

Re No.

36.4

WCL 4/16

QAL

April 16, 1979

Walter G. McCrone
Walter G. McCrone Associates, Inc.
2820 South Michigan Avenue
Chicago, Illinois 60616

Dear Mr. McCrone:

For your information, I have attached the description of most of the 100 Talc samples you analyzed under Contract No. CDC 210-75-0063. As you may remember, I sent a general listing of the samples' origin to you about a year ago. Sample #'s 122 & 123 are from inactive mines in California and Sample #125 is from an inactive mine in Georgia. Sample #124 is a primary crusher sample from the American Talc Co. in Alpine, Alabama. The talc, however, came from the Willow Creek Mine in Alder, Montana (as did #034, 037, 108 & 109).

If you have any questions, please call me at (513) 684-3255.

Sincerely yours,

Howard R. Ludwig
Industrial Hygiene Engineer
Industrial Hygiene Section
Industry-wide Studies Branch
Division of Surveillance, Hazard
Evaluations, and Field Studies

1 Enclosure

HLUDWIG:pj:RM. 8415:FOB:Cincinnati, Ohio:4-26-79

PLAINTIFF'S
EXHIBIT
CAM-232

NIOSH Results of Talc Samples from "Analysis of Talc by X-Ray Diffraction and Polarized Light Microscopy"
PB84190651, May 1977

DSHE FS Sample #	Company and Sample Designation	Source of Sample	Particle Size	anthophyllite	chrysotile	talc % low	talc % high	tremolite-actinolite
1	Gouverneur Talc Company Nyltal 300	GTC	2.97	12		40	55	30 (3% fibers)
2	Gouverneur Talc Company Nyltal 400	GTC	1.64	8		30	45	45 (<1% fibers)
3	Gouverneur Talc Company 5X	GTC	1.87	13		38	50	35 (<2% fibers)
4	Gouverneur Talc Company 325	GTC	5.48	11-23		19	32	45 (~5% fibers)
5	Gouverneur Talc Company X	GTC	5.11	8		20		57 (1% fibers)
6	Gouverneur Talc Company FT	GTC	6.00	5		41		33 (25 % fibers)
7	Gouverneur Talc Company 3X	GTC	4.95	15		5		59 (10% fibers)
9	Johnson & Johnson, Vermont Product Talc (98% Pure)	J & J	11.30			98	99	<0.1
34	Hitchcock Talc Company, Murphy, NC, Product Talc	Harvard	6.37			75	87	<0.1m
35	Windsor Minerals, Gassets "37", July 29, 1975 (Vermont)	Harvard	28.90			45	55	
36	Windsor Minerals, West Windsor Mineral Rav Grind Composite, Vermont	Harvard	3.21			60	70	
37	Windsor Minerals, Ludlow "36", July 29-30, 1975	Harvard	16.20			48	59	
38	Windsor Minerals, Gassets "36", July 28-30, 1975	Harvard	22.40			69	76	
39	Vermont Talc Company - Bagging Bulk Sample, 7/16/75, 2nd Shift Vermont	Harvard	4.50			50	55	
40	Vermont Talc Company - Bagging Bulk Sample, vertical XXXD 9/17/75, 1st Shift Vermont	Harvard	6.15			53	61	
41	Southern Talc Co. (Cohutta Mill) Chatsworth, Ga. Product (Powder) Sample Mine I.D. 04-00493	MESA	6.00	0?		50	60	6.5 (~2% fibers)
42	Packer Station #3, Vanderbilt Talc, Mill #1 Gouverneur, N.Y. 1st Shift 11/4/75 (ET)	NIOSH Survey	1.47	10		31	36	40 (1-2% fibers)
43	Packer Station #2, Vanderbilt Talc, Mill #1 Gouverneur, N.Y. Nyltal 100 1st Shift 11/4/75	NIOSH Survey	7.12	4.5		43	48	~37 (<0.1% fibers)
44	Ceramitalc HDT, Vanderbilt Talc Co. 1st Shift 11/4/75 (NY)	NIOSH Survey	5.62	5.5		30	35	49 (<0.1% fibers)
45	Bagging Station #3, Vanderbilt Talc Co., Mill #1, Gouverneur, N.Y. 11/4/75 (Nyltal 200)	NIOSH Survey	6.15	8		33	38	43 (1-2% fibers)
46	Hitchcock Corp. #5 Mine ID# 3100222	MESA	8.20			94	97.5	0.1-0.5m
47	Hitchcock Corp. #3 Mine ID# 3100683	MESA	7.60			93	95	
18	Wray Mine & Mill, Int. Minerals and Chemicals ID# 31-0008 (VT)	MESA	6.85		4-5	1	2	5-7m
49	Bagging Station #3, Vanderbilt Talc Co., Mill #1, 2nd Shift, Gouverneur, N.Y. 11/3/75 (Nyltal 300)	NIOSH Survey	6.80	10		30	40	38 (3% fibers)

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50	Bagging Station #3, Vanderbilt Talc Co., Mill #1, 2nd Shift, Gouverneur, N.Y. 11/3/75 (Nytal 200)	NIOSH Survey	5.24	15		14		59 (<1% fibers)
51	Southern Talc Co., Souther Mill Product Talc sample, Chatsworth, Ga. Rock Cliff Mine, ID# 0900492, 9/3/74	MESA	14.50			55		5(<1% fibers)
52	Southern Talc Co., Souther Mill, Chatsworth, Ga. ore from Rock Cliff Mine, ID# 0900492.	MESA	7.73	9		35	50	8 (<0.01% fibers)
53	Southern Talc Co., Souther Mill, Chatsworth, Ga. ore from Judge Hole Mine, ID# 0900492.	MESA	5.73	12?		55	84	4.5 (5% fibers)
54	Winterboro Mine and Mill, American Talc Co., Alpine, Ala. Willowcreek Mine, Ore from Montana, ID# 01-00433 9/5/74	MESA	17.50			90		
55	Thompson-Weinman Co., Cartersville Plant, Cartersville, GA., ore from Brady Mine, ID# 09-00224	MESA	17.00			5		
56	Cohutta Mill, Southern Talc Co. Chatsworth, GA. 9/3/74, Ore From Ernest mine ID# 09-00493	MESA	24.80	0?m		25	45	8
57	American Talc Co., Alpine, Ga. Winterboro Mine & Mill, 9/5/75, ID# 01-00433, Final prod. Ore from Montana	MESA	6.14			99		
58	Pioneer Talc Co., Garren Pit Prod. #6, Allamore, Hudspeth Co., Texas ID# 41-00869	MESA	3.22			85	92	
59	Pioneer Talc Co., Apache Pit Product, #4, Texas ID# 41-00869	MESA	5.80			82	87	
60	Pioneer Talc Co., Texacola Pit Product, #4, Texas ID# 41-00869	MESA	15.20			92	95	<0.2m
61	Southern Clay Products, #2, Bottom Product, Allamore, Hudspeth Co., Texas #18	MESA	11.00			88	92	
62	Milwhite Co. Inc., Van Horn, Cumberson Co., Texas ID# 41-01527, Ground Calcined Product	MESA	5.70			77	88	
63	Milwhite Co. Inc., #11 Van Horn, Cumberson Co., Texas Eagle Hat Pit Crude ID# 41-01527	MESA	6.90			70	75	
64	Pioneer Talc Co., Allamore Hudspeth Co., Texas, #8 Garren Ceramic ID# 41-00869	MESA	5.81			84	91	
65	Milwhite Co. Inc., Van Horn, Cumberson Co., Texas Tumble Down Pit Product ID# 41-01527	MESA	4.94			76	87	
66	Emtal 42, Eastern Magnesia Talc Co. Vermont 8/28/75	Harvar d	5.85			43	67	

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67	Pfizer (Barretts Mill) Montana minus 12 microns	NIOSH Survey	3.73			96	98	
68	Pfizer (Barretts Mill) Montana minus 325 mesh	NIOSH Survey	6.91			97	98	
69	Pfizer (Barretts Mill) Montana minus 20 microns	NIOSH Survey	4.88			97		
70	Cyprus (Three Forks Mill) Montana Minus 325 mesh	NIOSH Survey	8.64			90	92	
71	Cyprus (Three Forks Mill) Montana Mistron Vapor minus 10 microns	NIOSH Survey	2.61			96	98	
72	Cyprus (Three Forks Mill) Montana Floor Sweepings (Bagging Area)	NIOSH Survey	5.51			95	97	
73	Cyprus (Yellowstone Mine) Montana Drill Hole	NIOSH Survey	4.30			10		
74	Southern Talc (Southern Mill) Ga. 98% Passing 200 mesh	NIOSH Survey	3.94			72	80	5 (~5% fibers)
75	Southern Talc (Southern Mill) Ga. 99% Passing 325 mesh (#1767)	NIOSH Survey	9.30			70	82	4 (10 % fibers)
76	Southern Talc (Cohutta Mill) Ga. 95% Passing 325 mesh	NIOSH Survey	9.95			27	35	5 (2% fibers)
77	Southern Talc (Cohutta Mill) Ga. 25% Passing 200 mesh	NIOSH Survey	16.80			42	58	6
78	Milwhite Talc Co. Inc. (Tex.) Finished CM4 Product	NIOSH Survey	4.45			54	70	
79	Westix Talc Co. (TDM) Dark - (Milwhite Inc.) Texas	NIOSH Survey	15.60			85	95	
80	Milwhite Talc Co. (Tex) Marshal mix - 92-200 mesh	NIOSH Survey	5.30			67	76	
81	Westex Talc Co (Milwhite Inc.) (Tex) White mine 93-200 mesh	NIOSH Survey	6.41			65	80	
82	Southern Clay Products - Texas Garren Mine #2	NIOSH Survey				70	85	
83	Texas Talc Co. - TP1 (Tex.) Mine (Texas Pacific)	NIOSH Survey				78	83	
84	Texas Talc Co. Texas David Mine	NIOSH Survey				75	86	
85	Texas Talc Co. TP2 Mine, Texas	NIOSH Survey	14.60			75	87	
86	Cyprus Industrial Minerals Co. Loyce Fine Mine (Texas)	NIOSH Survey				65	83	
87	Pioneer Talc Co. Inc. (Tex.) Texola Mine	NIOSH Survey	8.70			85	93	25 (80 % fibers)
88	Pioneer Talc Co. Inc. (Tex.) Dees Mine	NIOSH Survey				68	90	
89	Milwhite Co. Inc. Bryant Soapstone Mine Arkansas	NIOSH Survey	9.60			33	57	

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90	Laws Mill (California) Clay Sample, kaolin + 1% glue	NIOSH Survey	1.34			5	10	
91	Laws Mill Micro talc from White Eagle Mine (California) Standard Industrial Minerals	NIOSH Survey	8.40			88	93	
92	Laws Mill (California) Desert Talc, Standard Industrial Material	NIOSH Survey				77	90	7.5
93	Laws Mill (California) Holiday Talc, Standard Industrial Material	NIOSH Survey				89	95	
94	Keeler T-076 Cyprus California, Tecopa Mine (100% Panamint)	NIOSH Survey	4.10			67	90	
95	Keeler HGO 55 Blend, Cyprus, California, 4 panamint, 3 oasis, 3 white eagle	NIOSH Survey	3.20			59	88	
96	Keeler Sierra Cloud Blend (Cyprus, California) 4 panamint, 1 white eagle	NIOSH Survey	4.13			69	90	
97	Keeler MSC Mistron Cyprus, California, m Panamint + 0.5% stearite	NIOSH Survey	3.44			72	92	
98	Keeler Sierrallite, Cyprus, California, Talc City (Frisco)	NIOSH Survey	6.05			1		
99	Keeler Glacier 200 Cyprus, California, Talc City (tailings)	NIOSH Survey	4.33			2	4	
100	Keeler USP Cyprus, California, Oasis Mine (100%)	NIOSH Survey	8.38			94	96	<1
101	Keeler Cyprus, California, White eagle Screenings	NIOSH Survey				80	94	
102	Keeler Cyprus, California, Suggar Mine	NIOSH Survey				5	10	
103	Pfizer (Cal) Talcron CP 44-31 Eclipse, Bonnie, Mongolian	NIOSH Survey	7.05			70	93	<0.1
104	Pfizer (Cal) Cercron CF 96-38 Eclipse, Acme, Mongolian	NIOSH Survey	4.95			55	77	10
105	Pfizer Cercron DF 96-36 (California) White eagle, Mongolian, Apex	NIOSH Survey	4.66			52	81	10
106	Cyprus (LA) Furnace Creek (California) Tecopa (100 % Panamint)	NIOSH Survey	6.07			82	93	
107	Cyprus LA) Vanderbilt crude Soft LB (California)	NIOSH Survey				78	86	
108	American Talc (Alabama) 84 Color Dark 200 Mesh ore from Willow Creek Mine in Montana	NIOSH Survey	6.67			82	84	
99	American Talc (Alabama) 92 Color Dark 99% 400 Mesh ore from Willow Creek Mine in Montana	NIOSH Survey	4.70			93	98	
110	Ludlow Gassetts Mill (Vermont) Windsor Minerals, Product		2.30			45	55	
111	West Windsor Mill (Vermont) Windsor Minerals, Product		8.80			97	98	

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112	West Windsor Mill (Vermont) Hammondsville Mine, Windsor Minerals		3.33			45	75	
113	Vermont Talc Company (Vermont) Chester Mill, Verbal 77		3.52			46	57	
114	Vermont Composite Sample, Moretown, Vermont	Dr. Froines	6.85			66	87	
115	R.T. Vanderbilt (NY) Mouldene	RTV	4.17	11-18		29	71	44
116	Resubmittal of #071		1.55			90	94	
117	Resubmittal of #089		11.20			55	76	
118	Resubmittal of #098		4.34			2	3	
119	R.T. Vanderbilt (NY) Fibertal 1	RTV	3.58	7		72	73	13.5
120	R.T. Vanderbilt (NY) Fibertal 6	RTV	4.23	10.5		32	68	37
121	R.T. Vanderbilt (NY) Fibertal 12	RTV	4.80	11.5-16		31	69	45
122	California Mine no longer in operation	MESA	8.85			90	93	0.1 (5% fibers)
123	Western Talc (California) (R.T. Vanderbilt) MESA ID# 0401138	MESA	5.60			93	95	0.01 (50% fibers)
124	American Talc Co., Alpine, Ala. winterboro Mine & Mill Primary Crusher, Sample 9/5/74, ID# 01-00433 Ore from Willow Creek Mine in Alder, Montana	MESA	8.90			77	85	
125	Georgia Mine no longer in operation	MESA	9.15			1		