

UNION CARBIDE CORPORATION
Chemicals and Plastics

Texas City, Texas

To: Mr. M. E. Eisenhour
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Mr. R. L. Frantz
Dr. D. H. Glenn
Mr. J. L. Hockersmith
Mr. D. R. Hutchinson
Mr. J. B. Leverton
Dr. D. R. Montgomery
Mr. K. E. Ross
Mr. R. W. Sesler
Mr. W. R. van der Hoeven

February 7, 1975

Subject: VCM Perimeter Survey - November 11-15, 1974

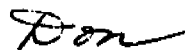
Gentlemen:

For your information, attached are the results of a carbon tube study of vinyl chloride dispersions downwind of production facilities November 11-15, 1974. This was an effort to assist in defining "action level" areas (above 0.5 ppm) and "regulated areas" (above permissible levels).

Operating parameters at the time included venting high pressure streams to the air. Widespread elevated levels reflect this. (See red circled sampling points on map.)

New data taken with vent streams fed to Building 11 boilers will be forthcoming. Hopefully, the magnitude of dispersion will be significantly reduced.

Very truly yours,



D. E. Deese
Industrial Hygiene Director

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Attachments

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034003

VINYL CHLORIDE PERIMETER SURVEY

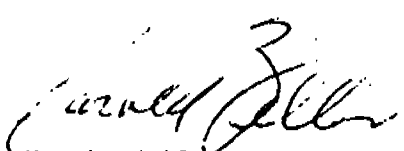
A survey was conducted by the Industrial Hygiene group in an effort to establish a 1.0 ppm and 0.5 ppm vinyl chloride concentration level at the perimeter of the polyvinyl chloride manufacturing area.

This activity was carried out during the week of November 11, 1974 and November 15, 1974 at which time the units were operating normally. The data gathered in the survey will be used to establish tentative boundaries for the regulated area around our polyvinyl chloride facilities and required by federal regulations. Since the time of this survey several vents emitting significant amounts of vinyl chloride monomer to the atmosphere are now being burned and further study will be required to establish permanent boundaries.

The sampling strategy and analytical technique were considered very carefully since this is the first time a project of this type has been attempted in the Plant. It was decided to use the Century organic vapor analyzer to get a rough estimate of the concentration levels. The Miran portable gas analyzer operated from a 12 volt battery with converter was used to make the necessary qualitative determinations. A van was rented for the week to house the equipment used and conduct the survey.

Carbon tube samples were taken and analyzed by the A.I.D. chromatograph in the laboratory. This is the primary method currently recommended by OSHA.

The attached map and carbon tube analyses data table indicate the perimeter for the 1.0 and 0.5 ppm levels. Although the numbers may appear startling at first, reduced emission from the units since the survey should decrease the radius of this perimeter considerably.



Harold Zeller

February 5, 1975

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VCM PERIMETER DATA
(CARBON TUBE ANALYSES)

DATE	SAMPLE		PPM VCM	WIND	
	Point	Time-Min.		DIRECTION	VELOCITY MPH
11-11-74	1	*	2.20	NW	10-15
11-11-74	2	*	0.28	NW	10-15
11-11-74	3	*	0.22	NW	10-15
11-11-74	4	*	0.14	NW	10-15
11-11-74	5	*	0.22	NW	10-15
11-11-74	6	*	0.18	NW	10-15
11-12-74	7	*	0.36	NW	10-26
11-12-74	8	*	0.22	NW	10-26
11-12-74	9	*	0.20	NW	5-10
11-12-74	10	*	0.40	NW	5-10
11-12-74	11	*	0.30	NW	5-10
11-13-74	12	*	0.70	SW	3-7
11-13-74	13	*	0.20	SW	3-7
11-13-74	14	161	0.50	SW	3-7
11-13-74	15	161	0.20	SW	10-20
11-13-74	16	*	3.10	SW	10-20
11-14-74	17	*	2.00	SW	5-12
11-14-74	18	*	0.40	N	10-15
11-15-74	19	232	0.60	N	18-20
11-15-74	20	124	0.04	ENE	18-20
11-15-74	21	*	0.60	ENE	18-20
11-15-74	22	*	0.40	ENE	18-20
11-15-74	23	*	1.30	ENE	18-20
11-15-74	24	20	1.80	ENE	20-30
11-15-74	25	20	1.50	ENE	20-30

* 15 Minutes.

Harold Zeller
February 5, 1975

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