PLAINTIFF'S EXHIBIT UC-459

INTERNAL CORRESPONDENCE

UNION CARBIDE CORPORATION

270 PARK AVENUE, NEW YORK, NEW YORK 10017

To (Name) Mr. C. E. Frankenberger
Division Linde Division
Location Speedway Factory
Floor Number 4801 West 16th Street
Indianapolis, Indiana 46224

Date November 23, 1976
Originating Dept. Industrial Hygiene
Floor Number

Copy to Mr. P. J. Burtis
Mr. S. E. Hine
Mr. R. M. Neary
Mr. J. B. Browning
Mr. T. W. Carmody
Dr. J. J. Welsh/Dr. A. D. Gullett
Mr. P. W. McDaniel

Answering letter date

Subject Industrial Hygiene Survey
8/26/76 and 10/5/76

BUSINESS CONFIDENTIAL

Dear Mr. Frankenberger:

An industrial hygiene survey was conducted at the Speedway Factory by Mr. L. J. LaFrance and me on August 26 and on October 5, 1976. All areas of the plant were inspected visually, and one air sample was taken for asbestos during the shredding operation. Settled dust samples were also taken for free silica analysis in the Slurry Mixing Room and Power House; the lateness of this report is due to unanticipated difficulties in having the silica analyses performed at Kettering Laboratory.

FINDINGS AND OBSERVATIONS

In addition to the one sample collected for asbestos during our survey, we also counted sixteen additional samples taken by Mr. L. A. Pollert during August and September. The results are found in attached Table I. Asbestos exposures in the shredder room during charging are near or above the proposed OSHA "Ceiling" limit of five fibers per cc. Samples taken for asbestos in other plant areas were within both the present 2 fibre/cc. standard and the proposed

A21642

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0.5 fibre/cc. standard for an eight-hour, time-weighed average exposure to asbestos.

During our visit of 8/26, the asbestos charging bin was under positive pressure when the shredder was operating, and asbestos was blowing our through leaks in the bin enclosure. Corrective maintenance had been done on the bin enclosure by our return visit of 10/5, but housekeeping in this area was still poor for asbestos usage. All loose asbestos should be cleaned by vacuuming, and no partially-filled bags of asbestos should be left in the area.

Housekeeping in the Slurry Mixing Room was generally poor, with extensive caking of dried slurry mix on equipment and work areas. A sample of settled dust taken from the mixer platform yielded 16% quartz (free crystalline silica) in this dust (Table II). Such a high percentage of silcia lowers the TLV for dust exposure in this area to only 0.5mg/M^3 of respirable particulate. Since this silica-containing dust can be re-entrained into the air from the dried slurry mix, this area should be kept clean and free of such material.

A sample of settled coal dust in the Power House yielded 4% quartz; for coal dust of less than 5% quartz, the TLV is 2.4 mg/M^3 of respirable particulate.

Solvent vapor was, subjectively, adequately controlled in the Spray Painting area during our visits, but weather was pleasant, and doors and windows wide open. The lack of supplied make-up air during cold weather will diminish the effectiveness of local exhaust ventilation, however. We understand that such a make-up system is

A21643

being installed, and should increase ventilation effectiveness significiently. This is especially important if you continue to use paints containing methyl n-butyl ketone (MBK) as a solvent. This substance has been found to cause peripheral neuropathy, a nervous system disorder, in man, and ACGIH has proposed establishing a TLV of 25 ppm for MBK. To achieve compliance with this standard in a spray painting operation, good local exhaust ventilation is essential.

Discussions were held with Messrs. Hine and Pollert on future air sampling needs and techniques, and arrangement for analytical work where required. We thank you for the fine cooperation of all partied involved, and if we can be of further assistance, please advise.

Very truly yours,

L. R. Andrews
Industrial Hygienist

LRA:nl
Enc.

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UNION CARBIDE CORPORATION
Linde Division
Speedway Factory
Indianapolis, Indiana

TABLE I - ASBESTOS

Location	Concentration, Fibres >5u/cc	Remarks
Dept. 511, operator drilling fuse plug wells	< 0.1	Personal Sample, 8/17/76, A.M. Total time: 0:20
Repeat of above sample	< 0.1	Personal Sample, 8/17/76, A.M. Total time: 0:20
Machine Shop, operator cutting cylinders open	< 0.1	Personal Sample, 8/4/76, P.M. Total time: 0:23
Machine Shop, operator cutting blocks of filler	0.2	Personal Sample, 8/4/76, P.M. Total time: 0:15
Lance-out Room	< 0.1	General Area Sample, 8/25/76, A.M. Total time: 0:25 Good general ventilation
Asbestors shredder room, charging asbestos into shredder	5.8	Personal Sample, 8/26/76, A.M. Total time: 0:13
Asbestos shredder room, blower operating	2.3	Personal sample, 9/21/76, P.M. Total time: 0:14
Asbestos shredder room, blower operating	6.6	General Area sample, 9/27/76, P.M. Total time: 0:21 Leak in blower line.
Top of asbestos mixing tank	0.2	General Area sample, 9/30/76, P.M. Total time: 0:12
Operator drilling valve wells	0.5	Personal sample, 9/16/76, P.M. Total time: 0:08
Top clearance inspection station, undercutting WTLS and WS skids	0.1	Personal sample, 9/16/76, P.M. Total time: 0:17 Very dusty

A21645

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TABLE I - ASBESTOS

General area - Dept. 511	0.1	General Area sample, 8/25/76, A.M. Total time: 0:30
Vicinity of Power Cabinet	0.1	General Area sample, 9/7/76, A.M. Total time: 0:30
Warehouse, in asbestos storage area	0.1	General Area sample, 9/16/76, A.M. Total time: 0:20 Little activity
Small metal blast building, blasting WTL's	0.1	General Area sample, 9/9/76, P.M. Total time: 0:18
Drilling fuse plug wells - rehabs	0.1	Personal sample, 9/10/76, A.M. Total time: 0:14
Brushing valve wells and installing valves	0.1	Personal sample, 9/10/76, A.M. Total time: 0:25

The Threshold Limit Value for asbestos is two fibres, longer than 5μ, per cc of air for an eight-hour, time-weighted average exposure, and ten fibres, longer than 5μ, per cc of air as a "Ceiling" limit, not to be exceeded at any time (29 CFR 1910,1001; 1976).

OSHA has proposed that the eight-hour, time-weighted average exposure standard for asbestos be lowered to one-half fibre, longer than 5μ, per cc of air, and that the "Ceiling" limit be lowered to five fibres, longer than 5μ, per cc.

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TABLE II - FREE CRYSTALLINE SILICA

Location	α-Quartz	Cristobalite	Tridymite
Settled dust sample from area of Mixing Tank	16%	absent	absent
Settled dust sample from Power House	4%	absent	absent

The Threshold Limit Value for particulates in the Mixing Room, based upon the percentage of free crystalline silica, is 0.5 mg/M^3 of respirable particulates for an eight-hour, time-weighted average exposure.

The Threshold Limit Value for coal dust (respirable fraction less than 5% SiO_2) is 2.4 mg/M^3 of respirable particulates for an eight-hour, time weighted average exposure.

Source: 29CFR 1910.1000, Table Z-3; 1975.

A21647