1
	—	—	—	—	1
	—	—	—	—	3
10	1	1	—	—	—
	—	—	—	—	—
	1	—	—	—	2
	—	—	—	—	—
15	—	2	—	—	—
	—	—	—	—	1
	—	1	—	—	1
	—	—	—	1	—
	—	1	—	—	—
20	—	—	—	—	—

SUBTOTALS

TOTAL 28

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{198 (.28)}{55.8} = .99$$

SGP 0020996

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Akron
 Name Clarence Blueye
 Title Packer - Stacker

Date 10/23/75
 Pump Serial No. B-08-0490
 Sampled by _____
 Signature _____

LOCATION	Packer & Suction	—	—	—	—	—				
FILTER NO.	136	142	209	211	222	219				
FLOW:										
Pump Setting	6	6	6	6	6	6				
Liter/min (R)	1.7	1.7	1.7	1.7	1.7	1.7				
TIME:										
On	7:13	8:42	10:40	1:06	2:35	2:50				
Off	8:40	10:40	1:04	2:35	2:50	3:25				
ELAPSED TIME (min) (t)		120	116	89	11	35				
VOLUME, Liters (t x r)	148	204	197	151	25.5	59.5				
REMARKS			Pumps 86 30 min Lunch							
CONCENTRATION (F) fibers/ml	.58	.41	.41	.59	.78	1.76				

Total Sample Time (T) 462 mins.

$$\text{Time Weight Av. Concentration} = \frac{(t_1 F_1) + (t_2 F_2) + (t_3 F_3) + \dots}{T}$$

$$= \frac{(\cancel{87} \times .58) + (120 \times .41) + (116 \times .41) + (89 \times .59) + (11 \times .78) + (35 \times 1.76)}{462}$$

$$= \frac{50.5 + 49.2 + 47.6 + 48 + 52.5 + 11.7 + 61}{462} = \frac{320.5}{462} = \boxed{.69}$$

Date: 1-16-76

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 142 ELAPSED TIME (t) 120 mins.
 FLOW RATE _____ l/min VOLUME (V) 204 liters
 FIELD AREA (a) _____ mm² BLANK COUNT (b) _____ fibers/field
 FILTER AREA (A) 855 mm² AV. FIBER COUNT (f) .42 fibers/field

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

SUBTOTALS

TOTAL 42

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{198(.42)}{204} = .41$$

SGP 0020998

Date: 1-23-76

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 13kELAPSED TIME (t) 57 mins.FLOW RATE 1/minVOLUME (V) 148 litersFIELD AREA (a) mm²BLANK COUNT (b) fibers/fieldFILTER AREA (A) 855 mm²AV. FIBER COUNT (f) .43 fibers/field

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

SUBTOTALS

TOTAL 43

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{198 (.43)}{148} = .58$$

SGP 0020999

Date: 12/9/75

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 222 ELAPSED TIME (t) 15 mins.
 FLOW RATE 1 l/min VOLUME (V) 25.5 liters
 FIELD AREA (a) mm² BLANK COUNT (b) fibers/field
 FILTER AREA (A) 855 mm² AV. FIBER COUNT (f) 0.10 fibers/field

0	—	—	—	—	—
	/	—	—	/	—
	—	—	—	—	—
	/	—	—	—	—
	—	—	—	—	—
	—	—	—	—	—
5	/	—	—	—	—
	—	—	—	/	—
	—	/	—	—	—
	—	—	—	—	/
	—	—	—	—	—
10	—	—	—	—	—
	—	—	—	—	—
	/	/	/	—	—
	—	—	—	/	/
	—	—	—	—	—
15	—	—	—	—	—
	/	—	—	/	—
	—	/	—	—	—
	—	—	—	—	—
	—	—	—	—	—
20	—	—	—	—	—

SUBTOTALS

TOTAL 10

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{198(.10)}{25.5} = .78$$

Date: 12/10/77

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 209

ELAPSED TIME (t) 116 ~~12/10/77~~ mins.

FLOW RATE 1 l/min

VOLUME (V) 197 liters

FIELD AREA (a) mm²

BLANK COUNT (b) fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) 41 fibers/field

0	—	—	—	—	—
	1	1	—	1	
	—	—	1	—	—
	—	1	—	—	—
	—	1	—	1	2
	—	2	2	—	—
5	3	2	3	—	—
	—	—	—	—	1
	—	—	—	—	—
	—	—	—	—	—
	1	1	1	1	—
10	—	—	—	—	—
	—	1	—	1	1
	—	1	—	—	—
	1	—	—	—	—
15	—	1	2	—	—
	1	—	—	—	—
	—	1	—	1	1
	—	—	—	—	—
	—	1	2	—	—
20					
SUBTOTALS	6	13	12	4	6
					TOTAL <u>41</u>

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{197 (.41)}{197} = .41$$

Date: 12/15/75

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 219

ELAPSED TIME (t) 35 mins.

FLOW RATE 1.7 l/min

VOLUME (V) 57.5 liters

FIELD AREA (a) 00432 mm²

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) .53 fibers/field

0	1	—	—	2	—
	4	1	—	—	—
	—	4	2	1	1
	1	—	—	—	—
	1	1	1	1	1
5	1	1	1	—	—
	1	—	1	—	—
	2	—	—	—	—
	1	—	—	1	5
	2	—	—	—	—
10	—	—	—	1	1
	—	—	—	1	—
	—	1	1	1	—
	—	—	—	1	—
15	2	1	1	—	—
	—	1	—	—	—
	—	1	2	1	—
	—	1	2	1	—
	—	—	1	2	—
20					
SUBTOTALS	12	8	12	13	8
					TOTAL <u>.53</u>

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{198(.53)}{59.5} = 1.76$$

Date: 12/8/75

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 212 ELAPSED TIME (t) 17 mins.
 FLOW RATE 1.8 ~~1.75~~ l/min VOLUME (V) 30.6 liters
 FIELD AREA (a) .00432 mm² BLANK COUNT (b) _____ fibers/field
 FILTER AREA (A) 855 mm² AV. FIBER COUNT (f) .43 fibers/field

	1	1	—	—	—
0	1	—	—	1	—
	—	1	1	1	—
	—	—	—	2	1
	—	—	—	1	—
	1	—	—	—	—
5	—	1	—	—	—
	—	1	1	—	—
	2	1	1	1	—
	—	1	—	—	1
	2	—	1	1	—
10	2	—	—	1	—
	—	1	—	—	—
	—	—	1	—	—
	—	1	—	—	1
15	—	—	—	1	—
	—	—	—	1	—
	—	1	2	1	1
	—	—	—	—	2
20	—	—	—	—	1
SUBTOTALS	9	9	7	11	7

TOTAL 43

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

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

$$\frac{198 (.43)}{30.6} = 2.78$$

Date: 1-12-76

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 211

ELAPSED TIME (t) 3' 4" mins.

FLOW RATE 1.7 l/min

VOLUME (V) 15.1 liters

FIELD AREA (a) .02432 mm²

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) 45 fibers/field

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

SUBTOTALS

TOTAL 45

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

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

$$\frac{1980(.45)}{151} = \boxed{.59}$$

AIRBORNE ASBESTOS FIBER SAMPLING

Plant AKRON

Date 10/23/75

Name Al Kenworth

Pump Serial No. B06-0288

Title Ready Mix Mixer

Sampled by ~~XXXXXXXXXX~~

Signature _____

LOCATION	Ready mix mixer	—	—	—	—					
FILTER NO.	143	137	201	210	217					
FLOW:										
Pump Setting	6	6	6	6	6					
Liter/min (R)	1.7	1.7	1.7	1.7	1.7					
TIME:										
On	7:08	8:45	9:55	1:13	1:30					
Off	8:45	9:55	1:13	1:30	3:25					
ELAPSED TIME (min) (t)	97	70	168	17	115					
VOLUME, Liters (t x r)	165	119	286	29	196					
REMARKS			30 min pump off							
CONCENTRATION (F) fibers/ml	.70	.40	.62	3.00	.63					

Total Sample Time (T) 467 mins.

Time Weight Av. Concentration = $\frac{(t_1 F_1) + (t_2 F_2) + (t_3 F_3) + \dots}{T}$

$$= \frac{(165 \times .70) + (119 \times .40) + (168 \times .62) + (17 \times 3) + (115 \times .63)}{467}$$

$$= \frac{115.5 + 47.6 + 104.2 + 51 + 72.5}{467} = \frac{390.8}{467} = \boxed{.84}$$

Date: 1-15-76

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 143 ELAPSED TIME (t) 47 mins.
 FLOW RATE 1.7 l/min VOLUME (V) 165 liters
 FIELD AREA (a) .00432 mm² BLANK COUNT (b) — fibers/field
 FILTER AREA (A) 855 mm² AV. FIBER COUNT (f) .58 fibers/field

0	1	—	—	1	1
	—	1	—	1	—
	—	1	—	—	—
	1	1	—	—	—
	1	—	—	—	—
	—	1	—	1	1
5	1	—	1	—	1
	1	1	1	2	—
	—	—	—	3	—
	—	1	—	—	1
	1	1	—	—	1
10	—	—	—	—	—
	1	—	1	2	1
	1	—	1	1	1
	—	2	1	—	2
15	1	1	1	—	1
	2	1	1	1	1
	—	—	2	—	—
	—	—	1	1	—
20	1	—	—	1	—

SUBTOTALS

TOTAL 58

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{198(.58)}{165} = .70$$

SGP 0021006

Date: 1-3-76

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 210 ELAPSED TIME (t) 17 mins.
 FLOW RATE 1.7 l/min VOLUME (V) 29 liters
 FIELD AREA (a) 3432 mm² BLANK COUNT (b) - fibers/field
 FILTER AREA (A) 855 mm² AV. FIBER COUNT (f) .44 fibers/field

0	1	1	1	2	1
	1	—	1	—	—
	—	1	—	—	1
	—	1	—	—	1
	1	—	—	1	1
	—	—	—	—	2
5	—	—	1	—	—
	1	—	—	—	—
	1	—	—	—	—
	—	—	2	—	—
	1	—	—	—	1
10	—	—	—	—	—
	—	—	1	—	—
	1	—	1	—	—
	1	1	—	—	—
15	—	1	—	—	—
	2	1	1	—	1
	1	—	—	1	—
	—	3	—	1	1
20	—	2	1	—	2

SUBTOTALS

TOTAL .44

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{198 (.44)}{29} = 3.00$$

SGP 0021007

Date: 12/23/75

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 17 ELAPSED TIME (t) 11 mins.
 FLOW RATE 1.8 l/min VOLUME (V) 196 liters
 FIELD AREA (a) 2432 mm² BLANK COUNT (b) - fibers/field
 FILTER AREA (A) 855 mm² AV. FIBER COUNT (f) .62 fibers/field

	3	-	1	1	-
0	-	1	2	1	1
	-	3	1	1	-
	1	-	-	1	1
	1	-	1	-	1
	2	-	2	-	1
5	1	-	1	-	1
	1	-	-	-	-
	-	-	-	-	-
	1	1	1	-	-
	-	-	1	1	1
10	-	-	-	1	-
	1	-	1	1	1
	-	-	2	1	-
	-	1	-	1	-
15	-	1	-	-	-
	-	1	1	1	2
	-	1	-	-	1
	-	1	1	1	-
	1	1	2	-	1
20					
SUBTOTALS	12	11	17	11	11

TOTAL 62

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

Fiber Concentration (F) = $\frac{k (f-b)}{V}$ $\frac{196 (.62)}{196} = .63$

Date: 8-16-85

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 701ELAPSED TIME (t) 168 mins.FLOW RATE 1.7 l/minVOLUME (V) 286 litersFIELD AREA (a) 1,004.32 mm²

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm²AV. FIBER COUNT (f) .90 fibers/field

0	1	1	—	—	1
	1	—	—	—	—
	—	1	—	—	1
	1	1	—	2	—
	1	1	1	1	—
	—	1	—	—	—
5	1	3	2	3	1
	2	1	—	3	—
	—	2	—	—	—
	3	—	—	3	—
	1	—	—	1	—
10	2	2	2	3	1
	1	1	2	2	1
	2	—	1	—	2
	1	—	1	1	2
15	3	2	1	—	—
	1	—	—	—	1
	—	2	1	—	5
	1	1	—	—	2
	1	—	—	2	—
20					

SUBTOTALS

TOTAL 90

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

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

$$\frac{168 (.90)}{286} = \boxed{.62}$$

SGP 0021009

Date: 12/9/75

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 137

ELAPSED TIME (t) 70 mins.

FLOW RATE 1.7 l/min

VOLUME (V) 119 liters

FIELD AREA (a) 0.043 mm²

BLANK COUNT (b) - fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) - fibers/field

0	-	-	-	-	-
	-	-	-	1	-
	1	-	1	-	1
	-	-	-	-	-
	-	-	-	-	-
5	-	1	1	1	-
	-	-	-	1	-
	-	-	4	-	-
	2	-	-	-	-
	1	-	-	-	1
	-	-	-	1	-
10	-	-	-	-	-
	-	-	-	-	-
	-	-	-	1	-
	-	-	-	-	1
15	-	-	-	-	-
	1	-	1	-	-
	1	-	1	-	-
	1	-	-	-	-
20	-	-	-	-	-
SUBTOTALS	7	1	8	5	3

TOTAL 24

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

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

$$\frac{119 (24)}{119} = 24$$

AIRBORNE ASBESTOS FIBER SAMPLING

Plant AKRON
 Name Charlie Jackson
 Title DRY Blender

Date 10/23/75
 Pump Serial No. B-06-0444
 Sampled by _____
 Signature _____

LOCATION	Dry Blender area	-	-	-	-	-	-			
FILTER NO.	138	131	141	204	205	207	214			
FLOW:	Pump Setting	6	6	6	6	6	6			
	Liter/min (R)	1.75	1.75	1.75	1.75	1.75	1.75			
TIME:	On	7:05	8:00	8:47	9:57	10:48	11:03	1:01		
	Off	8:00	8:47	9:57	10:48	11:03	11:01	3:24		
ELAPSED TIME (min) (t)	55	47	70	51	15	103	143			
VOLUME, Liters (t x r)	96	82	123	89	26	180	250			
REMARKS						Dumped Asbestos 30 min during this sample pump off lunch				
CONCENTRATION (F) fibers/ml	.43	.85	.47	.29	1.29	Void	1.57			

Total Sample Time (T) ~~484~~ ~~566~~ 381 mins.

*Note: Filter damage during sample count. Could not take count.

$$\text{Time Weight Av. Concentration} = \frac{(t_1 F_1) + (t_2 F_2) + (t_3 F_3) + \dots}{T}$$

$$= \frac{(55 \times .43) + (47 \times .85) + (70 \times .47) + (51 \times .29) + (15 \times 1.29) + (143 \times 1.57)}{381}$$

$$= \frac{23.7 + 40.0 + 32.9 + 14.8 + 19.4 + 224.5}{381} = .93$$

Counted 532

Date: 10-25

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. _____

ELAPSED TIME (t) 51 mins.

FLOW RATE 1.75 l/min

VOLUME (V) 89 liters

FIELD AREA (a) 20436 mm²

BLANK COUNT (b) — fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) .13 fibers/field

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

SUBTOTALS

TOTAL .13

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{198 (.13)}{89} = .29$$

Date: 12-12-75

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO.

ELAPSED TIME (t) 15 mins.

FLOW RATE 1.75 l/min

VOLUME (V) 26 liters

FIELD AREA (a) 2432 mm²

BLANK COUNT (b) - fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) .17 fibers/field

0					
5					
10					
15					
20					

SUBTOTALS

TOTAL 17

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{198 (.17)}{26} = 1.29$$

Date: 12-12-78

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. _____

ELAPSED TIME (t) _____ mins.

FLOW RATE _____ l/min

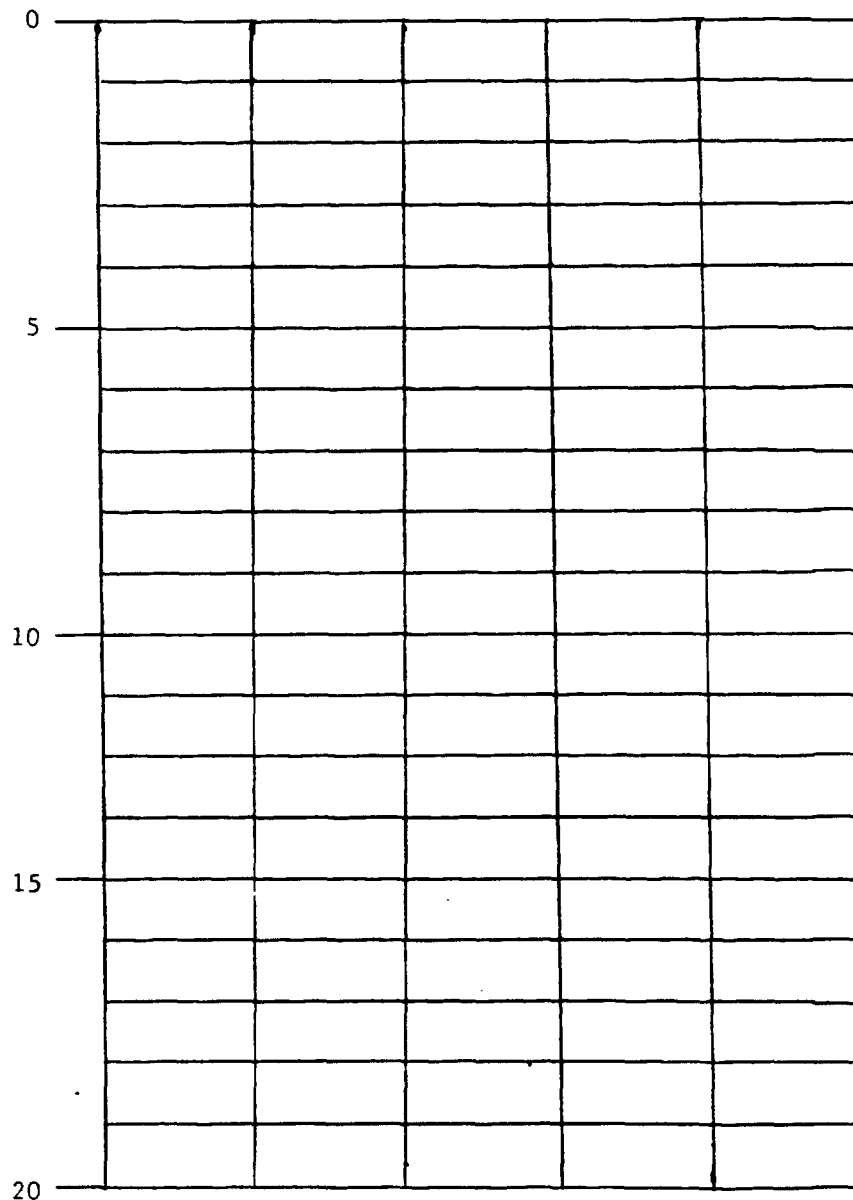
VOLUME (V) _____ liters

FIELD AREA (a) _____ mm²

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) _____ fibers/field



SUBTOTALS

TOTAL _____

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

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

SGP 0021014

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. _____

ELAPSED TIME (t) 55 mins.FLOW RATE 1.75 l/minVOLUME (V) 96 litersFIELD AREA (a) 2432 mm²BLANK COUNT (b) - fibers/fieldFILTER AREA (A) 855 mm²AV. FIBER COUNT (f) 21 fibers/field

0					
5					
10					
15					
20					

SUBTOTALS

TOTAL 21

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{198 (.21)}{96} = .43$$

SGP 0021015

Date: 1-22-76

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 131

ELAPSED TIME (t) 47 mins.

FLOW RATE 1.75 l/min

VOLUME (V) ~~123~~ 82 liters

FIELD AREA (a) 60.432 mm²

BLANK COUNT (b) - fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) 35 fibers/field

0	1	—	—	—	—
	—	—	—	1	3
	—	1	—	—	—
	—	—	1	1	—
	—	—	—	4	—
	—	—	—	1	—
5	1	1	—	—	—
	—	—	1	—	—
	—	1	1	1	—
	—	1	—	—	1
	—	—	1	—	—
10	—	—	—	1	—
	—	—	—	1	—
	1	—	—	2	—
	—	—	—	1	—
15	—	1	—	—	—
	2	—	—	1	—
	—	1	—	—	—
	2	—	—	—	—
	—	—	—	—	—
20	—	—	—	—	—

SUBTOTALS

TOTAL 35

$$\text{Constant } k = \frac{A}{1000 a} = 188$$

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

$$\frac{188 (.35)}{82} = .85$$

Date: 1-23-76

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 141 ELAPSED TIME (t) 70 mins.
 FLOW RATE 1.75 l/min VOLUME (V) 123 liters
 FIELD AREA (a) 0.2432 mm² BLANK COUNT (b) - fibers/field
 FILTER AREA (A) 855 mm² AV. FIBER COUNT (f) 29 fibers/field

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

SUBTOTALS

TOTAL 29

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{(198)(29)}{123} = 1.47$$

Date: 12/8/75

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 214

ELAPSED TIME (t) 143 mins.

FLOW RATE 1.75 l/min

VOLUME (V) 250 liters

FIELD AREA (a) 0.432 mm²

BLANK COUNT (b) - fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) 1.98 fibers/field

	4	4	-		
0	2	3	1		
	2	-	-		
	2	4	-		
	-	2	1		
	1	2	2		
5	1	1	2		
	2	1	5		
	4	1	1		
	3	3	-		
	-	3	1		
10	1	2	3		
	1	1	1		
	-	6	1		
	1	1	-		
15	1	2	1		
	4	2	1		
	1	3	1		
	2	1	2		
	-	1	1		
20					

SUBTOTALS 32 43 24

TOTAL 119

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

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

$$\frac{198 (1.98)}{250} = 1.57$$

$$\begin{array}{r} 1.98 \\ 60 \overline{) 119} \\ \underline{260} \\ 590 \\ \underline{540} \\ 500 \\ \underline{480} \\ 20 \end{array}$$

AIRBORNE ASBESTOS FIBER SAMPLING

Plant AKRON

Date 10/23/75

Name Bob Krantz

Pump Serial No. R-74-0799

Title Dry Blend Helper & Fork Truck Driver

Sampled by _____

Signature _____

LOCATION	Dry Blend area	—	—	—	—	—				
FILTER NO.	139	203	206	213	220	231				
FLOW:										
Pump Setting	6	6	6	6	6	6				
Liter/min (R)	1.9	1.9	1.9	1.9	1.9	1.9				
TIME:										
On	7:20	9:55	10:48	11:03	2:44	2:59				
Off	9:55	10:48	11:03	2:44	2:59	3:28				
ELAPSED TIME (min) (t)	155	53	105	101	15	29				
VOLUME, Liters (t x r)	245	101	200	192	27	55				
REMARKS			Pumps off for 30 min lunch							
CONCENTRATION (F) fibers/ml	.46	.41	.43	1.96	1.78	1.55				

Total Sample Time (T) 458 mins.

Time Weight Av. Concentration = $\frac{(t_1 F_1) + (t_2 F_2) + (t_3 F_3) + \dots}{T}$

$$= \frac{(155 \times .46) + (53 \times .41) + (105 \times .43) + (101 \times 1.96) + (15 \times 1.78) + (29 \times 1.55)}{458}$$

$$= \frac{71.3 + 21.7 + 45.1 + 198 + 26.7 + 45.0}{458}$$

$$= \frac{407.8}{458} = \boxed{.89}$$

SGP 0021019

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 213

ELAPSED TIME (t) 101 mins.

FLOW RATE 1.9 l/min

VOLUME (V) 192 liters

FIELD AREA (a) .0243 mm²

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) 1.90 fibers/field

	2	1	3		
0	1	5	2		
	3	2	2		
	3	2	1		
	1	—	1		
	3	1	2		
5	1	—	3		
	3	2	3		
	1	3	2		
	2	1	1		
	3	4	1		
10	2	1	2		
	4	—	2		
	1	1	1		
	—	2	3		
15	2	4	2		
	2	—	—		
	5	2	4		
	1	2	2		
	—	2	2		
20					
SUBTOTALS	40	35	39		

39
35
40
—
114
19
60
—
540

TOTAL 114

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

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

$$\frac{198 (1.9)}{192} = \boxed{1.96}$$

SGP 0021020

Date: 12/10/25

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 231

ELAPSED TIME (t) 29 mins.

FLOW RATE 1.4 l/min

VOLUME (V) 55 liters

FIELD AREA (a) .00432 mm²

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) 34 fibers/field

	0	1	—	—	—	—	—
		1	—	—	—	—	—
		—	—	—	2	—	—
		—	1	1	—	2	—
		1	1	1	—	1	—
		—	—	1	—	—	—
	5	—	1	—	3	—	—
		—	1	2	—	—	—
		—	—	1	2	—	—
		—	—	1	1	—	—
		—	—	—	—	—	—
	10	1	—	—	1	—	—
		—	—	—	—	—	—
		—	—	—	—	—	—
		—	1	—	—	—	—
	15	1	—	—	—	—	—
		—	—	—	2	—	—
		—	—	1	—	1	—
		1	—	1	—	—	—
		—	—	—	—	—	—
	20	—	—	—	—	—	—
SUBTOTALS		5	5	9	11	4	TOTAL <u>34</u>

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

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

$$\frac{198(1.43)}{55} = 155$$

Date: 12-17-75

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. _____

ELAPSED TIME (t) 53 mins.FLOW RATE 1.9 l/minVOLUME (V) 101 litersFIELD AREA (a) 0.0432 mm²

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm²AV. FIBER COUNT (f) 21 fibers/field

0		<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
		<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
		<u>1</u>	<u>—</u>	<u>—</u>	<u>1</u>	<u>—</u>
		<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
		<u>—</u>	<u>—</u>	<u>1</u>	<u>—</u>	<u>—</u>
5		<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
		<u>—</u>	<u>—</u>	<u>1</u>	<u>—</u>	<u>2</u>
		<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>
		<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
		<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
10		<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
		<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>	<u>—</u>
		<u>—</u>	<u>—</u>	<u>1</u>	<u>—</u>	<u>—</u>
		<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>
15		<u>—</u>	<u>—</u>	<u>1</u>	<u>—</u>	<u>—</u>
		<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>
		<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
		<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
20		<u>—</u>	<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>

SUBTOTALS

TOTAL 21

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

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

$$\frac{198(.21)}{101} = .41$$

SGP 0021022

Date: _____

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. _____

ELAPSED TIME (t) 105 mins.FLOW RATE 1.9 l/minVOLUME (V) 200 litersFIELD AREA (a) .00432 mm²

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm²AV. FIBER COUNT (f) .43 fibers/field

0				—	—
				—	—
				—	1
		—	—	—	—
		1	—	—	—
5	—	—	1	1	1
	—	—	1	1	1
		1	2	1	1
		1	—	—	—
		2	—	1	1
10		—	1	1	1
	—	—	—	—	—
		—	—	—	—
	—	1	—	—	1
15	—	—	—	—	1
	—	—	—	—	—
	—	—	—	—	2
	—	1	—	—	2
	—	—	1	1	1
20					
SUBTOTALS	5	6	12	6	14
					TOTAL <u>43</u>

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

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

$$\frac{198 (.43)}{200} = .43$$

SGP 0021023

Date: 1-13-76

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 220 ELAPSED TIME (t) 15 mins.
 FLOW RATE 1.9 l/min VOLUME (V) 29 liters
 FIELD AREA (a) 60432 mm² BLANK COUNT (b) _____ fibers/field
 FILTER AREA (A) 855 mm² AV. FIBER COUNT (f) .26 fibers/field

0	—	—	1	—	—
	—	1	—	—	—
	—	1	—	1	—
	—	—	—	—	—
	—	—	—	—	—
5	1	—	—	—	—
	—	—	2	—	—
	—	—	1	—	—
	—	2	—	—	—
	1	—	—	—	—
	1	1	—	—	—
10	—	—	—	—	—
	—	—	—	—	—
	1	—	—	—	—
	—	—	—	—	1
15	1	—	3	—	1
	—	1	1	—	—
	2	—	—	—	1
	—	—	—	—	2
20	1	—	—	—	—

SUBTOTALS

TOTAL 26

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{198 (.26)}{29} = 1.78$$

SGP 0021024

Date: 1-14-76

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 139

ELAPSED TIME (t) 155 mins.

FLOW RATE 1.9 l/min

VOLUME (V) 295 liters

FIELD AREA (a) 0.0432 mm²

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) .69 fibers/field

0	<u>2</u>	<u>2</u>	<u>—</u>	<u>1</u>	<u>—</u>
	<u>—</u>	<u>—</u>	<u>1</u>	<u>—</u>	<u>2</u>
	<u>—</u>	<u>1</u>	<u>3</u>	<u>—</u>	<u>1</u>
	<u>1</u>	<u>—</u>	<u>2</u>	<u>2</u>	<u>—</u>
	<u>1</u>	<u>—</u>	<u>3</u>	<u>—</u>	<u>—</u>
	<u>—</u>	<u>3</u>	<u>—</u>	<u>—</u>	<u>—</u>
5	<u>1</u>	<u>2</u>	<u>2</u>	<u>—</u>	<u>—</u>
	<u>1</u>	<u>1</u>	<u>2</u>	<u>—</u>	<u>3</u>
	<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
	<u>2</u>	<u>—</u>	<u>—</u>	<u>1</u>	<u>—</u>
	<u>—</u>	<u>—</u>	<u>1</u>	<u>—</u>	<u>—</u>
10	<u>—</u>	<u>1</u>	<u>2</u>	<u>—</u>	<u>—</u>
	<u>2</u>	<u>—</u>	<u>1</u>	<u>—</u>	<u>2</u>
	<u>—</u>	<u>—</u>	<u>2</u>	<u>1</u>	<u>2</u>
	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
15	<u>1</u>	<u>1</u>	<u>2</u>	<u>—</u>	<u>—</u>
	<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>
	<u>—</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>—</u>
	<u>—</u>	<u>—</u>	<u>2</u>	<u>—</u>	<u>—</u>
	<u>1</u>	<u>—</u>	<u>1</u>	<u>1</u>	<u>—</u>
20	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

SUBTOTALS

TOTAL .9

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{145 (.69)}{295} = .46$$

SGP 0021025

AIRBORNE ASBESTOS FIBER SAMPLING

Plant AKRON

Date 10/23/75

Name Area Samples

Pump Serial No. B-06-0422

Title _____

Sampled by _____

Signature _____

LOCATION	dry blend area	—	Ready Mix area	warehouse	Packer
FILTER NO.	144	202	208	215	218
FLOW:					
Pump Setting	6	6	6	6	6
Liter/min (R)	1.7	1.7	1.7	1.7	1.7
TIME:					
On	7:22	9:26	10:45	11:20	2:30
Off	9:26	10:45	1:20	2:30	3:30
ELAPSED TIME (min) (t)	124	79	155	60	60
VOLUME, Liters (t x r)	211	134	264	102	102
REMARKS					
CONCENTRATION (F) fibers/ml	.35	.38	.32	.14	1.11

Total Sample Time (T) _____ mins.

Time Weight Av. Concentration =
$$\frac{(t_1 F_1) + (t_2 F_2) + (t_3 F_3) + \dots}{T}$$

R E C E I V E D
OCT 23 1975

SGP 0021026

Date: 12-17-75

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 235

ELAPSED TIME (t) 79 mins.

FLOW RATE 1.7 l/min

VOLUME (V) 134 liters

FIELD AREA (a) mm²

BLANK COUNT (b) fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) 26 fibers/field

0	—	—	1	—	—
	2	—	—	—	—
	2	—	1	—	—
	1	—	1	—	—
	2	1	—	—	—
	—	1	—	—	—
5	1	—	—	—	1
	—	—	—	—	—
	—	—	—	—	—
	—	—	—	—	—
	—	—	1	—	—
10	—	—	—	—	—
	—	—	—	—	1
	—	—	2	1	—
	—	—	—	—	—
15	—	1	—	—	1
	—	—	—	1	1
	1	—	1	—	—
	—	1	—	—	—
20	—	—	—	—	—
SUBTOTALS	7	4	7	2	4
					TOTAL <u>26</u>

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

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

$$\frac{198 \times 26}{134} = 38$$

SGP 0021027

Date: 12/15/75

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 208

ELAPSED TIME (t) 155 mins.

FLOW RATE 1.7 l/min

VOLUME (V) 264 liters

FIELD AREA (a) mm²

BLANK COUNT (b) fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) 42 fibers/field

	0	1	—	—	—	—	—
		—	—	1	1	2	
		—	—	1	—	2	
		—	1	1	—	—	
		1	—	1	—	1	
		—	—	—	—	—	
	5	1	—	—	1	—	
		—	—	1	—	—	
		—	—	—	—	1	
		—	—	—	1	1	
		—	—	—	—	—	
	10	1	—	—	—	—	
		2	—	—	—	—	
		—	—	—	—	1	
		—	1	1	—	—	
	15	1	2	1	1	—	
		—	—	1	1	—	
		—	1	1	—	1	
		—	—	2	—	—	
	20	1	—	1	1	3	
SUBTOTALS		7	5	12	6	12	TOTAL <u>42</u>

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

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

$$\frac{198 (.42)}{264} = 32$$

SGP 0021028

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 215

ELAPSED TIME (t) 60 mins.

FLOW RATE 1.7 l/min

VOLUME (V) 102 liters

FIELD AREA (a) _____ mm²

BLANK COUNT (b) _____ fibers/field

FILTER AREA (A) 855 mm²

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

0					
5					
10					
15					
20					

SUBTOTALS

TOTAL 7

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

$$\text{Fiber Concentration (F)} = \frac{k(f-b)}{V} = \frac{198 \times .07}{102} = .14$$

SGP 0021029

Date: 12/8/75

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 212

ELAPSED TIME (t) 60 mins.

FLOW RATE 1/min

VOLUME (V) 102 liters

FIELD AREA (a) mm²

BLANK COUNT (b) fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) .57 fibers/field

		<u>—</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>—</u>
0		<u>1</u>	<u>—</u>	<u>2</u>	<u>—</u>	<u>—</u>
		<u>—</u>	<u>1</u>	<u>1</u>	<u>—</u>	<u>—</u>
		<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>—</u>
		<u>1</u>	<u>—</u>	<u>—</u>	<u>3</u>	<u>—</u>
		<u>1</u>	<u>—</u>	<u>1</u>	<u>—</u>	<u>—</u>
5		<u>—</u>	<u>1</u>	<u>—</u>	<u>1</u>	<u>—</u>
		<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>
		<u>3</u>	<u>—</u>	<u>2</u>	<u>—</u>	<u>—</u>
		<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
		<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>
10		<u>—</u>	<u>—</u>	<u>3</u>	<u>1</u>	<u>—</u>
		<u>2</u>	<u>1</u>	<u>1</u>	<u>—</u>	<u>—</u>
		<u>—</u>	<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>
		<u>—</u>	<u>—</u>	<u>2</u>	<u>—</u>	<u>—</u>
15		<u>1</u>	<u>—</u>	<u>2</u>	<u>—</u>	<u>1</u>
		<u>1</u>	<u>—</u>	<u>—</u>	<u>1</u>	<u>—</u>
		<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
		<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>
		<u>1</u>	<u>—</u>	<u>1</u>	<u>2</u>	<u>—</u>
20		<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
SUBTOTALS		<u>15</u>	<u>6</u>	<u>19</u>	<u>11</u>	<u>5</u>

TOTAL 57

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

$$\text{Fiber Concentration (F)} = \frac{k (f-b)}{V} = \frac{198 \times .57}{102} = 1.1$$

Date: 1-9-76

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 144ELAPSED TIME (t) 124 mins.FLOW RATE 1/minVOLUME (V) 211 litersFIELD AREA (a) mm²BLANK COUNT (b) fibers/fieldFILTER AREA (A) 855 mm²AV. FIBER COUNT (f) 37 fibers/field

0	—	/	/	/	—
	2	/	—	—	/
	—	—	—	—	—
	—	—	—	—	—
	—	—	—	—	2
5	—	—	—	—	2
	—	—	—	—	—
	—	—	—	—	/
	—	/	—	—	/
	—	—	—	/	—
10	—	—	—	—	—
	—	—	—	2	/
	—	—	/	—	—
	/	—	/	/	—
15	/	—	—	—	/
	—	/	/	/	/
	—	/	/	/	—
	/	/	/	/	—
	—	/	—	—	—
20	—	/	—	—	—

SUBTOTALS

TOTAL 37

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

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

$$\frac{198 \times .37}{211} = .35$$

SGP 0021031

AIRBORNE ASBESTOS FIBER SAMPLING

Plant Alcoa S. Y.
 Name E. Rubbeck
 Title Trk Driver

Date 11/7/75
 Pump Serial No. B-06-288
 Sampled by _____
 Signature _____

LOCATION	<u>Unlabeled Industrial Area</u>				
FILTER NO.	<u>238</u>				
FLOW:					
Pump Setting	<u>6</u>				
Liter/min (R)	<u>1.7</u>				
TIME:					
On	<u>10⁰⁰ AM</u>				
Off	<u>12⁰⁰ Noon</u>				
ELAPSED TIME (min) (t)	<u>120</u>				
VOLUME, Liters (t x r)	<u>204</u>				
REMARKS					
CONCENTRATION (F) fibers/ml	<u>.28</u>				

Total Sample Time (T) 120 mins.

$$\text{Time Weight Av. Concentration} = \frac{(t_1 F_1) + (t_2 F_2) + (t_3 F_3) + \dots}{T}$$

$$= \boxed{.28}$$

Date: 12/9/71

ASBESTOS FIBER COUNT WORKSHEET

SAMPLE NO. 238

ELAPSED TIME (t) 120 mins.

FLOW RATE 1/min

VOLUME (V) 204 liters

FIELD AREA (a) mm²

BLANK COUNT (b) fibers/field

FILTER AREA (A) 855 mm²

AV. FIBER COUNT (f) 0.29 fibers/field

0	1	1	1	1	1
	1	1	1	1	1
	1	1	1	1	1
	1	1	1	1	1
5	1	1	1	1	1
	1	1	1	1	1
	1	1	1	1	1
	1	1	1	1	1
10	1	2	1	1	1
	1	1	1	1	1
	1	1	1	1	1
	1	1	1	1	1
15	1	1	1	1	2
	1	1	1	1	1
	1	1	1	1	1
	1	1	1	1	1
20	1	1	2	1	1
SUBTOTALS	7	8	7	3	8

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

Fiber Concentration (F) = $\frac{k (f-b)}{V}$ $\frac{198(.29)}{204} = .28$

AKRON NEW YORK
AIRBORNE ASBESTOS DUST SURVEY
Date Sampled: October 23, 1975

Name	Location or Job Title	Time Weighted Average Fibers/ml.	Filter No.	Elapsed Time Minutes	Individual Count Fibers/ml.
Leon Spears	Packer-Stacker	1.43	135	88	1.98
			130	?	Void
			200	178	.20
			212	17	2.78
			216	69	1.17
			221	15	2.64
			223	31	.99
Clarence Blueye	Packer-Stacker	0.69	136	87	.58
			142	120	.41
			209	116	.41
			211	89	.59
			222	15	.78
			219	35	1.76
Al Kenworth	Ready Mix Mixer	0.84	143	97	.70
			137	70	.40
			201	168	.62
			210	17	3.00
			217	115	.63
Charlie Jackson	Dry Blender	.93	138	55	.43
			131	47	.85
			141	70	.47
			204	51	.29
			205	15	1.29
			207	103	Void
			214	143	1.57
Bob Krantz	Dry Blend Helper and Truck Driver	.89	139	155	.46
			203	53	.41
			206	105	.43
			213	101	1.96
			220	15	1.78
			231	29	1.55
Area Samples	Dry Blender		144	124	.35
	Dry Blender		202	79	.38
	Ready Mix		208	155	.32
	Warehouse		215	60	.14
	Packer		218	60	1.11
E. Ribbeck	Asbestos Car Unloading on 11/7/75	.28	238	120	.28