INTERNAL CORRESPONDENCE

UNION CARBIDE CORPORATION • ONE CALIFORNIA, SAN FRANCISCO, CALIFORNIA 94111

To: Mr. W.C. Thurber
Mining & Metals
38th Floor
New York

Date: February 10, 1975

Originating Dept.: Regional Vice President

Accounting Index data:

Subject:

Dear Bill:

Last week I went to Sacramento and talked with Bob Monagan, president of California Manufacturers Association, concerning the matter of amendments to current asbestos legislation. Monagan, incidentally, was the former speaker of the Assembly in the California legislature and, more recently, was Assistant Secretary of Transportation in the federal government. He is well known and well respected as a legislator and administrator.

I explained the circumstances to Mr. Monagan, and when it came to a question of sponsorship of the bill proposing amendments, he said he saw no reason why the CMA shouldn't sponsor it rather than Union Carbide or the Asbestos Information Association. I indicated to him that we would be happy to provide an expert or experts to testify on this matter if it appeared to be appropriate or advisable, and that all we would need would be sufficient advance notice. I also assured him that we were not seeking any special advantage through this proposed legislation, and that we would have the backing of other members of the asbestos industry so that we should not expect any opposition from that area.

I will let you know as soon as I have heard from him about the action being taken.

Best regards,

NJ Hearn/dp

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PLAINTIFF'S EXHIBIT
UC-4200

UCC 010015

UNION CARBIDE

January 14, 1975

Mr. Norman J. Hearn
Union Carbide Corporation
One California Street
San Francisco, California 94111

Dear Norm:

Further to our conversations on the California Act relating to the spraying of asbestos, I have enclosed for your discussions with CMA a draft letter documenting the technical position of the asbestos industry in this matter and proposed amendments to the recently enacted law requesting additional exemptions based upon demonstrably low levels of airborne asbestos dust.

The information contained in this letter basically represents the position of member companies in the Asbestos Information Association/North America and, therefore, when this matter is formally submitted to the California Legislature it might possibly be under the aegis of AIA. However, I would request that you advise me on the best way to handle this matter.

You may wish to keep Mr. P. J. Gartly of Johns-Manville's San Francisco office apprised on this matter. He is quite familiar with the background on initial legislation.

If you need anything further, please let me know.

Very truly yours,

W. C. Thurber

WCT/es
Enclosure

bcc: Mr. R. H. Mereness
Dr. H. B. Rhodes

P. S. You may also wish to get in touch with Wilson [illegible]
Flintcote, Los Angeles (213-583-3011). He was [illegible]
exemption on cold cut back asphalt added [illegible]

UCC 010016

Draft - January 8, 1975

Gentlemen:

Reference is made to California Senate Bill No. 2419 which was passed into law on September 26, 1974. This act, which is added to Chapter 10.3 commencing with Section 25910 of the Health and Safety Code, prohibits the spraying of any substance containing any amount of asbestos after July 1, 1976, in or upon any building or other structure during its construction, alteration or repair, with the exception of cold process cutback asphalt roof coatings. In addition to the present statutory exemption of cold cutback asphalt roof coating, we believe that there are other applications which should also be exempted from the statute. These proposed additional exemptions will in no way jeopardize the health of the citizens of California and will, at the same time, protect the employment of workers in the California asbestos and realted industries.

The spraying of asbestos has received substantial publicity as a health hazard, primarily as the result of extensive use of sprayed-on asbestos as a fire proofing and insulation material. Industry has recognized that this practice which involved materials containing 10 to 80% asbestos and little or no permanent binder was hazardous and accordingly it has been discontinued.

However, it is our firm belief that various materials containing small quantities of asbestos can be applied safely by spraying with no significant hazard either to the occupational worker or the general public and further that such spraying can be done in total compliance with Section 5208 of the General Industry Safety Orders for the State of California dealing with asbestos and the EPA National Emission Standards for Hazardous Air Pollutants. Those applications which we propose for exemption generally involve the spraying of paints and coatings where asbestos is a minor but important constituent added to give critical properties to the material. These coatings are applied wet as a slurry or liquid thus precluding the generation of airborne

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asbestos fibers in excess of established California and Federal regulations. Specifically, we would propose that the following additional exemptions be added to the existing statute:

1. Water-based interior texture sprays containing as sprayed a maximum of 3% by weight of chrysotile asbestos and a minimum of 2% by weight of water-soluble starch, soya protein, polyvinyl alcohol, or equivalent binder.
2. Latex-based interior and exterior coatings containing as sprayed a maximum of 5% by weight of chrysotile asbestos and a minimum of 8% by weight of vinyl, acrylic, vinyl-acrylic, or equivalent polymer binder.
3. Resin-based laminating and/or coating materials containing as sprayed a maximum of 12% by weight of chrysotile asbestos and a minimum of 6% by weight of polyester resin, alkyd resin, epoxy resin alone or in combination with coal-tar, or an equivalent resin binder.
4. Asphaltic-based coatings containing as sprayed a maximum of 15% by weight of chrysotile asbestos and a minimum of 40% by weight of cutback asphalt or emulsified asphalt binder.

Supporting data from a variety of representative industrial operations in each class are provided in Tables I - IV. These data indicate that in no instance does the airborne concentration of asbestos fiber exceed either the time-weighted average or peak concentrations specified in Section 5208 of the General Safety Orders even for the lower level standard to be invoked on July 1, 1976.

Exhibit 1 attached provides additional information relevant to this proposal. This information was excerpted from the Federal Register (v. 38 No. 66, April 6, 1973, p. 8821 - 8822) and is part of the EPA background information included with the promulgated National

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Emission Standards for Hazardous Air Pollutants. This material clearly indicates the undesirability of and enforcement problems associated with an absolute ban on asbestos spraying.

Adding of these exemptions to the present statute will assure the continuing economic viability of those segments of the mining, milling, and formulating industries involved with asbestos while protecting the health of the workers and the general public. We should further note that this proposed amendment is fully supported by the Asbestos Information Association/North America. This organization consists of twenty-two member companies and associations which represent three-quarters of the asbestos mining, milling, manufacturing and importing industries of the United States. The AIA/NA has worked closely with State and Federal agencies to develop sound safety and health regulations for the asbestos and related industries.

We would be pleased to further discuss this proposed amendment to Chapter 10.3 of the Health and Safety Code with you at any time.

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TABLE I

WATER-BASED SYSTEMS

WITH WATER-SOLUBLE BINDERS

Sample Designation	Commercial Application	Date	Binder	Approximate (1) Wt. % Asbestos	Spray Gun Type	Operation	Sample Time (Min.)	Asbestos Airborne Concentration (Fibers/cc >5
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
Z-49	Ceiling spray.	12/4/73	"	1	"	Operator applying ceiling spray to condominium apts.	20	0.5
Z-54	"	"	"	1	"	Operator "wiping" walls after ceiling spray.	24	0.1

(1) Based on total formulation as sprayed.

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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 II

WATER-BASED SYSTEMS

WITH LATEX BINDERS

Sample Designation	Commercial Application	Date	Binder	Approximate[1] Wt. % Asbestos	Spray Gun Type	Operation	Sample Time (Min.)	Airborne Asbestos Concentration (Fibers/cc>5μ)
I - 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.

UCC 010022

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	Approximate Wt. % Asbestos[1]	Spray Gun Type	Operation	Sample Time (Min.)	Asbestos Airborne Concentration (Fibers/cc >5μ)
I - POLYESTER RESINS								
A. General Purpose Laminating Resins								
69	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
N-28	"	"	"	0.5	"	Operator spraying resin & chopped fiber glass.	5	0.4
N-30	"	"	"	0.5	"	Operator spraying resin & chopped fiber glass.	4	0.4
N-34	"	10/8/74	"	0.5	"	Operator spraying mold with resin. (No glass:)	55	0
N-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
H-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	Approximate[1] Wt. % Asbestos	Spray Gun Type	Operation	Sample Time (Min.)	Asbestos Airborne Concentration (Fibers/cc >5
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	0.03
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								
H-7	Painting building exterior	10/6/74	Alkyd resin.	12	Airless gun.	Operator spraying building exterior wall.	9	0
M-35	"	"	"	12	"	"	5	0.06

(1) Based on total formulation as sprayed.

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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) Sd
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
2	Fibrated Roof Coating.	9/26/74	"	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.

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IV. Asphaltic and Coal-Tar Based Systems

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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Federal Register (v. 38 No. 66, April 6, 1973, p. 8821-8822)

The proposed standard would have prohibited the spraying of any material containing asbestos on any portion of a building or structure, prohibited the spraying of any material containing asbestos in an area directly open to the atmosphere, and limited emissions from all other spraying of any material containing asbestos to the amount which would be emitted if specified air-cleaning equipment were used. Comments received pointed out that this standard would: (1) Prohibit the use of materials containing only the trace amounts of asbestos which occur in numerous natural substances, (2) prohibit the use of materials to which very small quantities of asbestos are added in order to enhance their effectiveness, and (3) prohibit the use of materials in which the asbestos is strongly bound and which would not generate particulate asbestos emissions. The promulgated standard applies to those uses of spray-on asbestos materials which could generate major emissions of particulate asbestos material. For those spray-on materials used to insulate or fireproof buildings, structures, pipes, and conduits, the standard limits the asbestos content to no more than 1 percent. Materials currently used contain from 10- to 80-percent asbestos. The intent of the 1-percent limit is to ban the use of materials which contain significant quantities of asbestos, but to allow the use of materials which would: (1) Contain trace amounts of asbestos which occur in numerous natural substances, and (2) include very small quantities of asbestos (less than 1 percent) added to enhance the material's effectiveness. Although a standardized reference method has not been developed to quantitatively determine the content of asbestos in a material, there are acceptable methods available, based on electron microscopy, which independent laboratories have developed. Determining the asbestos content of a material with these methods costs approximately $300, and the results are accurate within plus or minus 50 percent; these limits on accuracy were taken into account in establishing the 1-percent limitation.

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UNION CARBIDE CORPORATION
270 PARK AVENUE, NEW YORK, N.Y. 10017
LAW DEPARTMENT

January 14, 1975

W.C. Thurber
Mining & Metals
38th floor

Re: Mining & Metals
California Act relating
to the spraying of asbestos

Enclosed is the proposed change to the California Health & Safety Code, which I promised to send to you today.

If you have any questions, please do not hesitate to call.

Very truly yours,

Victor J. Zupa

VJZ/smm
Encl.

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Caldria ASBESTOS
UNION CARBIDE CORPORATION • MINING & METALS DIVISION • P.O. BOX 579 • NIAGARA FALLS, N. Y. 14302 • TEL: 716-278-3376

UNION CARBIDE
THE DISCOVERY COMPANY

December 5, 1974

Mr. R. H. Mereness
Executive Director
Asbestos Information Association/NA
1660 L Street, N.W.
Suite 610
Washington, D.C. 20036

Dear Bob:

As agreed at our recent meeting, the spraying data to serve as the basis for proposed amendments to the Marks Bill have been compiled into four broad categories and are attached. Bill Mortonson is planning to supplement his information with some data on emulsified asphalt-based materials and a spot has been left in Table IV to add this when you receive it. The Johns-Manville account, Riverside Cement, has not provided their data and, at Ed Fenner's suggestion, we have not included their end use. It would not be difficult to add a category, "Water-Based Systems with Cement Binder" if they should come through with the information.

The data have been incorporated into a proposed draft of a letter to Senator Marks put together by Bill Thurber. Four exemptions are requested that correspond to the four types of binder systems typified by the data. I did considerable thinking on the selection of the "right" words to define each system as broadly as possible and still have it acceptable and came to the conclusion that this depended largely on what the Senator wants. The definitions shown represent my opinion of definitions which are reasonable and can be defended effectively <u>if</u> this becomes necessary.

In essence, in each case the binder has been described broadly <u>but</u> a <u>minimum</u> binder level is also specified. This is coupled with a maximum asbestos level. Individual end-use categorization has been avoided. Obviously, if discussions with Senator Marks indicate binder and asbestos level specifications are unnecessary, they can be dropped.

Copies of this have been sent to Ed Fenner and Bill Mortonson for their comments and suggestions. It would be appreciated if they would also look at the data carefully to pick up any oversights. When you get the EPA problem temporarily out of the way, let's discuss this further.

Very truly yours,

Harry

H. B. Rhodes
Area Manager
Marketing & Technology

HBR:cjb
Attachments

CC: Messrs. E. M. Fenner
W. H. Mortonson
J. L. Myers
W. C. Thurber✓

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