



File
DOW CHEMICAL U.S.A.

March 7, 1975

LOUISIANA DIVISION
PLAQUEMINE, LOUISIANA 70764
504 687-4321

ALL GLYCOL I EMPLOYEES

ENVIRONMENTAL HEALTH REPORT

I did not get to discuss the December, ¹⁹⁷⁴~~1975~~, Environmental Health Study with each of you, therefore, I am sending this report.

1 - Airborne Organic Contaminants

A study was made on fifteen jobs and six toxic chemicals in our block. Results of those tested are, that there are no TLV's exceeded. We are below the acceptable Industrial Health Standard maximum limit. Two chemicals, PCH and DCIPE have no TLV, but a study in Midland is currently in progress. Two trouble areas in our block in 1973 which were improved upon were the Ether Reactor area and the loading of EPICH tank cars.

2 - Noise Levels

There are some areas in our plant which exceeds the maximum OSHA permissible noise exposure level limits. A copy of my noise survey is attached. A study is under way to consider posting of signs designating high noise level areas, and the wearing of hearing protection. More information on the noise problem should follow shortly.

3 - The average time on a daily basis a person can spend in an area at a given decibel level with no hearing protection is as follows:

90 db or less	-	8 hours
92 db	-	6 hours
95 db	-	4 hours
100 db	-	2 hours

An exposure to 115 db or greater requires hearing protection for any time period.

If there are any questions or problems, please discuss them with me.

E. D. Brittingham
E. Health Representative

jsm

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SOUND SURVEY

SEPT 16-17-1977

NO.	SAMPLE SITES	dB	NO	SAMPLE SITES	dB
1	OFFICE	56	27	R-2D	95
2	SHOP	68-78	28	R-1A	90
3	INST SHOP	56	29	D-2A	89
4	GRIMMERS OFFICE	66	30	R-2D	88
5	T1 CHECK TANK	70	31	S-1	86
6	T1 FINISH END	80	32	S-2	92
7	T-106 BTMS	80	33	70 Comp area	88
8	T1 CONTROL ROOM	64	34	70 MAIN DITCH SKY	90
9	T-102 B BTMS	85	35	T-102C OH	90
10	T-102 A BTMS	87	36	D-7 Pump	90
11	T-112 BTMS	86	37	ARU-1	82-86
12	T-102 A-B REFLEX AREA	86	38	T-6 BTMS	82
13	T1- COMP AREA	80-88	39	T-3	80
14	DH 1252 TANKS	75	40	70 C/Room	66
15	D-102 AREA	88	41	AIR DRYERS	89
16	S-101 AREA	87	42	Water Softener	88
17	R-102 C BTMS	84	43	Welding Machine	90
18	R-102 B BTMS	87	44	Caustic Pumps	88
19	D-103A	90	45	AIR Blower	87
20	R-101 A	92	46	Burner	80
21	R-102 D	96	47	DH 1201 TANKS	76
22	RIVER WATER Pumps	97	48	D-9	78
23	ARU 101	82	49	STORAGE TANKS	72
24	CHANCE ROOM	64	50	70 Check TANK	74
25	Portular Air Comp	96	51	DU 6201-	80-88
26	TANK FARM Air Comp	95	52	C.L. RACK- NORMAL	64-86
			53	C.L. RACK. Depressuring Gr.	115-120

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GLYCOL I - REPORT ON SOUND LEVELS

This report is an effort to up-date the status of Glycol I noise sources at or above 90db. The 1974 list was reviewed with the plant superintendent and the appropriate corrections and changes have been made.

I. Projects - Completed/ Not Completed

Plant sources producing 90db sound levels in 1974 was reported from one source. This was listed as steam venting during shutdowns of D-21 and D-30. No work has been done on reducing this source.

II. NEW Sources of Sound Levels Exceeding 90db

The noise survey done in February of 1975 revealed some new sources of sound levels. New process equipment had been installed in the reactor, hydrolyzer, and other areas of the plant since 1974. The sound levels are as follows, which are over 90db.

<u>Source</u>	<u>Db (A)</u>	<u>Description</u>	<u>Identification #</u>
1	95	Caustic hydrolyzer	R-2D, R102-D
2	95	River water pump	P-56A, B, C, D,; P-156
3	92	Caustic pumps	P-3A, B
4	92	Air blower for burner	
5	96	Tank farm air compressors	

III. Projects Planned or Underway and Their Estimated Cost

- A. On sources one and two of the above mentioned list, signs were erected stating this area as a "noise area--ear protection required" Estimated cost - \$600.
- B. A planned modification to the hydrolyzer level control valve should reduce cavitation and noise level. This should be complete on one hydrolyzer by the end of September 1975.
- C. Will attempt to measure noise level created by direct steam addition to bottoms of hydrolyzers and take appropriate corrective action.
- D. Must investigate other areas to determine what corrective action is needed.



E. Brittingham
Industrial Hygiene Representative

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DOW CHEMICAL U.S.A.
LOUISIANA DIVISION
DATA SHEET

GLYCOL I - PROPYLENE OXIDE EXPOSURES

YEAR: 1975

TLV = 100 PPM		NOTE: SAMPLE TYPE: - PERSONNEL SAMPLE TIME: 8 HRS			
DATE	JOB CLASS	P. oxide MEASURED PPM by Vol			
12-8-75	EDOC MAINT	1.33 PPM			
12-11-75	" "	1.84			
12-15-75	" "	0.33			
12-22-75	" "	0.39			
12-10-75	SUPPLY VENDOR	0.93			
12-8-75	"	0.78			
12-11-75	"	2.02			
12-9-75	BLOCK WADDER	1.05			
12-12-75	" "	1.20			
12-12-75	MATE. CONTROLLER	1.63			
12-10-75	LOAD S.O.T	0.89			
12-18-75	" "	N.D.	←	LOWEST	
12-10-75	LOAD OT	0.61			
12-10-75	" "	0.77			
12-18-75	" "	0.21			
12-18-75	" "	0.58			
12-15-75	INST. PERSON	2.60			
12-15-75	" "	0.36			
12-18-75	PIPERITTER	1.70			
12-18-75	ELECTRICIAN	1.24			
12-9-75	ASST CHEM	4.96			
12-12-75	" "	5.69			
12-17-75	" "	2.60			
1-1-75	" "	7.75			
12-9-75	LAB OT	23.03	←	HIGHEST	
12-12-75	" "	1.11			
12-15-75	" "	21.92			
12-8-75	70 O.S.	0.94			
12-11-75	" "	0.82			
12-22-75	" "	0.93			
12-12-75	LABORER	1.51			
12-22-75	"	0.47			



GLYCOL I - PROPYLENE OXIDE EXPOSURES YEAR: 1975

TLV = 100 ppm

NOTE: SAMPLE TYPE:- PERSONNEL
SAMPLE TIME: 8 HRS

DATE	JOB CLASS	P. oxide MEASURED PPM by VOL							
12-8-75	71	O.S.	2.01	PPM					
12-11-75	"	"	1.31						
12-17-75	"	"	1.54						
12-9-75	71	S.O.T.	5.65						
12-11-75	"	"	0.27						
12-15-75	"	"	4.79						
12-17-75	"	"	1.37						
12-22-75	"	"	0.82						
12-9-75	70	OT	2.68						
12-17-75	"	"	1.46						
12-22-75	"	"	2.26						
			2.70	←	Avg				