

12/92



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TO: PAUL WRIGHT

BLDG #: 2030

FROM: Bruce Heidze FAX #: 638-9564

BLDG #: 3502 FAX #: 384-8001 EXT. _____

4/92
Dow Stock Code 3572871

PAUL,

THE ATTACHED PAGES WERE TAKEN FROM A DRAFT REPORT PUT TOGETHER BY THE ETHANOLAMINES PLANT HERE IN THE LOUISIANA DIVISION. IF THERE ARE ANY QUESTIONS OR NEED FOR SOMETHING ELSE TO BE DONE PLEASE CONTACT ME (504) 384-1817.

Bruce Heidze

DO 074030
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3. Ethanolamines:

In 1990 and 1991, personal and area type sampling was conducted to determine airborne concentrations of monoethanolamine (MEA), Diethanolamine (DEA), and Triethanolamine (TEA) during various job tasks and process operations. The personal type sampling results for MEA, DEA, and TEA ranged from N.D. (0.01 ppm) to 231 ppm, from N.D. to 16 ppm, and from N.D. to 28 ppm, respectively. The high results for all their compounds were obtained from a sample taken during the loading of an monoethanolamine tank car. The validity of this sample is questionable since the high purity MEA produced contains no TEA, and the MEA and DEA levels reported are high compared to previous results, and to reach 231 ppm DEA in a 29 minute sample would almost certainly require liquid contact. A personal 8- hour TWA type sample of this same job produced none detected (N.D.) results for all three compounds.

Two excursion type area samples were collected in 1990 during the loading of MEA tank cars. The location of the pumps and tubes for each sampling were selected to provide "worse case" downwind, in close proximity to the open dome data. The airborne levels of MEA for these two samples were 25 ppm and 7.3 ppm. These results were significantly less than the 231 ppm personal sample taken in 1991.

4. Noise:

In 1991, an area noise survey was completed. Results of that survey showed that the high noise level areas in the block are the drumming line (95-105 dB(A)), due to noise of short term duration associated with the operation of an impact wrench. The tank car loading rack (97 dB(A)) during the use of an impact wrench, and the C-550 compressor area (98 dB(A)). The high noise areas were checked for warning signs. Drumming line and tank car rack procedures were changed reflecting the higher noise readings. Operators are required to wear hearing protection while using impact wrenches.

5. The laboratory fume hoods were surveyed in 1991 for face velocity measurements and smoke capturing performance. Both hoods, the north and the south, met the requirements of a "B" classification with restricted sash openings of 18".
6. During 1990 and 1991, personnel received training on respiratory protection, hazardous chemical loading/unloading and Hazcom.
7. During 1991, the annual asbestos maintenance program was conducted. All asbestos in the block was examined for damage and proper labeling. Problem areas were documented and repairs were made by trained asbestos abatement personnel. Where possible, non-asbestos material was substituted for asbestos during maintenance related activities.

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TABLE: 3 Results of Employees' Time-Weighted Average(TWA) Exposure and Area Monitoring Simulating Breathing Zone Height for Airborne Concentrations of Ethanolamines at the Louisiana Division Ethanolamines/Glycol Ethers Plant, Plaquemine, Louisiana, During 1990 and 1991

MASTER NO.	JOB ASSIGN.	DATE	TIME(MIN.)	MEA	CONCENTRATION,ppm(v/v)		COMMENTS
					DEA	TEA	
PERSONAL SAMPLES							
436-21-3474	Contract	08/01/91	450	N.D.	N.D.	N.D.	Drumming
434283	OS	06/19/91	480	N.D. (0.02)	N.D.	N.D.	T/C Loading
242215	OS	02/27/91	29	231	16	28	T/C Loading
095295	SOT	02/18/91	420	N.D. (0.01)			Drumming
436-21-3474	Contract	02/01/91	480	5.8			Drumming
96074	OS	01/11/90	15	N.D. (0.44)			Sampling Amines
							Feed Filter
434283	OS	12/12/90	510	N.D. (0.02)			Drumming
AREA SAMPLES							
		05/04/90	35	25			Loading T/C
		02/03/90	40	7.3			Loading T/C

Industrial Hygiene Exposure Guideline

ACGIH TLV 8 Hr. TWA

ACGIH TLV STEL

OSHA PEL 8 Hr. TWA

Dow IHG 8 Hr. TWA

* 10 ppm Proposed for 1992

N.E.- None Established

BLQ- Detectable amount but below the analytical limit of quantitation for the survey sampling conditions.

ND- None detected with the analytical limit of quantitation noted in parenthesis.

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N.E.*

1990 & 1991

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