

Ambler, C Pipe Plant
Industrial Hygiene Survey
December 3-12, 1979

TABLE _____

PLAINTIFF'S EXHIBIT

CT-1398

Dust/Fiber Exposures

No.	Position Location (Date)	Name/Area	Analysis for	Time	Min.	Result	TWA for Sample Period	Over Limit	Remarks
01	Fiber Warehouse (12/7/79)	Area Sample	Fiber	8:50-1:25p	275	0.48 f/cc	0.48 f/cc	NO	
02	Mixer Operator (12/3/79)	R. Dorin	Fiber	6:50-9:00a	130	3.0 f/cc	1.7 f/cc	NO	Manufacturing 8" 2400 Pipe
03				9:00-10:05a	65	0.38 f/cc			
05				12:33-1:57p	84	0.81 f/cc			
04			Total Dust	10:05-12:33p	148	279			
06	Mixer Operator (12/7/79)	R. Dorin	Fiber	10:07-10:47a	40	2.7 f/cc	4.0 f/cc	YES	Dumping Fiber
07				10:47-11:19a	32	5.9 f/cc			Staged Fiber/Waiting
08				11:19-11:45a	26	3.6 f/cc			Dumping Fiber
09	Fiber Dump Station (12/3/79)	Area Sample	Fiber	9:25-9:55a	30	2.4 f/cc	0.91 f/cc	NO	Pump hanging on front of dump station 1' above opening. Manufacturing 8" 2400 Pipe
011				12:35-2:45p	130	0.56 f/cc			
010			Total Dust	9:55-12:35p	220				
012	2nd Floor Manufacturing (12-7-79)	Area Sample	Fiber	7:55-1:30p	335	>0.82 f/cc	> 0.82 f/cc	NO	Near Mixers Manufacturing 6" 150 pipe
013	(12/7/79)	Area Sample	Fiber	7:55-1:30p	335	>0.79 f/cc	> 0.79 f/cc	NO	Near Fines Bin
014	Blender Area (12/3/79)	Area Sample	Fiber	9:23-10:00a	37	0.80 f/cc	1.4 f/cc	NO	Near #4 Mixer Manufacturing 8" 2400 pipe
016				12:30-1:35p	65	1.3 f/cc			
017				1:35-2:45p	70	1.8 f/cc			
015			Total Dust	10:00-12:30p	150				
018	Blender Area (12/6/79)	Area Sample	Fiber	3:25-5:00p	95	4.3 f/cc	4.4 f/cc	YES	Near #4 Mixer Manufacturing 6" 150 pipe
019				5:00-6:00p	60	5.0 f/cc			
020				6:00-6:30p	30	3.5 f/cc			
021	Trough Area (12-3-79)	Area Sample	Fiber	9:20-10:00a	40	>14.1 f/cc	9.5 f/cc	YES	6' From Floor Above Mix Trough Manufacturing 8" 2400 pipe
023				12:35-1:35p	60	>6.1 f/cc			
024				1:35-2:45p	70	9.7 f/cc			
022			Total Dust	10:00-12:35p	155				
025	Trough Area (12-6-79)	Area Sample	Fiber	3:25-5:00p	95	>2.8 f/cc	> 3.5 f/cc	YES	6' from Floor Above Mix Trough Manufacturing 6" 150 pipe
026				5:00-6:00p	60	>3.0 f/cc			
027				6:00-6:35 p	35	>6.3 f/cc			
028	Trough Area (12-7-79)	Area Sample	Fiber	11:45-1:15p	90	>5.6 f/cc	> 5.6 f/cc	YES	3' From Floor on Rail at trough. Manufacturing 6" 150 pipe.
029	Machine Flow Trough (12-3-79)	Area Sample	Fiber	6:35-7:05a	30	0.97 f/cc	0.97 f/cc	NO	Taken at Start up Cylinders being installed. Manufacturing 8" 2400 pipe
030	Machine Tender (12-3-79)	J. Low	Fiber	7:48-9:15a	87	2.6 f/cc	2.2 f/cc	YES	Manufacturing 8" 2400 pipe
031				9:15-10:52a	97	1.6 f/cc			
033				12:36-1:45p	69	2.6 f/cc			
032			Total Dust	10:52-12:36p	104				
034	Machine Control Panel (12-3-79)	Area Sample	Fiber	9:30-9:55a	25	2.1 f/cc	1.6 f/cc	NO	Manufacturing 8" 2400 pipe
036				12:35-1:50p	80	1.4 f/cc			
035			Total Dust	9:55-12:35p	160				

CTD019301

Ambler . . . Pipe Plant
Industrial Hygiene Survey
December 3-12, 1979

TABLE _____

Dust/Fiber Exposures

No.	Position Location (Date)	Name/Area	Analysis for	Time	Min.	Result	TWA for Sample Period	Over Limit	Remarks
037	Roll Up	Area (12-6-79)	Fiber	3:25-5:15p	110	VOID	> 7.3 f/cc	YES	Heavy Particulate not countable Manufacturing 6" 150 pipe
038	Area (12-6-79)			5:15-6:35p	80	> 7.3 f/cc			
039	Press	C. Worthington	Fiber	7:08- 9:05p	117	> 1.6 f/cc	1.7 f/cc	NO	Manufacturing 8" 2400 pipe
040	Operator			9:05-9:50p	45	1.9 f/cc			
042	(12-3-79)			12:45-2:00p	75	VOID			Pump malfunction
041			Total Dust	9:50-12:45p	175				
043	Press Operator (12-6-79)	C. Worthington	Fiber	3:25-6:45p	200	VOID	—	—	Heavy Particulate not countable
044	Mandrel	J. Bickley	Fiber	7:09-10:00a	171	0.65 f/cc	0.75 f/cc	NO	Manufacturing 8"2400 pipe
046	Operator			12:35-1:51p	76	0.96 f/cc			
045	(12-3-79)		Total Dust	10:00-12:35p	155				
047	Tunnel 12/3/79 Entrance	Area Sample	Fiber	6:55-7:03a	8	4.3 f/cc	4.3 f/cc	YES	Clean up of scrap pipe
048	Pipe Stripper (12-6-79)	H. Meyers	Fiber	2:30-6:20p	230	1.5 f/cc	1.5 f/cc	NO	Manufacturing 15" 3000 pipe
049	Pipe Stripper (12-6-79)Area	Area Sample	Fiber	2:35-6:45p	250	0.59 f/cc	0.59 f/cc	NO	Pump hanging 5' above pipe on tunnel conveyor
050	Tray Loader (12-6-79)	S. Mineo	Fiber	7:00-11:50a	290	0.54 f/cc	0.50f/cc	NO	Manufacturing 15" 3000 pipe
051				11:50-1:45p	115	0.41 f/cc			
052	Autoclave	F. Demedio	Fiber	8:05-11:55a	230	0.15 f/cc	0.28 f/cc	NO	Manufacturing 15" 3000 pipe
053	Truck Drive (12-6-79)			11:55-1:40p	105	0.57 f/cc			
054	Utility Truck	H. Schimmel	Fiber	6:40-7:03a	23	2.2 f/cc	0.62 f/cc	NO	Manufacturing 8" 2400 pipe
055	Driver(12-3-79)			7:03-9:20a	137	0.26 f/cc			
056				9:20-12:40p	200	VOID			Sample Used Twice
057				12:40-1:50p	70	0.79 f/cc			
058	Relief Operator (12-3-79)	R. Jackson-	Fiber	7:40-9:10 a	90	0.66 f/cc	0.51 f/cc	NO	Manufacturing 8" 2400 pipe
059				9:10-9:55a	45	0.20 f/cc			
061				12:45-1:45p	57	VOID			Sample Used Twice
060		—	Total Dust	9:55-12:48p	173				
062	Manufacturing	G. Jones	Fiber	2:15-5:23p	188	> 2.0 f/cc	2.7 f/cc	YES	Changing Mandrels
063	Supervisor (12-6-79)			5:23-7:00 p	97	2.3 f/cc			Changing Mandrels & Cleaning Mandrels
064				7:00-7:30p	30	8.6 f/cc			Shot Blasting Mandrels
065	Crusher	C. Randall	Fiber	7:00- 9:25a	145	2.7 f/cc	3.1 f/cc	YES	Manufacturing 15" 3000 pipe
066	Operator (12-6-79)			9:25-10:01	152	>3.5 f/cc			
067				10:06-12:02	5	15.9 f/cc			In dust collector shaking Bags.
068				12:02-1:45p	103	2.6 f/cc			

CTD019302

TABLE _____

Dust/Fiber Exposures

No.	Position Location (Date)	Name/Area	Analysis for	Time	Min.	Result	TWA for Sample Period	Over Limit	Remarks
069	Crusher Operator (12-6-79)	R. Meyers	Fiber	2:30-5:20p	170	1.5 f/cc	1.5 f/cc	NO	Manufacturing 6" 150 pipe
070				5:20-6:15p	55	VOID			Pump Malfunction
071	Crusher Area (12-7-79)	Area Sample	Fiber	7:45-9:55a	130	0.32 f/cc	0.67 f/cc	NO	At Entry to Crusher Manufacturing 6" 150 pipe
072				9:55-11:15a	80	1.5 f/cc			
073				11:15-1:30p	135	0.52 f/cc			
074	Crusher Area (12-7-79)	Area Sample	Fiber	7:40-9:55a	130	5.5 f/cc	3.9 f/cc	YES	In Crusher Area Hanging On Rail Near Isle
075				9:55-11:55a	80	2.4 f/cc			
076				11:55-1:30p	135	3.3 f/cc			
077	Crusher Area (12-7-79)	Area Sample	Fiber	7:40-9:55a	130	0.58 f/cc	0.60 f/cc 0.86 f/cc	NO	In Crusher Area Hanging on Rail Near Wall.
078				9:55-11:15a	80	0.91 f/cc			
079				11:15-1:30p	135	1.1 f/cc			
080	Fork Truck Driver (12-4-79)	S. Steltz	Fiber	7:30-9:05a	95	0.17 f/cc	0.26 f/cc	NO	Finishing Line 3
081				9:05-11:00a	115	0.26 f/cc			12" Sewer Pipe
082				11:00-1:15p	135	0.24 f/cc			Finishing Line 2
083				1:15-1:45p	30	0.58 f/cc			
084	Lathe Operator (12-4-79)	A. DeClerico	Fiber	6:50-9:00a	130	0.43 f/cc	0.60 f/cc	NO	Finishing Line 3
085				9:00-10:57a	117	0.62 f/cc			12" Sewer Pipe
086				10:57-1:15p	138	0.79 f/cc			Finishing Line 2
087				1:15-1:45p	30	0.36 f/cc			
088	Lathe Operator (12-4-79)	G. Meyers	Fiber	6:55-9:00a	125	0.20 f/cc	0.30 f/cc	NO	Finishing Line 3 (Drive Side) 12" Sewer Pipe
089				9:00-10:58a	118	0.33 f/cc			
090				10:58-12:40a	102	0.38 f/cc			
091	Q. C. Inspector (12-4-79)	A. Mastromatto	Fiber	7:28-9:05a	97	0.52 f/cc	0.71 f/cc	NO	Finishing Line 3
092				9:05-11:00a	115	1.0 f/cc			12" Sewer Pipe
093				11:00-1:10p	130	0.76 f/cc			Finishing Line 2
094				1:10-1:45p	35	0.14 f/cc			
095	Tester Operator (12-4-79)	G. Bojaciuk	Fiber	7:23-9:01a	98	0.55 f/cc	0.67 f/cc	NO	Finishing Line 3
096				9:01-11:00	119	0.75 f/cc			(Drive Side)
097				11:00-1:15p	135	0.77 f/cc			12" Sewer Pipe
098				1:15-1:45p	30	0.31 f/cc			Finishing Line 2
099	Beller (12-4-79)	J. Handerhan	Fiber	7:40-9:05a	85	0.28 f/cc	0.55 f/cc	NO	Finishing Line 3
100				9:05-11:02a	117	0.32 f/cc			12" Sewer Pipe
101				11:02-1:12p	130	1.0 f/cc			Finishing Line 2
102				1:12-1:45p	33	0.31 f/cc			

TABLE

Dust/Fiber Exposures

No.	Position Location (Date)	Name/Area	Analysis for	Time	Min.	Result	TWA for Sample Period	Over Limit	Remarks
103	Beller (12-4-79)	S. Wallace	Fiber	7:02-9:07a	125	0.38 f/cc	0.67 f/cc	NO	Finishing Line 3 (drive side)
104				9:07-11:05a	118	0.45 f/cc			12" Sewer Pipe
105				11:05-12:45p	100	0.52 f/cc			
106				12:45-1:45p	60	1.99 f/cc			Finishing Line 2
107	Handler (12-4-79)	N. Paone	Fiber	7:10-9:07a	117	0.22 f/cc	0.37 f/cc	NO	Finishing Line 3
108				9:07-11:04p	117	0.28 f/cc			12" Sewer Pipe
109				11:04-12:45p	101	0.54 f/cc			
110				12:45-1:45p	60	0.58 f/cc			Finishing Line 2
111	Handler (12-4-79)	M. McCarthy	Fiber	7:05-9:11a	126	0.26 f/cc	0.40 f/cc	NO	Finishing Line 3 (drive Side)
112				9:11-11:02a	111	0.50 f/cc			12" Sewer Pipe
113				11:02-12:45p	103	0.39 f/cc			
114				12:45-1:45p	60	0.50 f/cc			Finishing Line 2
115	Mill Operator (12-5-79)	C. Handschin	Fiber	7:25-9:33a	128	0.26 f/cc	1.1 f/cc	NO	30" Coupling Mill FD 16
116				9:33-11:20a	107	0.55 f/cc			
117				11:20-12:55p	95	2.2 f/cc			8" 3300
118				12:55-1:45p	50	2.5 f/cc			
119	Mill Operator (12-5-79)	F. Marincole	Fiber	7:30-9:35a	125	0.59 f/cc	2.0 f/cc	NO	30" Coupling Mill - FD 15
120				9:35-11:20p	105	1.2 f/cc			
121				11:20-12:55p	95	2.5 f/cc			8" 3300
122				12:55-1:45p	50	6.2 f/cc			
123	Mill Operator (12-5-79)	J. Zollo	Fiber	7:30-9:30a	120	0.25 f/cc	0.32 f/cc	NO	42" Coupling Mill - FD 54
124				9:30-11:20a	110	0.18 f/cc			16" Sewer Pipe
125				11:20-12:55p	95	0.42 f/cc			
126				12:55-1:45p	50	0.58 f/cc			
127	Saw Operator (12-5-79)	E. Cupid	Fiber	7:35-9:35a	120	0.29 f/cc	0.59 f/cc	NO	Dry Coupling Saw - FD 9
128				9:35-11:25a	110	0.52 f/cc			4" X 6" Couplings
129				11:25-12:55p	90	1.16 f/cc			
130				12:55-1:45p	50	0.44 f/cc			
131	Saw Operator (12-6-79)	A. Echadarria	Fiber	7:10- ?	0	VOID	0.41 f/cc	NO	Employee Lost Cassett
132				9:50-11:55a	125	0.41 f/cc			Rework Saw FD 10
133				11:55-1:40p	105	0.40 f/cc			
134	Saw Helper (12-5-79)	D. Newman	Fiber	7:45-9:25a	100	0.43 f/cc	0.44 f/cc	NO	Rework Saw FD 10
135				9:25-11:25a	120	0.54 f/cc			8" 3300
136				11:25-1:45p	140	0.37 f/cc			

CTD019304

Ambler A/C Pipe Plant
Industrial Hygiene Survey
December 3-12, 1979

TABLE _____

Dust/Fiber Exposures

No.	Position Location (Date)	Name/Area	Analysis for	Time	Min.	Result	TWA for Sample Period	Over Limit	Remarks
137	Lathe Operator (12-5-79)	T. Gray	Fiber	7:47-9:30a	103	0.38 f/cc	0.37 f/cc	NO	Nebel Lathe PD 8 6" & 8" FMS
138				9:30-11:25a	115	0.51 f/cc			
139				11:25-1:00p	95	0.31 f/cc			
140				1:00-1:45p	45	0.11 f/cc			
141	Lathe Operator (12-5-79)	W. Barnett	Fiber	7:50-9:30a	100	0.38 f/cc	0.38 f/cc	NO	Laman Lathe FD 7 16" Pipe
142				9:30-12:55p	205	0.31 f/cc			
143				12:55-1:45p	50	0.70 f/cc			
144	Mill Operator (12-5-79)	J. DeSilva	Fiber	7:55-9:32a	97	0.13 f/cc	0.28 f/cc	NO	Universal Boring Mill FD 7 6" Pipe
145				9:32-11:25a	113	0.22 f/cc			
146				11:25-1:00p	95	0.48 f/cc			
147				1:00-1:45p	45	0.35 f/cc			
148	Drill Operator (12-6-79)	J. Diaz	Fiber	7:10-9:50a	160	0.66 f/cc	0.46 f/cc	NO	Koritt Drill
149				9:50-11:55a	125	0.34 f/cc			
150				11:55-1:40p	105	0.29 f/cc			
151	Saw Operator (12-5-79)	N. Chancy	Fiber	8:45-11:25a	160	1.88 f/cc	1.66 f/cc	NO	Wet Saw 16" 150
152				11:25-1:00p	95	1.69 f/cc			
153				1:00-1:45p	45	0.84 f/cc			
154	Lathe Operator (12-6-79)	E. Moore	Fiber	7:40-9:52a	132	1.2 f/cc	1.1 f/cc	NO	Pencil Sharpener
155				9:52-11:55a	123	1.1 f/cc			
156				11:55-1:40p	105	1.0 f/cc			
157	Finishing Supervisor (12-5-79)	R. Grudzinski	Fiber	8:15-2:00p	405	0.12 f/cc	0.12 f/cc	NO	
158	Sweeper Operator (12-6-79)	H. Dukes	Fiber	10:10-12:45p	145	0.23 f/cc	0.29 f/cc	NO	
159				12:45-3:00p	135	0.35 f/cc			
160	Electrician (12-3-79)	C. Beaver	Fiber	7:15-9:10a	115	0.84 f/cc	0.40 f/cc	NO	
161				9:10-1:45p	275	0.22 f/cc			
162	Mechanic (12-6-79)	J. DeMario	Fiber	7:40-12:40p	300	0.41 f/cc	0.39 f/cc	NO	Working on Finishing Line #2
163				12:40-3:00p	140	0.36 f/cc			

CTD019305

INDUSTRIAL HYGIENE SURVEY
Ambler A/C Pipe Plant
January 28-29, 1980

TABLE

Page 1.

Dust/Fiber Exposures

No.	Position Location (Date)	Name/Area	Analysis for	Time	Min.	Result (f/cc)	TWA for Sample Period f/cc	Over Limit	Remarks
001 002 003 004 005 6" 300	Mixer Operator 1/28/80	H. Meyers	Fibers	7:24-8:34a 8:34-8:50a 8:50-9:32a 9:32-1:00p 1:00-2:00p	70 16 42 208 60	6.9 6.3 0.94 0.82 VOID	2.36	YES	Wearing 8710 Respirator and white suit. Samples 001 & 002, hood ventilation damper half open Mixer Operator training a new person. 002 Operation upset; bag-house failure. 005 Sample used twice
006 007	Fiber Dump Station 1/28/80	Area, just below damper	Fibers	6:42-7:31a 1:20-2:12p	49 52	0.11 0.22	-	NO	006 dumped 6 minutes 007 dumped 5 minutes
008 009 010 011 012	Machine Tender 1/28/80	J. Love	Fibers	6:30-8:37a 8:37-8:49a 8:49-10:06a 10:06-1:27p 1:27-2:00p	127 12 77 201 33	1.87 6.59 1.3 0.3 3.28	1.30	NO	009 Process upset, Baghouse Failure 011-Removing scrap 2 minute 012 in area of control panel
013 014 015 016 017	Manufacturing Supervisor 1/28/80	G. Jones	Fibers	6:27-8:37a 8:37-8:51a 8:51-10:09a 10:09-12:45p 12:45-2:03p	130 14 78 156 78	0.78 5.74 1.66 1.12 1.11	1.26	NO	014-Process upset, Baghouse Failure. 016-Scraping Mandrels for 5 minutes.
018 019	Blender 1/28/80	AREA- Height 5 ft., 2 ft from Mixer Motor	Fibers	6:48-7:30a 1:13-2:12p	42 59	0.27 0.39	-	NO	Blender started approximately 7:15a.
020 021	Trough 1/28/80	AREA- Height 5 ft above covered viewing hole.	Fibers	6:45-7:30a 1:13-2:12p	45 61	0.51 1.51	-	NO	020 No visible emissions in trough area Startup 7:30 am 021 Water level stayed constant little steam or dust produced
022	Machine Control Panel 1/28/80	AREA-on top of console	Fibers	6:50-7:30a 1:13-2:12p	40 59	0.37 4.69	-	YES	
024 025 026 027 028 029 20-24" 150 10-12 3000 8" 150	Mixer Operator 1/29/80	H. Meyers	Fibers	6:42-8:42a 8:42-10:42a 10:47-12:12p 12:12-12:33p 12:33-12:51p 12:51-1:57p	120 120 90 21 18 66	0.66 VOID 1.27 13.98 5.07 1.0	2.05	NO YES	028-while dumping. 027- very fine fibers around 5 um long while on break at locker room & lunch room. 025 Sample used twice

CTD019306

INDUSTRIAL HYGIENE SURVEY
Ambler A/C Pipe Plant
January 28-29, 1980

TABLE

Dust/Fiber Exposures

Page 2.

No.	Position Location (Date)	Name/Area	Analysis for	Time	Min.	Result (f/cc)	TWA for Sample Period f/cc	Over Limit	Remarks
030	Fiber dump station 1/29/80	AREA-just below damper	Fibers	6:58-8:40a	102	0.86	-	NO	031- made 2 dumps
031				12:35-1:57p	82	1.05			
032	Machine Tender 1/29/80	J. Love	Fibers	6:54-10:20a	206	0.57	0.80	NO	034 Relieving Control Operator & cleaning cylinders.
033				10:20-12:56p	156	0.93			
034				12:56-2:01p	65	1.21			
035	Manufacturing Supervisor 1/29/80	G. Jones	Fibers	6:48-7:45p	57	VOID	-	NO	035-039 VOID. Pump found inoperative at end of 039 sample period.
036				7:45-8:00a	15	VOID			
037				8:00-9:02a	62	VOID			
038				9:02-10:50a	108	VOID			
039				10:50-1:07p	137	VOID			
040				1:07-2:10p	63	1.11			
041	Laborer 1/29/80	R. Lutz	Fibers	7:22-7:43a	11	1.01	-	NO	Employee scraping mandrels wearing 8710 respirator and white suit.
042	Trough 1/29/80	AREA-Height 5ft above covered viewing hole	Fibers	7:01-8:08a	67	0.79	0.72	NO	
043				8:08-10:54a	166	0.45			
044				10:54-12:30p	96	1.13			
045				12:30-2:04p	94	0.72			
046	Blender 1/29/80	AREA-Height 5 ft, 2 ft from mixer motor	Fibers	6:58-8:06a	72	1.13	0.51	NO	046 & 047, men scraping and painting #4 mixer frame.
047				8:06-10:50a	164	0.34			
048				10:50-12:30p	100	0.40			
049				12:30-2:04p	94	0.43			
050	Rollup 1/29/80	AREA- Under deck next to pipe Machine Operator's Control Box.	Fibers	7:02-8:10a	68	0.46	-	NO	051 20-24" pipe 052-8" pipe
051				8:10-9:54a	104	0.20			
052				12:37-2:00p	83	0.61			
053	Pipe Machine 1/29/80	AREA - Samples	Fibers	7:10-8:47a	97	VOID			053-Above Rollup 054-Center machine, upper level, on catwalk next to vacuum. 055-West side upper level, near vacuums. 056-West side upper level, on catwalk toward fiber prep. 057- East side just above cylinder. 053, 055, 057 Heavy particulate - not countable
054				8:47-10:23a	96	0.94			
055				10:24-12:33p	129	VOID			
056				12:33-1:50p	77	1.08			
057				10:33-1:34	181	VOID			

CTD019307

TABLE 1
Dust/Fiber Exposures

No.	POSITION LOCATION (DATE)	NAME/AREA	ANALYSIS FOR	TIME	MIN.	RESULT	TWA for Sample period	REMARKS
1	Mixer Operator 12/3/79	R. Dorin	Fiber	6:50a- 9:00a	130	3.0 f/cc	1.7f/cc	Manufacturing 8" 2400 pipe. Wearing respirator Blast gate 1/2 open
2				9:00a- 10:05a	65	0.38 f/cc		
3				12:33p- 1:57p	84	0.81 f/cc		
4			Total Dust	10:05a- 12:33p	148	2.2 mg/M ³		
5	Mixer Operator 1/28/80	R. Dorin	Fiber	10:07a- 10:47	40	2.7 f/cc	-	5-7: Wearing respirator 5: Dumping Fiber
6				10:47a- 11:19a	32	5.9 f/cc	-	6: Staged Fiber/Waiting
7				11:19a- 11:45a	26	3.6 f/cc	-	7: Dumping fiber (Blast Gate 1/2 open.
8	Mixer Operator 1/28/80	H. Meyers	Fibers	7:24a- 8:34a	70	6.9 f/cc	2.36 f/cc	Wearing 8710 respirator and white suit. Samples 8 & 9, hood ventilation damper half open. Mixer Operator training a new person 9, Operation upset, baghouse failure. 12, Sample used twice
9				8:34a- 8:50a	16	6.3 f/cc		
10				8:50a- 9:32a	42	0.94 f/cc		
11				9:32a - 1:00p	208	0.82 f/cc		
12				1:00- 2:00p	60	VOID		
13	Mixer Operator 1/29/80	H. Meyers	Fibers	6:42a- 8:42a	120	0.66 f/cc	2.05 f/cc	14, Sample used twice. 16, Very fine fibers around 5 um long while on break at locker room and lunch room. 17, While dumping. Wearing respirator
14				8:42a- 10:42a	120	VOID		
15				10:47a- 12:12	90	1.27 f/cc		
16				12:12p- 12:33p	21	13.98		
17				12:33- 12:51p	18	5.07		
18				12:51p- 1:57p	66	1.0		
19	Machine Tender 12/3/79	J. Low	Fibers	7:48a- 9:15a	87	2.6 f/cc	2.2 f/cc	Manufacturing 8" 2400 pipe.
20				9:15a- 10:52a	97	1.6 f/cc		
21				12:36p- 1:45p	69	2.6 f/cc		
22			Total Dust	10:52- 12:36	104	1.8 mg/M ³		

TABLE 1
Dust/Fiber Exposures

No.	POSITION LOCATION (Date)	NAME/AREA	ANALYSIS FOR	TIME	MIN.	RESULT	TWA sample period	REMARKS
23	Machine Tender 1/28/80	J. Love	Fibers	6:30a- 8:37a	127	1.87 f/cc	1.30 f/cc	24, process upset, bag- house failure. 26, Removing scrap 2 minutes 27, in area of control panel.
24				8:37a- 8:49a	12	6.59 f/cc		
25				8:49a- 10:06	77	1.3 f/cc		
26				10:06a- 1:27a	201	0.3 f/cc		
27				1:27p- 2:00p	33	3.28 f/cc		
28	Machine Tender 1/29/80	J. Love	Fibers	6:54a- 10:20a	206	0.57 f/cc	0.80 f/cc	30, Relieving Control Operator, & cleaning cylinders.
29				10:20a- 12:56p	156	0.93 f/cc		
30				12:56p- 2:01p	65	1.21 f/cc		
31	Manufacturing Supervisor 12/6/79	G. Jones	Fiber	2:15p- 5:23p	188	2.0 f/cc	2.7 f/cc	31, changing mandrels 32, changing mandrels & cleaning mandrels. 33, Shot Blasting Mandrels
32				5:23p- 7:00p	97	2.3 f/cc		
33				7:00p- 7:30p	30	8.6 f/cc		
34	Manufacturing 1/28/80	G. Jones	Fiber	6:27a- 8:37a	130	0.78 f/cc	1.26	35, Process upset, baghouse failure. 37, scraping mandrels for 5 minutes.
35				8:37a- 8:51a	14	5.74 f/cc		
36				8:51a- 10:09a	78	1.66 f/cc		
37				10:09- 12:45p	156	1.12 f/cc		
38				12:45p- 2:03p	78	1.11 f/cc		
39	Manufacturing Supervisor	G. Jones	Fibers	6:48- 7:45p	57	VOID		39-43, VOID. Pump found inoperative at end of 43 sample period.
40				7:45a- 8:00a	15	VOID		
41				8:00a- 9:02a	62	VOID		
42				9:02a- 10:50a	108	VOID		
43				10:50a- 1:07p	137	VOID		
44				1:07p- 2:10p	63	1.11 f/cc		

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TABLE 1
Dust/Fiber Exposures

No.	POSITION LOCATION (DATE)	NAME/AREA	ANALYSIS FOR	TIME	MIN.	RESULT	TWA for Sample period	REMARKS
45	Press Operator	C. Worthington	Fiber	7:08a- 9:05a	117	1.6 f/cc	1.7 f/cc	Manufacturing 8" 2400 pipe.
46				9:05a- 9:50a	45	1.9 f/cc		Pump malfunction
47				12:45- 2:00p	75	VOID		
48			Total Dust	9:50a- 12:45p	175	1.3 mg/M ³		
49	Press Operator 12/6/79	C. Worthington	Fiber	3:25p- 6:45	200	VOID	-	Heavy particulate-not countable
50	Mandrel Operator	J. Bickley	Fiber	7:09a- 10:00a	171	0.65 f/cc	0.75 f/cc	Manufacturing 8" 2400 pipe.
51	12/3/79			12:35p- 1:51p	76	0.96 f/cc		
52			Total Dust	10:00a- 12:35p	155	0.82 mg/M ³		
53	Pipe Stripper 12/6/79	H. Meyers	Fiber	2:30p- 6:20p	230	1.5 f/cc	-	Manufacturing 15" 3000 pipe.
54	Tray Loader	S. Mineo	Fiber	7:00a- 11:50a	290	0.54 f/cc	0.50 f/cc	Manufacturing 15" 3000 pipe
55				11:50a- 1:45p	115	0.41 f/cc		
56	Autoclave Truck Driver	F. Demedio	Fiber	8:05a- 11:55a	230	0.15 f/cc	0.28 f/cc	Manufacturing 15" 3000 pipe.
57	12/6/79			11:55 a- 1:40p	105	0.57 f/cc		
58	Utility Truck Driver	H. Schimmel	Fiber	6:40a- 7:03a	23	2.2 f/cc	0.62 f/cc	Manufacturing 8" 2400 pipe.
59	12/3/79			7:03a- 9:20a	137	0.26 f/cc		Sample used twice
60				9:20a- 12:40p	200	VOID		
61				12:40p- 1:50p	70	0.79 f/cc		
62	Relief Operator	R. Jackson	Fiber	7:40a 9:10a	90	0.66 f/cc	0.51 f/cc	Manufacturing 8" 2400 pipe.
63				9:10a- 9:55a	45	0.20 f/cc		Sample used twice
64				12:48p- 1:45p	57	VOID		
65			Total Dust	9:55a- 12:48p	173	0.24 mg/M ³		

TABLE 1
 Dust/Fiber Exposures

No.	POSITION LOCATION (DATE)	NAME/AREA	ANALYSIS FOR	TIME	MIN.	RESULT	TWA for Sample period	REMARKS
66	Laborer 1/29/80	R. Lutz	Fibers	7:22a- 7:43a	11	1.01	-	Employee scraping mandrels wearing 8710 respirator and white suit.
67	Crusher Operator	C. Randall	Fiber	7:00a- 9:25a	145	2.7 f/cc	3.0 f/cc (Excluding 69, baghouse entry)	Manufacturing 15" 3000 pipe. Wearing respirator
68	12/6/79			9:25a- 10:01a	152	3.5 f/cc		In dust collector shaking bags, wearing 3M8710 respirator.
69				10:06a- 12:02p				
70				10:01a- 10:06a	5	15.9 f/cc		
				12:02p- 1:45p	103	2.6 f/cc		
71	Crusher Operator	R. Meyers	Fiber	2:30p- 5:20p	170	1.5 f/cc	1.5 f/cc	Pump malfunction.
72	12/6/79			5:20p- 6:15p	55	VOID		
73	Fork Truck Driver	S. Steltz	Fiber	7:30a- 9:05a	95	0.17 f/cc	0.26 f/cc	Finishing Line 3
74	12/4/79			9:05a- 11:00a	115	0.26 f/cc		12" Sewer Pipe (Lathing only)
75				11:00a- 1:15p	135	0.24 f/cc		Finishing Line 2
76				1:15p- 1:45p	30	0.58 f/cc		
77	Lathe Operator	A. DeClerico	Fiber	6:50a- 9:00a	130	0.43 f/cc	0.60 f/cc	Finishing Line 3
78	12/4/79	-		9:00a- 10:57a	117	0.62 f/cc		12" Sewer Pipe
79	(Control Side)			10:57a- 1:15p	138	0.79 f/cc		Finishing Line 2
80				1:15p- 1:45p	30	0.36 f/cc		
81	Lathe Operator	G. Meyers	Fiber	6:55a- 9:00a	125	0.20 f/cc	0.30 f/cc	Finishing Line 3 (Driver Side)
82	12/4/79			9:00a- 10:58a-	118	0.33 f/cc		12" Sewer Pipe.
83	(Drive Side)			10:58a- 12:40p	102	0.38 f/cc		

TABLE 1

Dust/Fiber Exposures

No.	POSITION LOCATION (DATE)	NAME/AREA	ANALYSIS FOR	TIME	MIN.	RESULT	TWA for Sample period	REMARKS
84	Q. C. Inspector 12/4/79	A. Mastromatto	Fiber	7:28a- 9:05a	97	0.52 f/cc	0.71 f/cc	Finishing Line 3
85				9:05a- 11:00a	115	1.0 f/cc		12" Sewer Pipe.
86				11:00a- 1:10p	130	0.76 f/cc		
87				1:10p- 1:45p	35	0.14 f/cc		Finishing Line 2
88	Tester Operator 12/4/79	G. Bojaciuk	Fiber	7:23a- 9:01a	98	0.55 f/cc	0.67 f/cc	Finishing Line 3 (Drive Side)
89				9:01a- 11:00p	119	0.75 f/cc		
90				11:00p- 1:15p	135	0.77 f/cc		12" Sewer Pipe.
91				1:15p- 1:45p	30	0.31 f/cc		Finishing Line 2
92	Beller 12/4/79	J. Handerhan	Fiber	7:40a- 9:05a	85	0.28 f/cc	0.55 f/cc	Finishing Line 3
93				9:05a- 11:02a	117	0.32 f/cc		
94				11:02 1:12p	130	1.0 f/cc		12" Sewer Pipe
95				1:12p- 1:45p	33	0.31 f/cc		Finishing Line 2
96	Beller 12/4/79	S. Wallace	Fiber	7:02a- 9:07a	125	0.38 f/cc	0.67 f/cc	Finishing Line 3 (Drive Side)
97				9:07a- 11:05a	118	0.45 f/cc		12" Sewer Pipe
98				11:05a- 12:45p	100	0.52 f/cc		
99				12:45p- 1:45p	60	1.99 f/cc		Finishing Line 2
100	Handler 12/4/79	N. Paone	Fiber	7:10a- 9:07a	117	0.22 f/cc	0.37 f/cc	Finishing Line 3
101				9:07a- 11:04a	117	0.28 f/cc		12" Sewer Pipe
102				11:04a- 12:45p	101	0.54 f/cc		
103				12:45p- 1:45p	60	0.58 f/cc		Finishing Line 2
104	Handler 12/4/79	M. McCarthy	Fiber	7:05a- 9:11a	126	0.26 f/cc	0.40 f/cc	Finishing Line 3 (Drive Side)
105				9:11a- 11:02a	111	0.50 f/cc		Continued...

TABLE 1
Dust/Fiber Exposures

No.	POSITION LOCATION (DATE)	NAME/AREA	ANALYSIS FOR	TIME	MIN.	RESULT	TWA for Sample period	REMARKS
106	Handler	M. McCarthy	Fiber	11:02a- 12:45p	103	0.39 f/cc	0.40 f/cc	12" Sewer Pipe
107	Continued...			12:45p- 1:45p	60	0.50 f/cc		Finishing Line 2
108	Mill Operator	C. Handschin	Fiber	7:25a- 9:33a	128	0.26 f/cc	1.1 f/cc	30" Coupling Mill FD 16
109	12/5/79			9:33a- 11:20a	107	0.55 f/cc		8" 3300
110				11:20a- 12:55p	95	2.2 f/cc		
111				12:55p- 1:45p	50	2.5 f/cc		
112	Mill Operator	F. Marincole	Fiber	7:30a- 9:35a	125	0.59 f/cc	2.0 f/cc	30" Coupling Mill - FD 15
113	12/5/79			9:35a- 11:20a	105	1.2 f/cc		8" 3300
114				11:20a- 12:55p	95	2.5 f/cc		
115				12:55p- 1:45p	50	6.2 f/cc		
116	Mill Operator	J. Zollo	Fiber	7:30a- 9:30a	120	0.25 f/cc	0.32 f/cc	42" Coupling Mill-FD 54
117	12/5/79			9:30a- 11:20a	110	0.18 f/cc		16" Sewer Pipe
118				11:20a- 12:55p	95	0.42 f/cc		
119				12:55p- 1:45p	50	0.58 f/cc		
120	Saw Operator	E. Cupid	Fiber	7:35a- 9:35a	120	0.29 f/cc	0.59 f/cc	Dry Coupling Saw - FD 9
121	12/5/79			9:35a- 11:25 a	110	0.52 f/cc		4" X 6" Couplings
122				11:25a- 12:55p	90	1.16 f/cc		
123				12:55p- 1:45p	50	0.44 f/cc		
124	Saw Operator	A. Echadarría	Fiber	7:10a-?	0	VOID	0.41 f/cc	Employee Lost Cassette
125	12/6/79	-		9:50a- 11:55a	125	0.41 f/cc		Rework Saw FD 10
126		-		11:55a- 1:40p	105	0.40 f/cc		
127	Saw Helper	D. Newman	Fiber	7:45a- 9:25a	100	1.43 f/cc	0.44 f/cc	Rework Saw FD 10
128	12/5/79			9:25a- 11:25a	120	0.54 f/cc		8" 3300
129				11:25a- 1:45p	140	0.37 f/cc		

Dust/Fiber Exposures

No. 79	Position Location (Date)	Name/Area	Analysis for	Time	Min.	Result	TWA for Sample Period	Remarks
130 131 132 133	Lathe Operator (12-5-79)	T. Gray	Fiber	7:47-9:30a 9:30-11:25a 11:25-1:00p 1:00-1:45p	103 115 95 45	0.38 f/cc 0.51 f/cc 0.31 f/cc 0.11 f/cc	0.37 f/cc	Nebel Lathe FD 8 6" & 8" FMS Sebastian Lathe FD 20
134 135 136	Lathe Operator (12-5-79)	W. Barnett	Fiber	7:50-9:30a 9:30-12:55p 12:55-1:45p	100 205 50	0.38 f/cc 0.31 f/cc 0.70 f/cc	0.38 f/cc	Laman Lathe FD 7 16" Pipe
137 138 139 140	Mill Operator (12-5-79)	J. DeSilva	Fiber	7:55-9:32a 9:32-11:25a 11:25-1:00p 1:00-1:45p	97 113 95 45	0.13 f/cc 0.22 f/cc 0.48 f/cc 0.35 f/cc	0.28 f/cc	Universal Boring Mill FD 13 6" Pipe
141 142 143	Drill Operator (12-6-79)	J. Diaz	Fiber	7:10-9:50a 9:50-11:55a 11:55-1:40p	160 125 105	0.66 f/cc 0.34 f/cc 0.29 f/cc	0.46 f/cc	Korit Drill
144 145 146	Saw Operator (12-5-79)	N. Chancy	Fiber	8:45-11:25a 11:25-1:00p 1:00-1:45p	160 95 45	1.88 f/cc 1.69 f/cc 0.84 f/cc	1.66 f/cc	Wet Saw 16" 150
147 148 149	Lathe Operator (12-6-79)	E. Moore	Fiber	7:40-9:52a 9:52-11:55a 11:55-1:40p	132 123 105	1.2 f/cc 1.1 f/cc 1.0 f/cc	1.1 f/cc	Pencil Sharpener
150	Finishing Supervisor (12-5-79)	R. Grudzinski	Fiber	8:15-2:00p	345	0.14 f/cc	0.14 f/cc	
151 152	Sweeper Operator (12-6-79)	H. Dukes	Fiber	10:10-12:45p 12:45-3:00p	155 135	0.21 f/cc 0.35 f/cc	0.28 f/cc	
153 154	Electrician (12-3-79)	C. Beaver	Fiber	7:15-9:10a 9:10-1:45p	115 275	0.84 f/cc 0.22 f/cc	0.40 f/cc	
155 156	Mechanic (12-6-79)	J. DeMario	Fiber	7:40-12:40p 12:40-3:00p	300 140	0.41 f/cc 0.36 f/cc	0.39 f/cc	Working on Finishing Line #2