

IWS-32,29a

REGION-6

PB82150848

RESULTS OF AIR SAMPLES

CERTAIN-TEED
Hillsboro, Texas

Report Prepared By:
Jeremiah R. Lynch

May, 1967



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE

Occupational Health Research & Training Facility
Bureau of State Services
1014 Broadway
Cincinnati 2, Ohio

May 8, 1967

Certain-Teed Products Company
Hillsboro, Texas

Atten: Mr. Naaman Rhodes
Plant Manager

Dear Sir:

The analysis of the air samples collected in your plant during our survey in January 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 a 50-50 mixture of diethyl oxalate, dimethyl phthalate and counted at 430X magnification with phase contrast illumination.

All of the dust concentrations as measured by impinger were under the 5 million particles per cubic foot Threshold Limit Value currently in use. The membrane filter method is experimental and no standard has been set for its interpretation. Some relationships between the impinger and filter measurement, and some results of surveys of other asbestos product areas, are discussed in the enclosed reprints.

Your cooperation in this study is sincerely appreciated and the data gained from your plant is of considerable value.

Sincerely yours,

Jeremiah B. Lynch
Senior Sanitary Engineer
Engineering Section
Occupational Health Program

cc: Mr. L. Horwitz
State of Texas
Region VII, Mr. Jones
Asbestos File
Dr. Cralley

Results of Air Samples of January 1966

Certain-Teed, Hillsboro, Texas

Operation	Impinger		Membrane Filter		
	Sample #	mppcf	Sample #	Total	Fibers/cc 10 μ +
Warehouse and Mixing Mixer					
Personal			212	9.0	3.6
			217	3.7	0.9
			225	6.1	1.9
			237	3.8	0.8
			239	4.5	1.6
BZ	116	0.7	117	18.9	1.5
Gen.	17	0.7	19	18.4	2.7
	J18	0.1	20	4.9	0.8
Waste crusher & sand blaster					
Personal			246	23.8	5.8
Pipe Forming Machine Operator--BZ					
	112	1.9	113	16.4	1.9
Gen.	9	0.4	11	11.1	0.8
	J10	0.4	N12	13.5	0.6
Machine Tender Air-Spray Operator					
Personal			209	3.6	0.8
			215	1.4	0.6
			224	1.6	0.6
			226	2.3	0.7
			240	3.3	0.9

NOTES:

- "Personal" refers to personal samples on membrane filters
- "BZ" refers to breathing zone samples by companion impingers and membrane filter
- "Gen." refers to samples of general air in the particular department
- "J" refers to respirable impinger sample
- "N" refers to respirable membrane filter sample

Certain-Teed

Operation	Impinger		Membrane Filter		
	Sample #	mppcf	Sample #	Fibers/cc Total 10 μ +	
Pipe Forming (cont.)					
Machine Repair					
Personal			207	3.6	1.3
			208	4.4	1.3
			210	2.7	0.7
			238	5.3	0.9
Crane Operator					
Personal			143	0.3	0.0
Curing					
Mandrel Puller					
Personal			247	1.3	0.4
BZ	118	0.8	119	19.0	1.5
Curer					
Personal			223	2.8	0.5
			229	2.3	0.7
Pipe Finishing					
Lathe					
Personal			141	4.6	1.4
			214	8.2	2.4
			220	3.8	1.2
			227	5.5	1.3
			232	4.5	1.2
BZ	114	0.5	115	30.4	2.2
Gen.	13	0.7	15	11.9	1.5
	J14	0.5	H16	26.0	4.1
Tester					
Personal			244	12.7	5.7
			245	7.0	1.7

Certain-Teed

Operation	Impinger		Membrane Filter		
	Sample #	mppcf	Sample #	Fibers/cc Total 10 μ +	
Pipe Finishing (cont.)					
Unit loader					
material handler					
Personal			140	2.4	1.0
			233	8.5	1.8
			234	6.9	2.0
Foreman					
Personal			242	3.8	0.7
Pipe Inspector					
Personal			213	7.6	1.7
Fork Lift					
Personal			216	4.5	1.1
Coupling Finishing					
Coupler Cutter					
Personal			221	3.4	0.9
			228	11.6	3.4
			236	9.6	2.6
BZ	120	1.2	121	17.7	2.2
	149	2.8	150	25.7	4.8
Gen.	5	1.0	7	5.3	2.4
	J6	0.6	N8	4.9	1.8
Lathe--BZ	110	0.4	111	11.0	2.6
Mill					
Personal			218	3.3	0.8
			219	3.5	0.9
			235	5.8	1.2
BZ	107	0.1	108	3.3	1.0
	135	0.9	136	0.7	0.2
Gen.	1	0.6	3	4.9	0.9
"	J2	0.0	N4	2.9	1.5

Cartain-Teed

Operation	<u>Impinger</u>		<u>Membrane Filter</u>	
	Sample #	mppcf	Sample #	<u>Fibers/cc</u> Total 10 μ +
Coupling Finishing (cont.)				
Tester Personal			222	4.1 1.2
			231	14.3 2.4
Packing Packer Personal			142	12.0 3.8
			148	16.9 4.4
Miscellaneous Mechanic Personal			230	0.6 0.2
			241	2.6 0.5
			243	3.1 1.1
Inspector Personal			146	3.0 1.0

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16. Abstract (Limit: 200 words)

Air samples for asbestos (1332214) were collected at the Certain-Teed Products Company (SIC-3292) in Hillsboro, Texas during January, 1966. General, personal, and breathing zone samples were collected from approximately 20 representative operations including pipe preparation, waste crushing, sand blasting, air spraying, general materials handling, and servicing areas. Samples were collected either by the impinger or membrane filter method. Fiber counts ranged from 0.5 to 1.9 million particles per cubic foot (mppcf) for general area samples and from 0.5 to 0.8mppcf for breathing zone samples, by the impinger collection method. Fiber counts ranged from 0.3 to 23.8 fibers per cubic centimeter (F/cc) for personal samples, 0.7 to 30.4F/cc for breathing zone samples, and 2.9 to 26.0F/cc for general areas, by the membrane collection method. Fiber size ranged from 0.2 to 5.8 microns. The greatest dust concentrations were found at waste crushing, pipe finishing, and curing operations and in the warehouse and mixing areas.

17. Document Analysis a. Descriptors

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Region-6, Asbestos-dusts, Air-sampling, Work-sites, Particle-counters

b. Identifiers/Open-Ended Terms**c. COSATI Field/Group**

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