

TO	SEE DISTRIBUTION	FIELD POINT OR DEPT. & BLDG. NO.	DATE YOUR LETTER
FROM	STEPHEN E. WILLIAMS	ALTC B/418	10-13-87
SUBJECT			

MONITORING RESULTS ON CHLORIDE MONOMER (VCM)

During the months of May, August, and September, sixty-one VCM readings were taken in Building 413 (Laboratory Areas), 414 (Process Area), 417 (Hydrin Area), and 416 (Laboratory Areas), to check the employees' exposure levels to VCM.

The Vinyl Chloride OSHA Standard 1910.1017 states that the Permissible Exposure Limit for employees shall not be exposed to vinyl chloride at concentrations greater than 1ppm averaged over an 8-hour period nor at concentrations greater than 5ppm averaged over 15 minutes. Also, no employee may be exposed to vinyl chloride by direct contact with liquid vinyl chloride. It has been stated before that engineering and process changes have and will continue to be made to reduce exposure to VCM to the lowest practicable level.

The Sampling results were obtained by means of a Mini Monitor called a Reiszner Badge. The Reiszner Badge is two inches in diameter and a quarter inch thick. The badge weights 35 grams and contains 1.35-gram loadings of the Reiszner activated coconut-based charcoal to collect the VCM.

The badge is easily placed near the breathing zone without restricting the movements of the wearer.

The VCM analysis was performed in the Brecksville Department 8506 Lab.

The data obtained is summarized in Table I.



Stephen E. Williams

DISTRIBUTION

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TABLE I

PROCESS WORKERS, PROCESS FOREMEN, VCM LAB PERSONNEL AND
TECHNICAL PEOPLE-LINE GROUP IN BUILDINGS 413,414,416

<u>DATE</u>	<u>PERSONNEL & SHIFT</u>	<u>AREA</u>	<u>EXPOSED SAMPLE TIME (MIN)</u>	<u>PERSONAL PROTECTIVE EQUIPMENT</u>	<u>PPM</u>
5/7/87		Bldg. 416 Analytical Lab	360	-	< 0.25
8/12/87		Bldg. 414 Estane Pilot Plant-1st Floor	420	-	< 0.25
8/12/87		Bldg. 414 Estane Pilot Plant-1st Floor	420	-	< 0.25
8/12/87		Bldg. 414 Estane Pilot Plant-1st Floor	420	-	< 0.25
8/12/87		Bldg. 414 Bowen Dryer 3rd Floor	420	-	< 0.25
8/13/87		Bldg. 414 15&30 Gals. 3rd Floor	660	-	0.60
8/13/87		Bldg. 414 15&30 Gals. 3rd Floor	660	-	0.94
8/24/87		Bldg. 414 15&30 Gals. 3rd Floor	660	-	1.59
8/26/87		Bldg. 414 15&30 Gals 3rd Floor	660	-	0.52
8/13/87		Bldg. 414 55 Liters 2nd Floor	660	-	< 0.25
8/13/87		Bldg. 414 55 Liters 2nd Floor	660	-	0.29

REDACTED

<u>DATE</u>	<u>PERSONNEL & SHIFT</u>	<u>AREA</u>	<u>EXPOSED SAMPLE TIME (MIN)</u>	<u>PERSONAL PROTECTIVE EQUIPMENT</u>	<u>PPM</u>
8/24/87		Bldg. 414 55 Liters 2nd Floor	660	Wore a $\frac{1}{2}$ mask, <0.25 air supplied (Bad build-up- Poly #1 cleaned out)	
8/26/87		Bldg. 414 55 Liters 2nd Floor	660	-	0.50
8/13/87		Process Foreman Throughout The Plant	660	-	< 0.25
8/19/87		g Process Foreman Throughout The Plant	420	-	< 0.25
8/13/87		Bldg. 413 3-Liters Lab #13	420	-	< 0.25
8/19/87		Bldg. 413 3-Liters Lab #13	420	-	< 0.25
8/27/87		Bldg. 413 3-Liters Lab #13	420	-	1.36
9/22/87		Bldg. 413 3-Liters Lab #13	420	-	0.60
8/13/87		Bldg. 413 Lab #13 & Office Area	420	-	< 0.25
8/13/87		Bldg. 413 Lab #13 & #14	420	-	< 0.25
8/13/87		Bldg. 413 Lab #11 Testing Resin	420	-	< 0.25
8/13/87		Bldg. 413 Lab. Rm. 202	420	-	< 0.25
8/13/87		tian Bldg. 413 Lab. Rm. 202	420	-	< 0.25

REDACTED

<u>DATE</u>	<u>PERSONNEL & SHIFT</u>	<u>AREA</u>	<u>EXPOSED SAMPLE TIME (MIN)</u>	<u>PERSONAL PROTECTIVE EQUIPMENT</u>	<u>PPM</u>
8/19/87		Bldg. 413 & 414 (Mass Pilot Plant- 2nd Floor)	420	-	0.27
8/19/87		Bldg. 413 & 426	420	-	< 0.25
8/24/87		Bldg. 413 Suspension Special Projects	420	-	< 0.25
8/26/87		Bldg. 413-Lab & 426 (Milling)	420	-	< 0.25
8/13/87	REDACTED	1 Bldg. 414 2nd Floor CPVC	420	-	< 0.25
8/13/87		Bldg. 414 1st Floor Making PVC RX Coating	420	-	< 0.25
8/13/87		2 Bldg. 416 PVC Latex Colloidal Lab.	420	-	0.76
9/8/87		p Bldg. 416 PVC Latex Colloidal Lab	420	-	< 0.25

MAINTENANCE PERSONNEL SEMI-ASSIGNED IN BUILDINGS 414 & 417

<u>DATE</u>	<u>PERSONNEL & SHIFT</u>	<u>AREA</u>	<u>EXPOSED SAMPLE TIME (MIN)</u>	<u>PERSONAL PROTECTIVE EQUIPMENT</u>	<u>PPM</u>
8/25/87		ski Bldg. 414 & 426 Pipefitter	420	-	< 0.25
8/25/87		Bldg. 417 Screening Rm. Pipefitter	420	-	< 0.25
8/25/87		les Bldg. 417 & 424 Pipefitter (Welder)	420	-	< 0.25
8/25/87		r Bldg. 417 Screening Rm-Pipefitter	420	-	< 0.25
8/25/87		Bldg. 414 1st & 2nd Floors Electrician	420	-	< 0.25
8/25/87		Bldg. 417 Screening Rm. Electrician	420	-	< 0.25
8/25/87		1 Bldg. 414 2nd & 3rd Floors Instrumentation	420	-	< 0.25
8/26/87		Bldg. 414 Hydrin Pilot Plant Pipefitter	420	-	< 0.25
8/26/87		aski Bldg. 414 Estane Area Pipefitter	420	-	< 0.25

REDACTED

Period of Time Covered:

11/5/87 - 02/27/88

Key to the Streams

1. Over SA Poly filter box
2. Over BD tank
3. B/414 by VCM pump
4. Over D Poly
5. By VCM recovery system
6. Over latex loop reactor
7. By 55 liter reactors
8. By dispersion reactors
9. Mass polymerization area
10. By Bowen dryer

SEE DISTRIBUTION

STEVE WILLIAMS ALTC/418 July 27, 1988

MONITORING RESULTS ON VINYL CHLORIDE MONOMER (VCM)

SUMMARY

Fifteen of twenty samples for VCM were below 0.5 ppm the "Action Level." Two samples were above 0.5 ppm, the "Action Level." Three samples were over the 8 hour TUV of 1.0 ppm.

DISCUSSION

On May 25, 26, 27, and June 1, 2, 3, 29, 1988, twenty personal samples were taken in Building 414, second floor, SA-Poly Area and the 55 liters; third floor, Dispersion Pilot Plant, Bowen Dryer, the 55 liter Pilot Plant and Building 413, Lab #13, 3-liters to check the operators exposure levels to VCM.

The Vinyl Chloride OSHA Standard 1910.1017 states that the Permissible Exposure Limit for employees shall not be exposed to vinyl chloride at concentrations greater than 1 ppm averaged over an 8-hour period nor at concentrations greater than 5 ppm averaged over 15 minutes. Also, no employee may be exposed to vinyl chloride by direct contact with liquid vinyl chloride.

The sampling results were obtained by means of a Mini Monitor called a Reiszner Badge. The Reiszner Badge is two inches in diameter and a quarter inch thick. The badge weighs 35 grams and contains 1.35-gram loadings of the Reiszner activated coconut-based charcoal to collect the VCM. The badge is easily placed near the breathing zone without restricting the movements of the wearer.

In the past three months the Supervisors for Building 414 have talked to their operators (Old & New) regarding the VCL exposures and exposures readings which have been higher on an average than they used to be, which is not acceptable to operate any Pilot Plant and/or Process Operation.

An effort was made by the Supervisors to address the problem to their operators, and to find solutions for this problem. A copy of the SOP Procedures regarding Company Policy on VCL was thoroughly reviewed and discussed with the Supervisor's personnel.

There has been a turn-over in Building 414 of new employees and old employees being retrained, transferred and trained on Pilot Plant Projects and Process Operations. A few meetings were over 1 ppm, but the learning experience from the mistakes and the guidance from the Supervisors and Veteran operators have improved the operator's efforts in improving their performance level and their work procedures.

1 Do VCM analysis was performed in the Brookville Department 8506 Lab.

The attached data sheets show the results.

David Williams

DISTRIBUTION

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