bcc: R.E. Byrne, Jr.
R.F.X. Fusaro
J.V. Murray
R.L. Schult
W.C. Thurber

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THE DISCOVERY COMPANY

Calidria ASBESTOS

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

PLAINTIFF'S EXHIBIT
UC-533

October 27, 1975

Mr. Robert W. Flugge
Deputy Commissioner
Department of Environmental Quality
95 Franklin Street
Buffalo, NY 14202

Dear Mr. Flugge:

Per our telecon this date enclosed are the attachments which were referenced in my letter to you dated October 23, 1975, but which were inadvertently omitted from the mailing.

I hope this has caused you no inconvenience, please accept my apologies.

Very truly yours,

John L Myers

John L. Myers
Marketing Manager

JLM/ejp
Enc.

cc: Dr. H.B. Rhodes

A08789

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Calidria ASBESTOS

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October 23, 1975

846-7444

Mr. Robert W. Flugge
Deputy Commissioner
Department of Environmental Quality
95 Franklin Street
Buffalo, NY 14202

Dear Mr. Flugge:

This letter and attachments provide the technical supporting information on the spraying of asbestos-containing materials which was mentioned in my comments presented on September 25, 1975, copy enclosed. These comments were directed to the proposed Erie County Air Quality Code, Article III, Title 9, Section B, on Asbestos.

The spraying of asbestos has received substantial publicity as a health hazard, primarily as a result of the extensive use of sprayed-on asbestos as a fire proofing and insulation material. Industry 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 worker or the general public, and further that such spraying can be done in total compliance with the Federal OSHA Health Standard dealing with asbestos and the EPA National Emission Standard for Hazardous Air Pollutants. The subject applications 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 asbestos dust in excess of accepted Federal threshold limits.

Our data were obtained at commercial locations under routine operating conditions. Samples were collected in the breathing zone of the operator during active spraying procedures and do not include breaks, lunch, and similar non-working conditions. The results thus represent the highest exposure level for each particular operation and the time-weighted average (TWA) during an eight hour shift would be much lower. Environmental exposures outside the work area would be even lower than the TWA due to dilution by other air. All samples were collected on millipore filters and counted at 400x using phase contrast illumination in accordance with Federal OSHA regulations.

The data were obtained at 21 different industrial locations throughout the United States. These or very similar operations are probably practiced to some extent in Erie County.

For convenience, the data are divided into four catergories based on the characteristics of the binder, and are presented in this manner in Tables I through IV. Details of the type and quantity of binder, the main uses, and the asbestos content are supplied with each category. An overall summary is shown below:

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SUMMARY

AIRBORNE ASBESTOS FIBER CONCENTRATIONS

VARIOUS INDUSTRIAL SPRAYING OPERATIONS

Application	Binder Type	Binder % as Sprayed	Asbestos % as Sprayed	Locations Sampled	No. of Samples	Airborne Asbestos Fiber Concentration (Fibers/cc>5μ Range	Average
Wall and Ceiling Interior Texture Sprays	Starch, PVA, Casein etc.	2-4	1-5	7	24	0.0-1.6	0.6
Exterior Wall and Roof Sprays	Vinyl & Acrylic latex	10-20	4 max.	2	5	0.0-0.2	0.1
Resin-Based Coatings (Boat mfg., ship coating, Building maintenance coatings)	Polyester & Epoxy Resins	6-50	12 max.	9	19	0.0-0.6	0.2
Asphaltic Roof and Auto Undercoating	Asphaltic	45	15 max.	3	8	0.03-1.5	0.3
				21	56	0 -1.6	0.4

It is noteworthy that the highest value found was 1.6 fibers/cc > 5 μ and only three out of the 56 samples gave readings higher than 1 fiber/cc. In the three highest cases other values for the same operation were below 1 fiber/cc. The overall average was 0.4 fiber/cc in the breathing zone of the operator performing the spraying.

On this basis we feel that the proposed Erie County ban on the spraying of asbestos or asbestos-containing materials is overly restrictive. In view of this the alternative wording in my presentation is proposed:

> "No person shall cause, suffer, permit, or allow visible emissions of asbestos dust from spraying of asbestos-containing materials used for fireproofing and insulation."

Another alternative would be to modify your wording to exempt certain materials based on our supporting data, as follows:

> "No person shall cause, suffer, permit, or allow surface coating by the spraying of asbestos or asbestos-containing materials, with the exception of water, resin, and asphaltic-based coating and laminating materials applied for decorative and/or maintenance purposes containing, as sprayed, an amount of binder not less than 50% of the weight of the asbestos present and a maximum of 15% by weight of asbestos."

We appreciate the opportunity to comment on your proposed rule-making. Please contact Dr. Rhodes or me if we can be of any assistance in the final development of your standard, or if you require additional information.

Very truly yours,

John L. Myers

John L. Myers
Marketing Manager

JLM/ejp
cc: Dr. H.B. Rhodes

bcc: R.E. Byrne, Jr.
R.F.X. Fusaro
J.V. Murray
R.L. Schult
W.C. Thurber

A08791

PRESENTATION TO

ERIE COUNTY AIR POLLUTION CONTROL DIVISION

September 25, 1975

My name is John L. Myers. I am Marketing Manager for Union Carbide's asbestos products with offices in Niagara Falls, N.Y. I have been involved with Union Carbide's asbestos business since 1966; and, since 1972 when the OSHA (Occupational Safety and Health Administration-Department of Labor) asbestos standards were published, I have also been heavily involved with federal, state, and local regulatory activities concerning asbestos. We presented testimony at the OSHA hearings on the asbestos standard in 1972; and I served as an industry representative on a committee to develop the federal EPA (Environmental Protection Agency) asbestos standards, which were promulgated in 1973. Asbestos standards are now being developed especially for the construction industry and I attended and presented testimony at a two-day hearing in Washington last week.

With me tonight is Dr. H.B. Rhodes, my Technology Manager. One of his main responsibilities is to supervise the air monitoring service which we offer to our customers. Dr. Rhodes is chairman-elect of the technical sub-committee of the Asbestos Information Association and is also actively engaged in the asbestos/health question and regulatory activities. He attended a symposium in England last week on asbestos and health and is preparing an article for publication on the health hazards of asbestos in certain segments of the construction industry. His training in air sampling and analysis was obtained at special courses offered by NIOSH (National Institute for Occupational Safety and Health-Department of Health, Education and Welfare). Dr. Rhodes has also performed extensive air sampling in connection with the use of asbestos in various compounds

A08792

which are sprayed on surfaces. This was done to substantiate our position that relatively low levels of asbestos can be used in many products which, upon spraying, do not cause any significant amount of asbestos dust. At your discretion, we can send this supporting information to you in the next several days.

Union Carbide is engaged in the mining and milling of asbestos fibers at its plant in California, and we market asbestos fibers throughout the world. We supply asbestos as a raw material to compounders or manufacturers of various products, some of which are sprayed. We do not supply asbestos for use in spray fireproofing or insulation materials; and, in fact, neither does anyone else. Asbestos has essentially been eliminated from such products because of the attendant potential hazard to workers and the general public.

Our interest in regulatory actions is to prevent ambiguity and to avoid the promulgation of standards which are difficult or impossible to enforce because of their generality. We want to assist in the development of standards which eliminate or minimize asbestos exposure, but which do not effect an unnecessary prohibition against the general use of asbestos, especially in products which present no ultimate hazard to the general public. Following are some excerpted quotes from a 1971 report of the National Research Council: "At present, there is no evidence that the small numbers of fibers found in most members of the general population affect health or longevity....Asbestos is too important in our technology and economy for its essential use to be stopped.... Continued use at minimal risk to the public requires that the major sources of man-made asbestos emission into the atmosphere be defined and controlled." I think you would agree that these comments are closely aligned with mine.

It is my understanding that you are considering legislation with the following wording: "No person shall cause, suffer, permit, or allow surface coating by the spraying of asbestos or asbestos-containing materials." The spraying of asbestos-containing materials has received substantial publicity as a health hazard,

Union Carbide trial exhibit UC-533: John L. Myers to Robert W. Flugge Forwarding Asbestos Spraying Air-Sampling... Published by AsbestosClaims.Law
ACL Doc 15771 · Page 5 of 15 asbestosclaims.law/library/15771/5

primarily as the result of the extensive use of sprayed products for fireproofing and insulation. Industry, government, and health groups have recognized that this practice, which involved materials containing up to 80% asbestos with little or no permanent binder, was hazardous; and it has been discontinued. However, it is our belief, supported by the data previously discussed, that materials containing relatively small quantities of asbestos and suitable binders can be sprayed safely and in compliance with existing federal standards.

We are strongly in favor of legislation which would prohibit the spraying of asbestos-containing materials for fireproofing and insulation which generate visible dust emissions hazardous to the public environment. However, the wording which you have proposed would inadvertently prohibit the spraying of asbestos-containing materials even though they generate no asbestos dust. These applications would include automobile undercoating, roof coating, textured paints, airplane de-icing, and many others which would adversely affect activities involving thousands of jobs in Erie County.

We therefore propose the following revised wording for your legislation:

> "No person shall cause, suffer, permit, or allow visible emissions of asbestos dust from the spraying of asbestos-containing materials used for fireproofing and insulation."

We are confident that the above wording will accomplish your purpose, and ours; and that the safety and health of the general public will not be compromised or impaired by this revision.

Thank you for your time and attention.

John L. Myers
Union Carbide Corporation
Metals Division

A08794

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.

A08795

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
M-3	Ceiling spray.	10/3/74	"	1	"	Operator applying ceiling spray to home.	19	0.5
M-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.

A08796

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.

A08797

TABLE II

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)
I - EXTERIOR COATINGS								
H-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
H-43	Roof spray.	9/30/74	Acrylic latex.	0.7	Airless.	Operator spraying downward onto a large roof.	28	0.0
H-49	"	"	"	0.7	"	"	14	0.0

(1) Based on total formulation as sprayed.

A08798

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.

A08799

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 & cnopped 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.

A08800

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)
II - EPOXY RESINS								
A. Filled Epoxy								
K-9	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								
M-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.

A08801

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.

A08802

TABLE IV

ASPHALTIC AND COAL-TAR BASED SYSTEMS

Sample Identification	Commercial Application	Date	Binder	Approx-imate (1) Wt. % Asbestos	Spray Gun Type	Operation	Sample Time (Min.)	Airborne Asbestos Concentration (Fibers/cc) 5μ
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.

A08803