RESULTS OF AIR SAMPLES

H.K. Porter
Huntington, Indiana

Report Prepared By:
Jeremiah R. Lynch

May, 1968



PLANT 27

May 14, 1968

Mr. Thomas Bell
Works Manager
H. K. Porter Company
Huntington, Indiana 46750

Dear Mr. Bell:

The analysis of the air samples collected in your plant during our survey in November 1966 has been completed, and the results are attached. The impinger samples were counted during the survey using the American Conference of Governmental Industrial Hygienists' method. The membrane filters were rendered transparent with 50-50 mixture of diethyl oxalate, dimethyl phthalate and counted at 430X magnification with phase contrast illumination.

The dust concentration as measured by impinger exceeded the 5 million particle per cubic foot Threshold Limit Value currently in use, in a few locations. The membrane filter method is experimental and no standard has been adopted for its interpretation in this country. However, the British Occupational Hygiene Society has issued "Hygiene Standards for Chrysotile Asbestos Dust" for the 5 μ + fiber counts, averaged over a three month period, as follows:

Range	fibers/cc
Negligible	less than 0.5
Low	0.5 - 2.0
Medium	2.0 - 10.0
High	more than 10.0

They also recommend that an approved respirator be worn when it is necessary to work in "high" concentration areas.

Some reprints relating to our study are enclosed. Your cooperation is appreciated and the data gained from your plant is of considerable value.

Sincerely yours,

Jeremiah R. Lynch
Asst. Chief, Environmental Activities
Field Studies
Occupational Health Program

cc: Prog. Mgmt. Offer.
Dr. Cralley

JRLYNCH:ms

Attachments

Results of Air Samples of November 1966

H. K. Porter, Huntington, Indiana

Operation		Impinger (1)		Membrane Filter (2)		(3)
		Sample #	mppcf	Sample #	Fibers/cc Total	Fibers/cc 5 μ +
Mixing and Coating						
Preform Operator	B	206	2.1	207	6.8	3.6
		251	1.4	252	8.0	4.5
		253	2.1	254	13.4	9.0
	P			103	1.1	0.5
				118	3.6	1.8
				116	5.9	3.5
				117	14.8	10.3
				137	21.3	16.0
				153	12.5	7.1
				248	19.1	11.7
				246	7.1	4.5
				217	10.3	5.7
				212	8.4	4.7
	G	7	0.8			
		12	0.2			
Preform Roller	B	202	0.8	203	11.8	3.9
	P			105	4.5	1.9
				110	3.7	1.6
				111	4.0	1.8
				104	1.8	0.9
Mixer Dry	B	127	19.3			
		129	11.4			
	P			114	1.6	1.0
				211	3.5	1.6
Mixer Wet	B	200	6.5	201	9.6	6.0
Scrap Grinder	P			119	5.3	3.2

NOTES:

B - Breathing zone simultaneous impinger-membrane filter samples.

P - Personal membrane filter samples collected by a sampling pump worn by the worker.

G - General air samples.

[illegible]

Operation		Impinger		Sandpaper Filter		
		Sample #	Sheet	Sample #	Fibers/cm Total	[illegible]
Pouring						
Sandpaper Operator	S	123	3.6	124	6.6	[illegible]
[illegible]	S	[illegible]	2.1	[illegible]	22.2	[illegible]
	P			146	16.3	[illegible]
[illegible]	S	205	2.2			
	P			[illegible]	4.5	
				[illegible]	5.6	
[illegible]						
[illegible] Operator	S	123	3.4	120	7.1	[illegible]
		[illegible]	1.9	161	10.6	
		[illegible]	3.4	135	4.4	[illegible]
	P			102	6.4	[illegible]
				106	3.4	
				107	1.5	[illegible]
				109	3.0	[illegible]
				113	2.5	[illegible]
				115	6.1	[illegible]
				121	3.6	[illegible]
				136	5.6	[illegible]
				140	16.4	[illegible]
				167	10.0	[illegible]
				216	8.2	[illegible]
				218	3.4	2.4
	S	40	0.9			
Laying						
Oven Operator	S	210	[illegible]	200	9.2	[illegible]
		[illegible]	[illegible]	[illegible]	9.0	[illegible]
	P			143	21.7	[illegible]
				157	2.9	[illegible]
				139	12.7	[illegible]
				161	2.9	[illegible]
				165	3.6	[illegible]
				223	6.8	[illegible]
Lamette Loader	P			271	4.4	2.6
				281	7.9	[illegible]

M. K. Porter

Operation		Impinger		Membrane Filter		
		Sample #	mmpcf	Sample #	Fibers/cc Total	5 μ +
Grinding and Sanding Blanchard Operator	B	249	1.1	250	8.9	3.9
	P			224	17.3	8.3
				245	17.8	10.0
				287	11.0	6.6
Buffer	P			264	12.8	9.8
Finish Grinder (Slab Grinding)	B	153	3.6	156	32.9	21.4
	P			140	14.8	8.7
				142	22.3	15.4
				154	4.0	3.1
Blanchett Grinder	B	174	3.4	175	14.0	9.0
		236	2.8	237	23.8	13.4
	P			145	11.4	7.8
				151	12.5	8.9
				166	0.4	0.0
				229	5.3	3.9
				273	14.1	10.1
				289	4.8	2.2
				290	1.3	0.7
				294	4.6	2.1
	G	57	2.7			
Edge Grinder	B	274	2.9	275	11.5	5.3
	P			141	4.4	2.5
				263	4.5	2.1
Grinding and Sanding Sander-Auto	B	234	1.6	235	2.4	2.2
	P			227	6.7	4.7

H. K. Porter

Operation		Impinger		Membrane Filter		
					Fibers/cc	
		Sample #	ppcf	Sample #	Total	5 μ +
Grinding and Sanding						
Sander	G	233	0.1			
	P			226	12.0	8.5
Grinding and Cutoff	G	29	2.0			
		74	1.2			
Cutting and Drilling						
Drill Press	B	170	2.0	171	14.6	9.3
	P			160	2.0	0.6
				163	0.3	0.0
				164	3.1	1.8
				221	7.5	4.3
				222	5.5	3.9
				225	11.2	6.8
				267	0.9	0.4
				268	4.5	2.5
				269	3.3	1.6
				270	1.1	0.6
				272	2.2	1.5
Trim Press	P			214	18.2	12.8
Punch Press	P			208	2.3	1.4
Abrasive Cutoff Saw	B	131	1.7	132	1.6	0.8
		172	5.2	173	39.1	28.5
	P			265	13.9	10.0
Groover	P			291	32.7	15.7
Radial Saw	B	168	3.9	169	9.9	6.0
	P			138	21.1	13.6
				230	11.1	7.4
Band Saw	B	257	2.9	258	16.2	11.1

H. K. Porter

Operation		Impinger	Membrane Filter	
		Sample # mppcf	Sample #	Fibers/cc Total 5 μ †
Cutting and Drilling				
Multiple Disc Saw Operator	P		153	11.7 9.2
Bonding and Riveting				
Bonder	P		188	0.9 0.4
Inspection and Packing				
Brander	P		152	39.1 27.4
			162	1.9 1.1
			283	5.6 3.3
			286	10.8 6.9
			283	3.9 2.6
Inspector	P		223	30.4 21.1
			242	5.8 3.3
			266	18.5 11.4
			273	3.1 2.0
			279	16.9 8.9
			280	15.9 8.6
			284	4.3 3.0
			285	6.5 4.0
Packer	P		239	2.2 1.3
			279	7.1 4.3
			277	6.1 4.0