UNION CARBIDE

April 23, 1975

Mr. R. T. Monagan, President
California Manufacturers Association
P. O. Box 1138
Sacramento, California 95814

Dear Bob:

Enclosed is a draft of a letter which I suggest that CMA might wish to send to Senator Marks as a follow up to our recent conversations with him. I would also suggest that Eddie Story of the Asbestos Workers Union in San Francisco, Local 16, also be copied since he received a copy of Dr. Selikoff's May 14th letter to Senator Marks.

Feel free to exercise whatever editorial license you feel is appropriate and thanks for the help.

Very truly yours,

W. C. Thurber

WCT:es
Enclosure

cc: Messrs. N. J. Haase
P. McAuliffe

UCC 009998

PLAINTIFF'S EXHIBIT
UC-4198

Published by AsbestosClaims.Law
asbestosclaims.law/library/18792/1

Draft - April 23, 1975

Senator Milton Marks
California State Senate

Dear Senator Marks:

It was a pleasure meeting with you last week and having the opportunity to discuss proposed amendments to SB2419 relating to the spraying of materials containing asbestos.

In the interim since our meeting, we have had the opportunity to review Dr. Selikoff's letter of March 14, 1975, to you and would like to provide some comments on the questions raised by Dr. Selikoff. Dr. Selikoff apparently did not receive the detailed dust count data which CMA submitted in support of the proposed amendments and thus is quite correct in theposition that the information available was not adequate to evaluate the proposed amendments. It seems from the nature of his other questions that he is looking at this in the same light as the now discontinued operation of spraying asbestos building insulation. In insulation spraying, bags of raw asbestos fiber are mixed in a water slurry and sprayed on to steelwork and other surfaces for fireproofing. There is little or no permanent binder so the sprayed material ends up as a mater of virtually pure asbestos held in place by its own entangled fibers. Such operations obviously represent an inappropriate use of asbestos and have been outlawed.

There is a substantial difference between this spraying of asbestos for building insulation and the operations covered by our proposed amendments wherein a relatively small amount of asbestos is added to a liquid binder for control of certain physical properties of the material. The asbestos in the finished coating or item is firmly held in a permanent binder. Recognition of these distinctions is essential for an appropriate evaluation of the proposed amendments.

Referring to Dr. Selikoff's five specific questions, the following comments are offered:

1. All of the systems except the interior wall and ceiling texture sprays i.e. water-based systems with water soluble binders, are factory mixed and de-

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livered to the spraying location with the asbestos fully wetted out. The texture sprays, containing 1-3% asbestos mixed into the other dry ingredients are typically added to water at the site. The act of dumping is controlled by the OSHA regulations and if it cannot be done in compliance the entire operation should be stopped. There are moves at some locations to compound this type of spray at factory locations and pump it directly into the sprayer's tank.

2. Extensive supporting data have been supplied on this point. (See Tables I-IV attached) The maximum level found was a ceiling concentration of 1.6 fibers/cc with values of several tenths of a cc most typical.

   It should also be noted that in most of these counts all particles longer than 5μ with L/D $>$ 3 that in the judgment of an experienced operator could possibly be asbestos were counted as such. This tended to include a proportion of particles that were not really asbestos.

3. Regarding contamination of adjacent surfaces during spraying, it should be stressed that the materials sprayed are being used in the finishing or as the finish for surfaces and parts. Where overspray occurs, it is normally removed immediately or covered with subsequent coatings. Where it is not removed, the binder sets and holds the asbestos. There are no dry clumps of unbound asbestos as could occur with the insulation spraying and which seems to be of particular concern to Dr. Selikoff. We are prepared to provide an application by application commentary for the systems tested in developing the supporting data if it will be useful.

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4. Regarding subsequent manipulation of the coated surfaces, the texture sprays (Table I) the wall and roof sprays, (Table II) and the asphaltic roof and under coats (Table IV) are finished as applied and are not sanded or worked further to any extent. Certain of the resin applications (Table III) are cut, sanded or ground after the binder resin has hardened. A substantial amount of fiber count data has been obtained for this type of operation and ~~was~~ 15 provided in Tables V and VI. The highest level found in a commercial situation was 0.4 fibers/cc. In a laboratory test in a small closed room the maximum was 1.2 fibers/cc.

5. Regarding contamination of the workplace by waste materials, it should be noted that these materials cure or harden when used so the asbestos is bound in. An exception to this is the "empty" bags for the interior wall and ceiling texture sprays. These do present a potential exposure but are rigidly controlled by both the Federal and California OSHA regulations. It should also be noted that the removal of overspray on the floor is required after some texturing operations. This is normally done wet with a scraper and the floor is then finished.

We would like to reiterate that the proposed exemptions of certain additional questions from SB2419:

1. Can be accomplished within existing OSHA and EPA regulations;
2. Will generate very low levels of airborne asbestos contamination and that these dust levels are similar to those of already exempted operations;
3. Will insure the continuing economic well-being of those companies and workers in operations proposed for exemption.

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Your continuing consideration of this matter is appreciated.

Very truly yours,

R. T. Monagan, President
California Manufacturers Association

Attachments

cc: Mr. E. H. Story - Local 16 AFL-CIO
2601 Mission Street - Room 707
San Francisco, California 94110

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WATER-BASED SYSTEMS

WITH WATER-SOLUBLE BINDERS

Sample Designation	Commercial Application	Date	Binder	Approximate Wt. % Asbestos[1]	Spray Gun Type	Operation	Sample Time (Min.)	Asbestos Airborne Concentration (Fibers/cc
I - INTERIOR TEXTURE SPRAYS								
12	Ceiling spray.	6/14/73	Soya protein.	2	Air supported	Operator applying ceiling spray to condominium apts.	71	0.1
82	"	"	"	2	"	Operator wiping walls after ceiling spray.	68	0.1
3	Wall spray.	"	Starch.	2	"	Operator applying wall spray to condominium apts.	51	0.3, 0.8
35	"	"	"	2	"	Operator carrying hose during wall spraying.	34	0.1
38	Ceiling spray.	-	"	1	"	Operator spraying ceiling of condominium.	14	0.5
28	"	"	"	1	"	"	15	0.8
56	"	"	"	1	"	"	15	0.6
131	Wall spray.	-	"	2	"	Operator spraying walls of condominium.	21	1.6
102	"	"	"	2	"	"	12	1.1
K-3	Ceiling spray.	10/3/74	"	1	"	Operator applying ceiling spray to home.	19	0.5
K-2	"	"	"	1	"	Operator "wiping" walls after ceiling spray.	22	0.2
K-2	Wall spray.	"	"	2.5	"	Operator applying wall spray to home. Full coverage.	24	0.07
I-25	"	"	"	2.5	"	Operator spraying glitter. Immediately after ceiling sprayed.	26	0.0
2-49	Ceiling spray.	12/4/73	"	1	"	Operator applying ceiling spray to condominium apts.	20	0.5
2-54	"	"	"	1	"	Operator "wiping" walls after ceiling spray.	24	0.1

[1] Based on total formulation as sprayed.

UCC 010003

I. Water-Based Systems with Water-Soluble Binders

Binders:

Type: Starch, polyvinyl alcohol, soya protein, or equivalent.

Content: Typically 6-8% by weight of the dry formulation before mixing with water, 2-4% as sprayed.

Main Uses: Interior wall and ceiling texture sprays.

(Where texture is applied to walls it must be covered with at least one coat of a latex or oil-based paint.)

Asbestos Content: Up to 3% by weight of the total formulation as sprayed.

Supporting Data: Table I.

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TABLE 4a

WATER-BASED SYSTEMS

WITH LATEX BINDERS

Sample Designation	Commercial Application	Date	Binder	Approximate Wt. % Asbestos[1]	Spray Gun Type	Operation	Sample Time (Min.)	Airborne Asbestos Concentration (Fibers/cc>5μ)
E - EXTERIOR COATINGS								
M-6	Wall and Roof Spray.	10/4/74	Vinyl latex.	3.7	Air supported.	Operator spraying vertical wall panel.	15	0.0
J-3	"	"	"	2.8	"	"	12	0.2
C-2	"	"	Acrylic latex	0	"	"	8	0.2
M-43	Roof spray.	9/30/74	Acrylic latex.	0.7	Airless.	Operator spraying downward onto a large roof.	28	0.0
M-49	"	"	"	0.7	"	"	14	0.0

(1) Based on total formulation as sprayed.

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II. Water-Based Systems with Latex Binders

Binders:

Type: Vinyl latex, acrylic latex, vinyl-acrylic latex, or equivalent.

Content: Polymer content of 10-20% by weight as sprayed.

Main Uses: Exterior coatings for buildings and mobil homes, including roofs.

Asbestos Range: Up to 4% by weight of the total formulation as sprayed.

Supporting Data: Table II.

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TABLE III

RESIN-BASED SYSTEMS

Sample Designation	Commercial Application	Date	Binder	Approx. Waste Wt. % Asbestos (1)	Spray Gun Type	Operation	Sample Time (Min.)	Asbestos Airborne Concentration (Fibers/cc)
I - POLYESTER RESINS								
A. General Purpose Laminating Resins								
59	Boat manufacture.	12/7/72	General purpose laminating resin.	0.5	Air-supported chopper.	Operator spraying molds with resin & chopped glass.	24	0.6
L-13	"	10/31/74	"	0.5	"	Operator spraying resin & chopped fiber glass. (Includes roll-out time.)	16	0.1
M-28	"	"	"	0.5	"	Operator spraying resin & chopped fiber glass.	5	0.4
M-30	"	"	"	0.5	"	Operator spraying resin & chopped fiber glass.	4	0.4
M-34	"	10/8/74	"	0.5	"	Operator spraying mold with resin. (No glass.)	55	0
M-40	"	"	"	0.5	"	"	53	0.03
I-12	"	"	"	0.5	"	"	35	0.1
B. Chemical Resistant Resins								
J-21	Fiber-glass pipe manufacture.	8/13/74	Chemical resistant resin.	1.4	Airless.	Operator adjacent to automatic spray machine coating 28' mandrels.	23	0.1
M-26	"	"	"	1.4	"	Operator wiping mandrels. In area near spraying.	14	0.4
J-5	Ship coating.	10/3/74	Chemical resistant resin + chopped fiber glass.	0.7	Air-supported wand.	Roll-out man. In spraying area about 1/4 of time.	65	0.4
J-7	"	"	"	0.7	"	Operator spraying ship hull in dry dock.	41	0.4
M-28	"	"	"	0.7	"	"	23	0

(1) Based on total formulation as sprayed.

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TABLE III (continued)

RESIN BASED SYSTEMS

Sample Designation	Commercial Application	Date	Binder	Approx.(1) Grate Wt. % Asbestos	Spray Gun Type	Operation	Sample Time (Min.)	Asbest Airbo Concent (Fibers/c
II - EPOXY RESINS								
A. Filled Epoxy								
K-8	Ship coating.	10/2/74	Epoxy primer.	1.5	Airless.	Operator spraying outside & under a ship.	33	0.2
K-10	"	"	"	1.5	"	"	8	0.2
M-10	"	"	High build epoxy.	0	Air supported.	Operator spraying side of ship from scaffold.	31	0.1
I-27	"	"	"	0	"	"	14	0.3
J-1	"	"	"	0	"	"	60	0.0
B. Epoxy - Coal Tar								
M-45	Coating dry dock.	10/1/74	Epoxy Coal-tar, solvent.	1	Airless.	Operator spraying side of dry dock from suspended platform.	11	0.2
M-1	"	"	"	1	"	Operator spraying side of dry dock from fixed scaffold.	38	0
K-3	Coating pipe interiors.	"	"	1	Air-supported wand.	Operator spraying interior of 3", 6" and 12" diameter pipe.	37	0.1
III - ALKYD RESIN PAINT								
M-7	Painting building exterior.	10/6/74	Alkyd resin.	12	Airless gun.	Operator spraying building exterior wall.	9	0
M-15	"	"	"	12	"	"	5	0.0

(1) Based on total formulation as sprayed.

UCC 010908

III. Resin-Based Systems

Binders:

Type: Polyester resins, alkyd resins, epoxy resin alone or in combination with coal tar or equivalent resin.

Content: Range from ~6% in zinc-rich primer to ~49% for heavily filled alkyd to 99^{+} for polyester laminating resins.

Main Uses: Fiber glass reinforced boats, pipes, shower stalls, and similar articles.

Maintenance coatings for steel and concrete.

Intumescent and zinc-rich paint.

Exterior alkyd paints.

Asbestos Range: Up to 12% by weight of the total formulation as sprayed.

Supporting Data: Table III.

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TABLE IV

ASPHALTIC AND COAL-TAR BASED SYSTEMS

Sample Identification	Commercial Application	Date	Binder	Approximate Wt. % Asbestos[1]	Spray Gun Type	Operation	Sample Time (Min.)	Airborne Asbestos Concentration (Fibers/cc)
M-42	Auto undercoating (Sound deadener)	10/74	Cut back asphalt	15	Airless.	Operator spraying on auto body.	7	0.2
M-31	"	"	"	15	"	"	6	1.5
1	Fibrated Roof Coating.	9/25/74	"	8	Air supported.	Operator spraying against vertical steel surface.	-	0.02
2	"	10/11/74	"	8	"	" "	-	0.11
3	"	9/26/74	"	8	Airless	" "	-	0.03
3	"	10/11/74	"	8	"	" "	-	0.07
-	Emulsified asphalt fibrated roof coating.	12/18/74	Steam refined, emulsified asphalt.	3	Air supported	Operator spraying against vertical steel surface.	43	0.16
-	"	"	"	3	Airless	" "	23	0.17

(1) Based on total formulation as sprayed.

UCC 010010

Binders:

Type: Cutback and emulsified asphalt and coal-tar materials or equivalent.

Content: Typically~45%.

Main Uses: Automotive undercoating and sound deadener, roof coatings, foundation coatings.

Asbestos Content: Up to 15%.

Supporting Data: Table IV.

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TABLE V

AIRBORNE ASBESTOS FIBER COUNTS -

GRINDING AND SANDING OF RESIN-BASED SYSTEMS CONTAINING

Sample Designation	Commercial Application	Date	Resin	Asbestos Type	Asbestos Approx. Wt. %	Operation	Sample Time (Min.)	Airborne Asbestos Fiber Concentration (Fibers/cc >5μ)
I. THERMOSET RESIN (Polyester)								
--	Molding furniture parts	3/15/72	Polyester	RG-244	0.05	Operator hand sanding small parts.	45	0.002
--	"	"	"	"	0.05	Operator running power sander with integral hood.	45	0.002
1929-40-4	"	12/6/72	"	"	0.3	Operator sanding and grinding molded parts. Good hood & ventilating system on grinder.	23	0.3
1929-82-3	Fabrication of reinforced fiber glass pipe.	2/27/73	Polyester	RG-144	2-3	Operator pulls pipe along line. Saws off end with circular saw.	19	0.1
1929-82-4	"	"	"	"	2-3	Same operation as 1929-82-3.	49	0.1
1929-82-5	"	"	"	"	2-3	Operator removing end of pipe with scarfing machine.	45	0.04
I-13	"	8/13/74	"	RG-244	1.4	Operator shaping end of pipe with bell & spigot machine.	16	0.3
I-6	"	"	"	"	1.4	Operator cutting off pipe end and light grinding on exterior surface.	17	0.2
I-26	Fabrication of FRP tanks and pipe.	8/13/74	Polyester	RG-244	1.5	Operator grinding inside of 13' I.D. x 26' tank.	18	0.4
I-8	"	"	"	"	1.5	Continuation of same operation as I-25.	5	0.3
I-39	"	"	"	"	1.5	Operator grinding edges of miscellaneous small parts.	25	0.3
1929-84-4	Production of artificial bricks.	3/8/73	Polyester	RG-244	2.0	Operator cutting with sabre saw.	44	0.1
1929-84-5	"	"	"	"	2.0	Operator trimming with sabre saw.	39	0.2
B-20	Production of fiber glass boats.	11/26/74	Polyester	RG-244	0.5	Operator grinding inside of boat hull.	11	0.0
B-25	"	"	"	"	0.5	Operator grinding.	4	0.0

UCC 010012

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UCC 010013

TABLE VI

AIRBORNE ASBESTOS FIBER COUNTS

GRINDING OF RESIN PLAQUES CONTAINING ASBESTOS IN A SMALL (8'x8'x8.5') CLOSED ROOM

Plaque Composition							Airborne Asbestos Fiber Concentration (fibers/cc >5μ)		
Resin		Chrysotile		Fiber Glass	Sisal	Limestone	During Grind (7 Min.)		After Grind (90 Min.)
Type	Wt. %	Type	Wt. %	Wt. %	Wt. %	Wt. %	Operator Personal Sample	Sample from 5 Ft. Level Room Corner	Sample from 5 Ft. Level Room Corner
Polyester	79.2	RG-244	0.8	20.0	-	-	0.0	0.0	0.0
Polyester	99.2	RG-244	0.8	-	-	-	0.0	0.0	0.0
Polyester	98.0	RG-244	2.0	-	-	-	0.0	0.2	0.01
Polyester	96.0	RG-244	4.0	-	-	-	0.7	1.2	0.01
Epoxy	76.0	RG-144	4.0	20.0	-	-	0.2	0.2	0.05
Polyester	35.0	RG-110	5.0	10.0	10.0	40.0	0.6	1.2	0.02
Polyester	35.0	RG-110	10.0	10.0	10.0	35.0	0.0	0.0	0.0
Polyester	30.0	SG-200	18.0	-	2.0	50.0	0.3	0.9	0.06

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