

PLAINTIFF'S EXHIBIT

MON-2324

MONSANTO CHEMICAL INTERMEDIATES COMPANY
INDUSTRIAL HYGIENE SECTION
LOSS PREVENTION AND SAFETY DEPARTMENT
TEXAS CITY, TEXAS

NOVEMBER 1980

INDUSTRIAL HYGIENE STATUS REPORT
FOR THE TEXAS CITY PLANT

STATUS REPORT NO. 4
(UPDATE 1/1/80--7/1/80)

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MAP 005130

LAM000956

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FOR THE TEXAS CITY PLANT

I. INTRODUCTION

In 1977, World Wide Environmental Protection Guidelines were developed for Corporate Monsanto. Guideline #5, which pertains to Industrial Hygiene, will "determine and monitor workplace stresses and maintain Monsanto workplace environment standards." In late 1978, an additional Corporate guideline program was established which includes the requirement for issuance of semiannual Industrial Hygiene Status Reports. The first Industrial Hygiene Status Report for the Texas City plant was issued January 2, 1979.

The present status report includes an update of the plant-wide industrial hygiene results from January through June 1980.

II. SUMMARY

This Texas City Industrial Hygiene status report updates and summarizes the personnel exposure measurements, area and short-term surveys we have recorded for the chemicals and/or physical agents in the departments and areas of the Texas City plant. Approximately 6,250 analytical measurements are recorded since the status report of July 1979.

Included in the data sheets, as a separate table, are a number of materials for which initial determinations were not monitored (I.D.'d). These individual chemicals, because of low personnel exposure potential, were eliminated from actual measurement for initial baseline determinations.

The status of the Method Development Program and the initial Industrial Hygiene Monitoring Schedule for 1980 is included.

III. CONCLUSIONS

1. Extensive personnel sampling has indicated that personnel exposures do not normally exceed established limits and/or regulatory standards.
2. No new or revised regulated areas required.
3. Exceptions to the established limits during the six month period were 10 noise and 3 chemical overexposures. As noted in the report, six of the noise overexposures appeared to be spurious results

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FOR THE TEXAS CITY PLANT

and not reproducible. The chemical exposures occurred at the docks. Although so classed as overexposures by regulation, breathing protection was actually in use on two of the three occasions (OSHA requires monitoring reports as if no breathing protection was in use). A summary of the personnel sampling that exceeded the permissible exposure limit (PEL) is outlined in Table I.

4. Table II is a listing of the area samples that exceeded the allowable limits. As noted, many of these samples were taken under unusual conditions, such as during a spill or decontamination. No personnel overexposures are known to have occurred during these periods.

IV. RECOMMENDATIONS

1. Continue the scheduled plant-wide monitoring program.
2. Personnel receiving this report disseminate the results of these surveys to their supervision. As monitoring continues daily, more up-to-date data may be available from the I.H. group.

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TABLE I

SUMMARY OF PERSONNEL SAMPLING THAT EXCEEDED
THE PERMISSIBLE EXPOSURE LIMIT (PEL)

<u>Dept. or Area</u>	<u>Material</u>	<u>Function</u>	<u>PEL</u>	<u>NO. >PEL</u>	<u>Prot. Equip. Used</u>	<u>High Results</u>	<u>Comments</u>
13/14	Noise	Maint.	90dBA	1 of 32	No	93	Slag Gun and Grinder
25	Noise	Maint.	90dBA	1 of 22	No	99	
35F	Noise	Prod.	90dBA	6 of 50	No	161*	
44	Noise	Maint.	90dBA	1 of 11	Yes	93	
Power 2	Noise	Prod.	90dBA	1 of 40	No	99	
Dock 1	AN	Pipe Fitter	10 ppmC	4 of 12	Yes	25.3	15 Min. Ceiling; Hose Connect- Disconnect
Dock 1	Styrene	Pumper G.	100 ppm	1 of 1	No	138	Sampling During Ship Loading
Dock 2	AN	Pipe Fit.	10 ppmC	5 of 12	Yes	72	15 Min. Ceiling; Hose Connect- Disconnect

* This appears to be a spurious result because exposure times, noise level, and job function did not agree with high results. Repeat of survey resulted in lower determinations (all <PEL).

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TABLE II

AREA SAMPLES THAT EXCEEDED ALLOWABLE LIMITS

<u>Dept. or Area</u>	<u>Material</u>	<u>PEL</u>	<u>No. >PEL</u>	<u>High Results</u>	<u>Comments</u>
13/14	Benzene	10 ppm	3 of 17	21.9	Spill; Breathing Prot. Used Part Time
13/14	Ethyl Benzene	100 ppm	1 of 17	149.4	Spill; Breathing Prot. Used Part Time
13/14	di Ethyl Benzene	100 ppm	1 of 17	145.3	Spill; Breathing Prot. Used Part Time
35F	Welding Fumes	5mg/M ³	1 of 2	8.7	3' Downwind of Weld- ing Galvanize--Only 2.9 ppm inside Helmet
51	AN	2 ppm	1 of 2	5.2	Decontamination
513 (24)	Ammonia	25 ppm	1 of 4	29	
Bulk Load.	PA	1 ppm	1 of 2	25	Tank Car
P.T.	Welding Fumes	5mg/M ³	2 of 2	16.3	

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TABLE III
DATA SHEETS

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INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area Dept. 10 (Ethylene)
Date July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS	
		PPM	Mg/M ³	Other		TOTAL SAMPLES	SAMPLES	HIGH	AVERAGE	NO. > PEL			DATE
Ethylene	AREA MAINT.	Asphyx.				2		10.0	5.50	0	6/80		Unit shutdown permanently May 1980
	AREA MAINT.	Asphyx.			2			.20	.20	0	6/80		
Propylene	AREA MAINT.	Asphyx. Skin 10				30	8	1.45	.59	0	6/80		
	AREA MAINT.												
Dimethyl Formamide	PROD. MAINT.												
	PROD. MAINT.		2		X								
Sodium Hydroxide	PROD. MAINT.					37	9	.08	0	0	6/80		
	PROD. MAINT.	100				19	19	1.27	.09	0	6/77		
Hexane	AREA MAINT.					1	1	20.0	20.0	0	6/80		
	AREA MAINT.	Asphyx.			X								
Ethane Condensate Oil (Snifo)	PROD. MAINT.				X								
	PROD. MAINT.				X								
Acetylene	PROD. MAINT.	Asphyx.			X								
	PROD. MAINT.				X								
Quench Oils	PROD. MAINT.				X								
	PROD. MAINT.				X								
Noise-Dosimeters	PROD. MAINT.			90dBA		197	36	89	14	0	12/79		
	PROD. MAINT.					49	15	84	34	0	9/78		
Benzene	PROD. MAINT.	10				37	9	.39	.03	0	5/80		
	PROD. MAINT.	10				19	19	.36	.19	0	6/77		
Butane	PROD. MAINT.					1	1	.03	.03	0	2/80		
	PROD. MAINT.	Asphyx.			X								
Propane	PROD. MAINT.	Asphyx.			X								
	PROD. MAINT.												

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TEXAS CITY
 INDUSTRIAL HYGIENE STATUS REPORT

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS		
		PPM		Mg/M3		OTHER	TOTAL SAMPLES	LAST SURVEY					NO. > PEL	DATE
		PPM	Mg/M3					SAMPLES	HIGH	AVERAGE				
Benzene (Bz)	PROD.					121	13	8.52	1.03	0	6/80	Pre-project Board		
	MAINT.					46	15	4.69	.62	0	5/79	Assigned to Reduce		
	AREA	10				204	17	*21.86	5.63	3	11/79	Personnel Exposures		
	PROD.					121	13	.19	.05	0	6/80			
Styrene (SH)	MAINT.					46	15	.10	.03	0	5/79			
	AREA	100				204	17	2.44	.23	0	11/79			
	PROD.					121	13	.20	.10	0	6/80			
	MAINT.					46	15	.19	.06	0	5/79			
Ethyl Benzene (EB)	AREA	100				204	17	*149.39	15.82	1	11/79	**		
	PROD.					121	13	.08	.06	0	6/80			
	MAINT.					46	15	.09	.02	0	5/79			
	AREA	100				204	17	*45.20	13.80	1	11/79	**		
Diethyl Benzene (DIEB)	PROD.					121	13	.09	.03	0	6/80			
	MAINT.					46	15	.09	.10	0	5/79			
	AREA	100				204	17	11.13	.41	0	11/79			
	PROD.					2	2	<1	<1	0	12/78			
Toluene (Tol)	AREA	5				2								
	PROD.													
	MAINT.	Asphyx.			X									
	PROD.													
Ethylene	MAINT.													
	PROD.													
	MAINT.													
	AREA	2			X									
Sodium Hydroxide (NaOH)	PROD.													
	MAINT.													
	AREA	1000			X	2	2	0	0	0	6/80			
	PROD.													
Ethyl Chloride (EthCl)	MAINT.													
	PROD.													
	MAINT.													
	AREA													
Aluminum Granules	PROD.													
	MAINT.													
	AREA													
	PROD.													

NOTE: All maintenance samples (except noise) recorded since 1979
 are on Dept. 15/16 sheets since these personnel work both areas jointly.

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TEXAS CITY
 INDUSTRIAL HYGIENE STATUS REPORT

FUNCTION AND NUMBER	PEL (8hr. Ceiling)	INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING				BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
			SAMPLES	HIGH	AVERAGE	NO. > PEL		
Catalyst Complex (AlCl ₃) Sol	5 (HCL)		2	<1	<1	0	12/78	
Flux Oil (Heavy Oils)		X						
Calgon SL500 (NTA & EDTA)		X						
Nitrotriacetic Acid (NTA)		X						
Noise-Dosimeter	90 dBA		28	11	2.2	0	6/80	***Boilermaker
Phenol (Urine)			32	93	10	1	6/80	Spill Situation
Radiation	<0.005 mr		48	38.93	32.74		6/80	Spill Situation
			2	254.24	141.12		11/79	Wipe Test
			1	<0.005		0	2/80	
			15					

NOTE: All maintenance samples (except noise) recorded since 1979 are on Dept. 15/16 sheets since these personnel work both areas jointly. ***Using slagging gun, grinder, bonding iron

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INDUSTRIAL HYGIENE STATUS REPORT

Page 1 of 2
Dept. or Area: Dept. 15/16 (Styrene)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PPM	Mg/M ³	Other		TOTAL SAMPLES	LAST SURVEY					
							SAMPLES	HIGH	AVERAGE	NO. > PEL	DATE	
Styrene (SH)	PROD.					113	13	.81	.20	0	6/80	
	MAINT.					92	20	.42	.04	0	6/80	
	AREA	100				217	11	14.10	5.21	0	6/80	
Benzene (Bz)	PROD.					113	13	1.09	.28	0	6/80	Pre-project Board Assigned to Reduce Personnel Exposures
	MAINT.					92	20	2.49	.62	0	6/80	
	AREA	10				217	11	4.97	.93	0	6/80	
Ethyl Benzene (EB)	PROD.					113	13	.70	.19	0	6/80	
	MAINT.					92	20	1.43	.32	0	6/80	
	AREA	100				217	11	17.52	6.58	0	6/80	
Diethyl Benzene (DIEB)	PROD.					113	13	.27	.02	0	6/80	
	MAINT.					92	20	14.00	.82	0	6/80	
	AREA	100				217	11	.43	.14	0	6/80	
Toluene (Tol)	PROD.					113	13	.53	.11	0	6/80	
	MAINT.					92	20	.73	.07	0	6/80	
	AREA	100				217	11	49.55	11.77	0	6/80	
tert-Butyl Catechol (TBC)	PROD.				X							
	MAINT.						2	.03	.02	0	4/79	Dumping NSI in Whse.
Dinitrophenol (NSI)	MAINT.					5						
Dehydro Catalyst (Shell 105 as Chromium)	AREA		0.2									
	MAINT.		Cr			38	6	1.81	.33	0	11/78	Total Dust - Only 2.6% Chromium
	PROD.		0.5									
Sodium Hydroxide (NaOH)	MAINT.		2		X		2	<1	<1	0	12/78	
	AREA											
Muriatic Acid (HCL)	MAINT.	5				2						

NOTE: All maintenance since 1979 (except noise) for styrene complex on this sheet

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INDUSTRIAL HYGIENE STATUS REPORT

Page 2 of 2
Dept. or Area: Dept. 15/16 (Styrene)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING						BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PPM	Mg/M ³	Other		TOTAL SAMPLES	LAST SURVEY			NO. > PEL	DATE		
							SAMPLES	HIGH	AVERAGE				
Styrene Tars	PROD.				X								
	MAINT.												
	PROD.					189	44	75	9.25	0	6/80		
	MAINT.			90 dBA		15	15	33	15	0	11/74		Refer to Dept. 13&14
Noise-Dosimeters	AREA			25.0 - 32.2°C		8	2	29	30.3		11/78		
	MAINT.												
	AREA						4	0	0	0	12/78		CT 7-S.W. Pump House
	MAINT.					4							
Chlorine Calgon SL500 (NTA & EDTA)	PROD.	1											
	MAINT.				X								
	PROD.												
	MAINT.				X								
Methane	PROD.	Asphyx.											
	MAINT.												
	PROD.												
	MAINT.												
Microwave Ovens	AREA			5mm/cm ²		1	1	.02	.02	0	6/80		Kitchen

NOTE: All maintenance since 1979 (except noise) for styrene complex on this sheet

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TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Dept. 19 (HCN)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
						TOTAL SAMPLES	LAST SURVEY			DATE		
		PPM	Mg/M ³	Other			SAMPLES	HIGH	AVERAGE			
Hydrogen Cyanide	PROD.											Unit down and on standby
	MAINT.	10										
	PROD.											
	MAINT.	Asphyx.			X							
Methane	PROD.											
	MAINT.	25										
	PROD.											
	MAINT.											
Pt-Rh Catalyst	PROD.		PT.002									
	MAINT.		RH 0.1		X							
	PROD.											
	MAINT.		1		X							
Sulfuric Acid	PROD.											
	MAINT.											
	PROD.					36	36	26	4	0	4/73	
	MAINT.			90dBA		0						

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TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Dept. 25 (TBA)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PPM	Mg/M ³	Other		TOTAL SAMPLES	LAST SURVEY					
							SAMPLES	HIGH	AVERAGE	NO. > PEL		
Hydrogen Cyanide	AREA				3	3	<1	<1	0	12/78		
	MAINT.	10										
	PROD.											
Isobutylene	MAINT.											
	PROD.											
	MAINT.				X							
Sulfuric Acid	PROD.		1									
	MAINT.				X							
	PROD.											
Sodium Hydroxide	MAINT.		2									
	PROD.				X							
	MAINT.											
t-Butyl Amine	PROD.	SKIN				18	.60	.11	0	9/77		
	AREA	5				11	3.62	1.13	0	9/77		
	PROD.					62	26	29	0	4/73		
Noise-Dosimeters	MAINT.			90dBA		22	99	14.3	1	11/79		Bottommaker
	PROD.											
	MAINT.				X							
Sodium Formate	PROD.											
	MAINT.											
	PROD.				X							
Polyisobutylene	MAINT.											
	PROD.				X							
	MAINT.											
Formic Acid	PROD.											In by-product solution
	MAINT.	5			X							In by-product solution
	PROD.											
tert-Butyl Alcohol	MAINT.				X							In by-product solution
	PROD.	100										By-product in solution
	MAINT.				X							
tert-Butyl Formamide	PROD.											
	MAINT.				X							
	AREA	1				3	2	0	0	0	6/80	

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TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Dept. 27 (LN)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			CRITICAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		ppm	Mg/M ³	Other		TOTAL SAMPLES	SAMPLES	HIGH	AVERAGE	NO. > PEL	DATE	
Hydrogen Cyanide	AREA					3	3	<1	<1	0	12/78	
	MAINT.	10										
Acetaldehyde	PROD.				X							
	MAINT.	100										
Sodium Hydroxide	PROD.		2		X							
	MAINT.											
Phosphoric Acid	PROD.		1		X							
	MAINT.											
Lactonitrile	PROD.	HCN				6	6	.36	.18	0	5/79	
	MAINT.	10										
Noise-Dosimeters*	PROD.					36	36	26	4	0	4/73	
	MAINT.					0						
Microwave Ovens	AREA					1	1	<.01	<.01	0	6/80	

*See related measurements recorded for Department 29.

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TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Dept. 29 (ACY)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8-hr. Ceiling)		INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS		
		PPM	Mg/M ³		OTHER	TOTAL SAMPLES	LAST SURVEY					NO. > PEL	DATE
							SAMPLES	HIGH	AVERAGE				
Acetone Cyanohydrin	PROD.					16	0.94	0.35	0	1/79			
	MAINT.	10			27	11	0.80	.26	0	1/79			
	AREA					3	<1	<1	0	12/78			
Hydrogen Cyanide	PROD.	10			3								
	MAINT.					16	1.88	.48	0	1/79			
	AREA					11	.64	.20	0	1/79			
Acetone	PROD.	1000			27	12	17	4.5	0	11/79			
	MAINT.												
	AREA												
Noise-Dosimeters				90dBA		12							
Microwave Ovens				5mW/cm ²		1	1	<.01	<.01	0	6/80		
	AREA												

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TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Dept. 33 (Lactic)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)		INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS	
		PPM	Mg/M3		Other	TOTAL SAMPLES	LAST SURVEY					
							SAMPLES	HIGH	AVERAGE			NO. > PEL
Lactic Acid	PROD.					12	1.78	.21		5/79		
	MAINT.					5	0	0	0	5/79		
	AREA				32	2	<1	<1	0	12/78		
Hydrogen Chloride	MAINT.	5										
	AREA					1	0	0	0	12/79		
	MAINT.				1							
Ammonia	PROD.	25										
	MAINT.											
	PROD.											
Sodium Hydroxide	MAINT.		2									
	PROD.											
	MAINT.											
Carbon Dust	PROD.			X								
	MAINT.											
	PROD.											
Lactonitrile	MAINT.	HCN		X		12	.19	.04		5/79		
	PROD.	10				5	.06	.01		5/79		
	MAINT.										Resin Bed	
Crystalline Silica	PROD.		5									
	MAINT.		TotDus	X								
	PROD.					57	12	2	0	10/79		
Noise/Dosimeters	MAINT.					13	16	7	0	10/79		
	AREA		90 dBA			2	<1	<1	0	12/78		
	MAINT.											
Hydrogen Cyanide	PROD.	10			2	14	9.43	2.66	0	3/79		
	MAINT.					6	1.54	.84	0	9/79		
	PROD.	200				12	.30	.05	0	5/79		
Methyl Lactate	MAINT.				17	5	0	0	0	5/79		
	PROD.											
	MAINT.			X								
Ammonium Chloride	PROD.		10									
	MAINT.											
	PROD.	Asphyx.		X								
Methane	MAINT.											
	PROD.											
	MAINT.			X								
Methyl Chloride	PROD.	100										
	MAINT.											
	AREA				1	1	<.02	<.02	0	6/80		
Microwave Ovens			5m/cm2									

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TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Dept. 35F (PE)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PPH	Mg/M3	Other		TOTAL SAMPLES	SAMPLES	HIGH	LAST SURVEY			
									AVERAGE	NO. > PEL	DATE	
Methanol	PROD.					2	2	1.62	1.60	0	3/79	
	MAINT.	200										
Hexane	PROD.					36	36	38.19	4.12	0	6/80	
	MAINT.	100										
Calcium Hydroxide	PROD.											
	MAINT.	5			X							
Ethylene (Carbowax)	PROD.	Asphyx.			X							
Polyethylene Glycol	PROD.				X							
	MAINT.											
Polyethylene	AREA TOTAL		10			34	34	5.50	.59	0	3/77 Avail.	
	PROD.					5	5	1.12	.69	0	3/79 Avail.	
Chromates	PROD.				X							
	MAINT.											
Heat	AREA			25-32.2 °C								
Noise-Dosimeters	PROD.					174	50	161	48	6	9/79	
	MAINT.			90 dBA		66	14	60	30	0	9/79	
Glycerol Monostearate	PROD.				X							Accepted for Food Grade
	MAINT.											
Ionol	PROD.				X							
	MAINT.											
Polyethylene Anti-static	PROD.				X							
	MAINT.											
Radiation	AREA			0.005 mr		72	2	<0.005			2/80	Wipe Test
Welding Fumes	MAINT.		5			1	1	2.95	2.95	0	6/80	
	AREA					2	2	8.65	4.38	1	6/80	
Microwave Ovens	PROD.					1	1	<.01	<.01	0	6/80	Dept. 35F Kitchen
	MAINT.					1	1	<.01	<.01	0	6/80	Dept. 42 Office Kitchen

MAP 005148

LAM000974

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Page 1 of 2
Dept. or Area: Dept. 35P (PE)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PEL (8hr. Ceiling)				TOTAL SAMPLES	LAST SURVEY					
		PPM	Mg/M3	Other			SAMPLES	HIGH	AVERAGE	NO. > PEL		
	AREA					7	10.99	1.64	0	6/80		
	PROD.					41	8.33	.73	0	6/80		
	MAINT.	100				27	37.79	5.72	0	6/80		
	PROD.					3	.49	.32	0	3/79		
	MAINT.	200										
	PROD.											
	AREA	Asphyx.				1	50	50	0	6/80		
	MAINT.	5(HCL)				2	<1	<1	0	12/78		
	PROD.				X							
	MAINT.											
	PROD.	Asphyx.			X							
	MAINT.					2	<1	<1	0	12/78		
	AREA	5										
	MAINT.											
	PROD.				X							
	MAINT.				X							
	PROD.											
	MAINT.											
	PROD.		2		X							
	MAINT.	25				3	1	8.0	8.0	0	6/80	
	PROD.											
	MAINT.					2	2	5.33	4.98	0	6/80	
	PROD.		5			2	2	1.36	.68		3/79	
	MAINT.											
	PROD.					85	17	35	10.7	0	9/79	
	MAINT.			90 dBA		30	30	56	11	0	4/79	
	AREA			25-32.2 °C		3	3	30.8	30.6		7/77	
	MAINT.			0.005 mR								
	AREA					385	11	<0.005			2/80	Wipe Test

MAP 005149

LAM000975

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Page 2 of 2
Dept. or Area: Dept. 35P (PE)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS	
		PPM	Mg/M ³	Other		TOTAL SAMPLES	SAMPLES	HIGH	LAST SURVEY				DATE
									AVERAGE	NO. > PEL			
Butene	PROD.				X								
	MAINT.	1000											
Dilauryl Thiodi Propionate(DLDTP)	PROD.				X							No Method	
	MAINT.												
Microwave Ovens	AREA			5mM/cm ²		1	1	<.01	<.01	0	6/80		

MAP 005149

LAM000976

MAP 005150

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Dept. 44 (Methanol)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING						BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PPM	Mg/M ³	Other		TOTAL SAMPLES	SAMPLES	HIGH	AVERAGE	NO. > PEL	DATE		
Methanol	PROD.					24	9	.30	.09	0	6/80	No	
	MAINT.	200				12	12	2.3	.9	0	12/78	No	
Carbon Monoxide	AREA					343	343	550*	60		7/78	When Req.	*
	PROD.					61	8	14.6	3.25	0	6/80		
	MAINT.	50				14	4	2.92	2.41	0	6/80		
	PROD.					32	32	5.8	0.9	-	6/79		Start & End of Shift by Breath Analysis
Carboxy Hemoglobin	MAINT.												
Nickel Compounds	PROD.				X								
Copper/Zinc Compounds	MAINT.		0.1				3	.2	.1	0	6/77	Yes	
	AREA					3							
Hydrazine	MAINT.		1				1	0	0	0	6/80		
	AREA	SKIN	0.1			2							
Chlorine	MAINT.						2	0	0	0	6/80		CT 3, CT 4
	AREA	1				4							
Sodium Hydroxide	PROD.												
Sodium Hydroxide	MAINT.		2		X								
	PROD.												
Calgon (NTA)	MAINT.				X								
Noise-Dosimeters	PROD.					135	38	55	8.9	0	10/79		Hearing Prot. Req.
	MAINT.			90 dBA		95	11	93.0	16.6	1	11/79		Hearing Prot. Req.
	AREA			25 -			4	49.6	41.9	4	6/72		Access Controlled
	MAINT.			32.2°C		4					7/75		and Timed
Carbon Dioxide	PROD.												
Carbon Dioxide	MAINT.	5000			X								
	PROD.												
Nickel Carbonyl	MAINT.				X								
Sodium Phosphite	PROD.												
	MAINT.				X								
Microwave Ovens	AREA			5mW/cm ²		1	1	<.01	<.01	0	6/80		* Monitors near equipment - little personnel exposure - masks required when indicated by monitor

* Monitors near equipment - restricted area - little personnel exposure - masks required when indicated by monitor

LAM000977

TEXAS CITY
 INDUSTRIAL HYGIENE STATUS REPORT

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
						TOTAL SAMPLES	LAST SURVEY					
		PPH	Mg/M3	Other			SAMPLES	HIGH	AVERAGE	NO. > PEL	DATE	
Uxo Alcohol Plasticizers (S-711, S-790, DUP)	PROD.				X							No Method
	MAINT.											
	PROD.				X							No Method
	MAINT.											
	AREA		5			6	6	1.35	.54	0	2-6 1978	Yes
Silica, Amorphous & Crystalline	MAINT.		TotDus		X							
	PROD.		0.5									
	MAINT.		(0.1)									No Method
	PROD.											
	MAINT.				X							No Method
Cobalt Compounds	PROD.		1		X							
	MAINT.											
	AREA					2	2	<10	<10	0	12/78	Yes
	PROD.		1			2	2	<.01	<.01	0	10/79	
	PROD.				X							
Nickel Compounds	MAINT.		0.1									
	AREA				X	8	6	<25	<25*	0	4/77	Yes
	PROD.	5				2	2	0.12	0.12**	0	10/79	*Previous Lower Detection **New Method
	PROD.											
	MAINT.		1		X							
Sulfuric Acid	AREA						2	0	0	0	12/79	
	MAINT.											
	PROD.											
	MAINT.											
	MAINT.											
Phthalic Anhydride	MAINT.	1										
	AREA					740	740	100+**	11	0	7/78	
	PROD.					9	9	1.95	1.23	0	12/79	
	MAINT.	50				12	12	4.60	1.84	0	12/79	
	PROD.											
Carbon Monoxide	MAINT.				X							
	PROD.											
	MAINT.					36	4	1	1	0	10/79	
	PROD.					8	26	7	7	0	10/79	
	MAINT.			90 dBA								
Olefins Mix	PROD.				X							
	MAINT.											
	PROD.											
	MAINT.											
	PROD.											
Noise-Dosimeters	PROD.				X							
	MAINT.											
	PROD.											
	MAINT.											
	PROD.											
Bisphenol A	PROD.											
	MAINT.											
	PROD.											
	MAINT.											
	PROD.											

***Monitored daily--Area spot samples and not personnel 8hr. TWA

Value in Uxo-ester?

MAP 005151

LAM000978

TEXAS CITY
 INDUSTRIAL HYGIENE STATUS REPORT

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)		INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PPM	Mg/M3		TOTAL SAMPLES	LAST SURVEY			NO. > PEL		
						SAMPLES	HIGH	AVERAGE			
Carbon Dust	PROD.										
	MAINT.										
	PROD.										
	MAINT.										
Chromates	PROD.			X							
	MAINT.			X							
Radiation	AREA		0.005		41	3	<0.005			2/80	See Results-Dept. 51
	MAINT.		.mr						0		Wipe Tests
Filter Aid	AREA		10		8	4	.70	.30	0	6/78	
	PROD.										
Sodium Phosphite	MAINT.			X							
Microwave Ovens	AREA				1	1	<.01	<.01	0	6/80	
			5mM/cm ²								

MAP 005152

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Dept. 50 (Acetic)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS	
		PPM		Other		TOTAL SAMPLES	LAST SURVEY			NO. > PEL			DATE
		Mg/M ³					SAMPLES	HIGH	AVERAGE				
Acetic Acid	PROD.					57	17	.86	.08	0	6/79		
	MAINT.	10				30	16	.10	.03	0	6/79		
	AREA					119	119	.50+	.9	0	6/79		
Carbon Monoxide	PROD.					12	12	1.98	.79	0	11/79		
	MAINT.	50				16	16	6.05	1.89	0	12/79		3/76-8/77--Area Spot Samples&Not 8 hr TWA
	PROD.					12	12	1.28	.40	0	3/79		
Methanol	MAINT.	200				8	8	2.39	.88	0	9/79		
Rhodium Iodide	PROD.												Report by L. Garban
	MAINT.		.1(Rh)		X					0			
AREA						4	4	.008	.008	0	6/79		Making up Catalyst
Iodine	MAINT.	0.1				57	17	.22	.05	0	6/79		
Methyl Iodide	MAINT.	SKIN				30	16	.32	.10	0	6/79		
	PROD.	5											
Potassium Hydroxide	MAINT.		2		X								
AREA						4	4	.008	.008	0	6/79		
Hydrogen Iodide	MAINT.												
PROD.						148	35	.35	3.2	0	10/79		
Noise-Dosimeters	MAINT.			90 dBA		27	16	.41	9.9	0	10/79		
PROD.						17	17	.25	.03	0	6/79		
Methyl Acetate	MAINT.					16	16	.19	.03	0	6/79		
PROD.							4	0	0	0	6/80		
Nickel Carbonyl	MAINT.	.05	.35			5							
PROD.													
Propionic Acid	MAINT.				X								By-product
PROD.													
Rhodium Carbonyl	MAINT.		.1(Rh)		X								No Method
AREA				5mW/cm ²		1	1	<0.1	<0.1	0	6/80		

Report by L. Garban
Making up Catalyst

By-product
No Method

MAP 005153

LAM000980

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Dept. 50 (Acetic)
Date: July 1980

FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
	PPM	Mg/M ³	Other		TOTAL SAMPLES	LAST SURVEY					
						SAMPLES	HIGH	AVERAGE	NO. > PEL		
Acetic Acid	PROD.				57	17	.86	.08	0	6/79	3/76-8/77--Area Spot Samples & Hot 8 hr TWA
	MAINT.	10			30	16	.10	.03	0	6/79	
	AREA				119	119	.50+	.9	0		
Carbon Monoxide	PROD.				12	12	1.98	.79	0	11/79	
	MAINT.	50			16	16	6.05	1.89	0	12/79	
	PROD.				12	12	1.28	.40	0	3/79	
Methanol	MAINT.	200			8	8	2.39	.88	0	9/79	Report by L. Garban Making up Catalyst
Rhodium Iodide	PROD.		.1 (Rh)	X					0		
AREA	MAINT.				4	4	.008	.008	0	6/79	
Iodine	MAINT.										
PROD.	0.1				57	17	.22	.05	0	6/79	
MAINT.	SKIN 5				30	16	.32	.10	0	6/79	
Methyl Iodide	PROD.										
MAINT.				X							
PROD.	2										
Potassium Hydroxide	MAINT.				4	4	.008	.008	0	6/79	
AREA											
MAINT.											
Hydrogen Iodide	PROD.				148	35	35	3.2	0	10/79	
MAINT.			90 dBA		27	16	41	9.9	0	10/79	
Noise-Dosimeters	PROD.				17	17	.25	.03	0	6/79	
Methyl Acetate	MAINT.				16	16	.19	.03	0	6/79	
PROD.						4	0	0	0	6/80	
MAINT.	.05	.35			5						
Nickel Carbonyl	PROD.			X							By-product
MAINT.											
Propionic Acid	PROD.										
Rhodium Carbonyl	MAINT.		.1 (Rh)	X							No Method
PROD.											
AREA			5mW/cm ²		1	1	<0.1	<0.1	0	6/80	

MAP 005154

LAM000981

MAP 005155

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Page 1 of 2
Dept. or Area: Dept. 51 (AN-5)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING						BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PPM	Mg/M ³	Other		TOTAL SAMPLES	LAST SURVEY			NO. > PEL	DATE		
							SAMPLES	HIGH	AVERAGE				
Acrylonitrile (AN)	PROD.					1930	54	.39	.28	0	6/80	As Req.	Decontamination
	MAINT.					939	28	.28	.04	0	6/80	As Req.	
	AREA	2					2	5.24	2.62	1	6/80		
	PROD.					1930	54	.06	.01	0	6/80		
Acetonitrile (ACN)	AREA	40				939	28	.09	.01	0	6/80		Pre-project Board Assigned to Reduce Personnel Exposures
	PROD.						2	0	0	0	6/80		
	MAINT.					1930	54	.31	.01	0	6/80		
	AREA	1000				1930	20	.08	.03	0	6/80		
Acetone (DMK)	PROD.					1930	2	5.24	4.64	0	6/80		
	MAINT.						54	*.17	.01	0	6/80		
	AREA	0.1				939	28	*.32	.04	0	6/80		
	PROD.	2					2	.03	0	0	6/80		
Acrolein (AGR)	AREA						2	0	0	0	12/79		
	MAINT.					2							
	AREA					3	1	.01	.01	0	6/80		
	PROD.					4	4	25**	8.5	0	10/79		
Hydroquinone (HQ) Methyl Ether of Hydroquinone (MEHQ)	AREA	2											Inside SO ₂ Slg Bldg.
	MAINT.	10				11	1	<1	<1	0	6/80		
	PROD.												
	MAINT.												
Sulfuric Acid(H ₂ SO ₄)	AREA												
	MAINT.		1		X								
	PROD.												
	MAINT.												
Ammonia (NH ₃)	AREA	25				10	7	5.0	2.7	0	6/80		CT 9
	MAINT.												
	AREA					4	2	0	0	0	6/80		
	MAINT.	1											
Chlorine (Cl ₂)					**Exhaust fan normally on - samples taken with fan off to determine leaks								

*Probable analytical interference **Exhaust fan normally on - samples taken with fan off to determine leaks

LAM000982

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Page 2 of 2
Dept. or Area: Dept. 51 (AN-5)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PPH	Mg/M ³	Other		TOTAL SAMPLES	SAMPLES	HIGH	AVERAGE	NO. > PEL	DATE	
Sodium Hydroxide (NaOH)	PROD.				X							
	MAINT.		2									
Chromates (Cr 4's)	AREA					7		.01	.01	0	9/79	CT-9
	MAINT.		0.05									
Catalyst Dust	AREA					3		.08	.05		7/78	
	MAINT.											
Noise-Dosimeters	PROD.					3						
	MAINT.					216	76	40	4.0	0	6/80	
Radiation	AREA						82	147	16	2	6/78	Carpenter-Enc. Space Wipe Tests
	PROD.			90 dBA			16	<0.005		0	2/80	
Sodium Sulfite	AREA			0.005 mr		162						
	PROD.				X							
Methane	PROD.				X							
	MAINT.	Asphyx.										
Propylene	PROD.				X							
	MAINT.	Asphyx.										
Microwave Ovens	AREA			5mW/cm ²		1	1	<.03	<.03	0	6/80	

MAP 005156

LAM000983

MAP 005157

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Dept. 53 (Phthalic)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMIN- ATION NOT MONI- TORED	PERSONNEL SAMPLING						BREATH- ING EQUIP - MENT USED	CORRECTIVE ACTION OR STATUS
						TOTAL SAMPLES	LAST SURVEY			NO. > PEL	DATE		
		PPM	Mg/M ³	Other			SAMPLES	HIGH	AVERAGE				
O-Xylene	PROD.						8	.04	.01	0	9/78		
	MAINT.						4	0	0	0	9/78		
	AREA	SKIN 100				12	3	.01	0	0	1/79		
Sulfur Dioxide	AREA	5				19	5	15	4.5	3	10/79	Yes	Tank Truck Unload- ing--Small Leak
	MAINT.												
	AREA		Dust.5 Fme.05			18	4	.13	.11	0	8/77	*Yes	*Contract Per - Some Did Not Wear Masks
Vanadium Pentoxide	PROD.												
	MAINT.		2		X								
	AREA						8	.08	.02	0	9/78		
Sodium Hydroxide	PROD.					13	4	.04	.01	0	9/78		
	MAINT.					14	2	0	0	0	6/80		
	AREA	1					8	.04	.01	0	9/78		
Phthalic Anhydride	PROD.					12	4	0	0	0	9/78		
	MAINT.	.25					1	0	0	0	9/78		
	AREA	SKIN 0.1				2		0	0	0	6/80		
Maleic Anhydride	MAINT.												
	PROD.												
	MAINT.												
Hydrazine	PROD.												
	MAINT.												
	AREA												
Sulphuric Acid	PROD.		1		X								
	MAINT.												
	AREA												
Noise-Dosimeters	PROD.			90 dBA		98	38	29	3.3	0	10/79		
	MAINT.					12	6	49	28	0	11/79		
	AREA												
Maleic Anhydride	PROD.	.25				12	3	1.76	.59	1	1/79	Yes	Inside 5314-2
	MAINT.												
	AREA												
Phthalic Esters	PROD.				X								
	MAINT.												
	AREA												
Sodium Sulfite	PROD.				X								
	MAINT.												
	AREA												
Phthalic Tars	PROD.				X								
	MAINT.												
	AREA			0.0005 mm		100	5	<0.005	0		2/80		Wipe test
Radiation	PROD.												
	MAINT.												
	AREA												
Microwave Ovens	PROD.												
	MAINT.												
	AREA			5mM/cm ²		1	1	<0.1	<0.1	0	6/80		

LAM000984

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Dept. 513, 24 (Waste)
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PPM	Mg/M ³	Other		TOTAL SAMPLES	SAMPLES	LAST SURVEY		NO. > PEL		
								HIGH	AVERAGE			
Ammonia	PROD. AREA	25				10	4	29.0	10.00	1	6/80	
	PROD. MAINT.			90 dBA		22	22	12.0	1.14	0	12/79	
	PROD. MAINT.					9	9	.43	.18	0	10/79	
	PROD. MAINT.	1000				9	9	0	0	0	10/79	
Acetonitrile	PROD. MAINT.	40				9	9	0	0	0	10/79	
	PROD. MAINT.					9	9	0	0	0	10/79	
	PROD. MAINT.	0.1				9	9					
	PROD. MAINT.	2				9	9	.51	.15	0	10/79	
Acrylonitrile	PROD. MAINT.					9						
	PROD. MAINT.					9						
Microwave Ovens	AREA			5mW/cm ²		1	1	<0.2	<0.2	0	6/80	

MAP 005158

LAM000985

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Bulk Loading
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS	
		PPM	Hg/M3	Other		TOTAL SAMPLES	SAMPLES	LAST SURVEY		NO. > PEL			DATE
								HIGH	AVERAGE				
t-Butyl Amine	PUMPER G.	SKIN				8	2	3.01	1.78	0	3/79	Drum Out	
	PUMPER G.	5				4	4	13.48	3.96	1	9/77	Tank Car	
	PUMPER G.	SKIN				6	6	29.26	8.63	4	9/77	Tank Truck	
	Area	5				6	2	1.00	.87	0	3/79	Drum Out	
	PUMPER G.	2				8	3	1.59	.60	0	6/80	Tank Car Loading	
Acrylonitrile	Area					100	4	.04	.01	0	6/80	Tank Car Loading	
	PUMPER G.	2				2	2	.62	.38	0	10/77	Drum Loading	
	Area					3	3	331.0	110.67	1	10/77	By Drum Loading	
	PUMPER G.	10				9	1	.96	.96	0	7/79	Tank Car & Trucks	
	Area					4	3	2.69	1.78	0	7/79	Loading Rack	
Phthalic Anhydride	Area	1				6	2	25.00	13.15	1	6/80	Tank Car Loading	
	PUMPER G.	100				2	1	1.36	1.36	0	4/79	Tank Car Loading	
	MAINT.					2	2	46.22	23.28	0	7/78	On Top Tank Car	
	PUMPER G.					2	1	1.97	1.97	0	6/80	Truck Unloading	
	Area	100				2	2	10.15	5.41	0	6/80		
Hexane	PUMPER G.	HCH				4	4	0	0	0	5/79	Tank Car	
	Area	10				2	2	0	0	0	5/79	Loading	
						2	1	29.0	29.0	0	8/79	N.P.E. Loading Rack	
	Area					2	9	1.12	.45	0	4/79	Napth. Stg. 116	
	Area	10				9	2	.27	.14	0	5/79	Tank Car	
Naphthalene	PUMPER G.	100				2	2	.08	.07	0	5/79	Tank Car	
	Area					1	1	2.44	2.44	0	4/79	Truck	
	PUMPER G.	100				1	1	.06	.06	0	4/79	Truck	
	Area					2	2	1.19	.92	0	5/79	Drum Out	
	PUMPER G.	100				2	2	5.80	2.90	0	5/79	Drum Out	
Styrene (SM)	Area				X							No Method--Can Identify by Odor	
					X							No Method	
					X							Pellet Loading	
Lactic Acid													
Acetaldehyde													
DUP													
Polyethylene													
Microwave Ovens	AREA			5mM/cm2		1	1	5.05	<.05	0	6/80	Main Shack Kitchen	

LAM000986

MAP 005159

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Control Lab
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING						BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PPM	Mg/MS	Other		TOTAL SAMPLES	LAST SURVEY			NO. > PEL	DATE		
							SAMPLES	HIGH	AVERAGE				
Non Aromatics (Hexane)	ANAL.				123	33	1.25	.35	0	6/80	No		
	MAINT.	100			20	10	.40	.17	0	2/78	No		
	ANAL.				118	33	.20	.05	0	6/80	No		
	MAINT.	10			20	10	.49	.14	0	2/78	No		
Benzene	ANAL.				113	33	.19	.04	0	6/80	No		
	MAINT.	100			20	10	.06	.03	0	2/78	No		
	ANAL.				113	33	.48	.11	0	6/80	No		
	MAINT.	100			20	10	.32	.16	0	2/78	No		
Styrene	ANAL.				90	33	74.42	4.68	0	6/80	No		
	MAINT.	1000			20	10	5.06	1.24	0	2/78	No		
	ANAL.				90	33	.51	.15	0	6/80	No		
	MAINT.	2			20	10	.09	.03	0	2/78	No		
Acrylonitrile	ANAL.				2	1	0.15	0.15	0	6/80		Environmental Lab	
	MAINT.				1	1	<.05	<.05	0	6/80		Downstairs	
	AREA				1	1	<.05	<.05	0	6/80		Upstairs	
	AREA			5mm/cm ²									
Microwave Ovens													

MAP 005160

LAM000987

MAP 005161

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Page 1 of 2
Dept. or Area: Dock 1
Date: July 1980

	FUNCTION AND NUMBER	PEL (Ohr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PPM	Mg/M ³	Other		TOTAL SAMPLES	SAMPLES	LAST SURVEY				
								HIGH	AVERAGE	NO. > PEL		
Ortho xylene	PUMPER GAUGER	100										Not Handled
	PIPE FITTERS	2			3	2	1.81	.91	0	6/80	Yes	Pre-project Board
	PUMPER GAUGER	100			59	12	25.32	7.80	4	6/80	Yes	Vapor Collection
	PIPE FITTERS	2			99	48	5.10	1.35	14*	5/78	Yes	Barge Loading
Acrylonitrile	AREA				122	71	.69	.06	0	6/79	No	Ship Loading
	PUMPER GAUGER	10										
Acetic Acid	MAINT.				X							See Dock 2
	PUMPER GAUGER				41	1c	138.0	138.0	1	10/77	No	Ship Loading-Sampling
Stryene	AREA	100			2	40	.35	.04	0	5/79		Ship Disconn.
	PIPE FITTERS					2	1.12	.22	0	5/79		
Methanol	AREA	200			3	3	12.05	8.05	0	7/79		
S-790-S-711					X							No Method
	AREA	5			6	4	.13	.05	0	1/79		
Phenol												
Butanol	PIPE FITTERS	50			2	2	2.88	2.55	0	7/79		
	PUMPER GAUGER				2c	2	17.0	9.0	1	10/77	No	Ship Loading
	MAINT.				4c	4	.65	.2	0	10/77	No	
	AREA	10			54	9	1.12	.45	0	4/79	No	Barge Unloading
Sodium Hydroxide			2		X							
	PUMPER GAUGER				2c	2	11.5	9.9	1	10/77		
Vinyl Acetate	AREA	10			2c	2	5.54	3.39	0	10/77		
Oxo Alcohol					X							No Method
Ethyl Benzene		100										Not Handled
												Not Handled

*Download samples of barge loading operation - high loading rates

*Downwind samples of barge loading operation - high loading rates

LAM000988

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Page 2 of 2
Dept., or Area: Dock 1
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PPM	Mg/M3	Other		TOTAL SAMPLES	LAST SURVEY			NO. > PEL		
							SAMPLES	HIGH	AVERAGE			
Benzene		10										Not Handled
SAB					X							
DUP					X							
Noise-Dosimeters				90 dBA	X							

MAP 005162

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TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Page 1 of 2
Dept. or Area: Dock 2
Date: July 1980

	FUNCTION AND NUMBER	PEL (Birr. Ceiling)		INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING				BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PPM	Mg/M ³		OTHER	TOTAL SAMPLES	LAST SURVEY			
							SAMPLES	HIGH	AVERAGE	
Napthalene	AREA	10			4	2.33	1.09	0	1/79	Trans. from Barge to Queeny at Dock 1
SAB				X						
Ethyl Benzene		100								
Acetic Acid	PUMPER GAUGER MAINT.	10			8	1.2	0.5	0	9/77	Not Handled
	PUMPER GAUGER				6	2.9	1.5	0	3/77	
	PIPE FITTER				13	.10	.10	0	12/79	Yes
	AREA				63	72.0	16.4	5	6/80	Yes
	PERSONNEL				381	.21	.19	0	12/79	Hose Conn.- Disconn. Pre-Project Board
Acrylonitrile	AREA	2			12	1.22	.22	0	8/79	Vapor Collection
Sodium Hydroxide		2		X	62	1.96	.29	0	8/79	Unit Barge Tow to Port Plastics
Butanol	PIPE FITTER	50								
	PUMPER GAUGER MAINT.	200			2	4.12	2.49	0	12/79	
	AREA				2	9.30	5.13	0	12/79	
	PERSONNEL	200			2	8.79	7.23	0	12/79	
	PERSONNEL AREA	200			2	15.41	7.74	0	12/79	
Methanol	PERSONNEL AREA	200			5	2.22	.88	0	8/79	Unit Barge Tow to Port Plastics
Ortho-xylene	AREA	100			4	1.18	.96	0	8/79	
Vinyl Acetate		10		X	4	0	0	0	10/78	
Phenol		5		X						See Dock 1 Data
Olefins Mix				X						See Dock 1 Data
Noise-Dosimeters				X						
			90 dBA							

MAP 005163

LAM000990

MAP 005164

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Page 2 of 2
Dept. or Area: Dock 2
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		Mg/M3				TOTAL SAMPLES	LAST SURVEY					
		PPM	Mg/M3	Other			SAMPLES	HIGH	AVERAGE	NO. > PEL	DATE	
Benzene	PERSONNEL	10										Not Handled
	AREA	100				12	1.22	.22	0	8/79		Unit Barge Tow to
	PUMPER GAUGER					62	.07	.02	0	8/79		Port Plastics
	MAINT.	100			X							See Dock 1 Data
Styrene	AREA	100			X							See Dock 1 Data
	MAINT.											

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TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Dock 3
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING						BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PPM	Mg/M ³	Other		TOTAL SAMPLES	LAST SURVEY						
							SAMPLES	HIGH	AVERAGE	NO. > PEL	DATE		
Benzene	MAINT. PUMPER GAUGE				111	2	6.99	4.01	0	6/80		Pre-project Board	
	AREA	10			31	2	1.22	.61	0	6/80			
	MAINT. PUMPER GAUGE	100			20	1	.04	.04	0	3/79		Downwind-Barge Unloading	
Ethyl Benzene	MAINT. PUMPER GAUGE				107	42	.38	.27	0	6/80			
					29	2	.20	.13	0	6/80			
Noise-Dosimeters	MAINT. PUMPER GAUGE			90 dBA	X								
Phenol (Urine)	MAINT. PUMPER GAUGE				20	20	48.23	19.20		10/78			
					5	5	30.21	13.80		10/78			

MAP 005165

LAM000992

INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Dock 4

Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)		INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS	
		PPM	Mg/M ³		Other	TOTAL SAMPLES	LAST SURVEY					DATE
							SAMPLES	HIGH	AVERAGE	NO. > PEL		
Toluene	HAZT. AREA	100			2	2	6.94	5.09	0	10/78	No	Barge connect
				4	*2	.09	.08	0	6/80	No		
Condensate Oil												
Napthalene Cond.		10										
#6 Fuel Oil												
Noise-Dosimeters												
Benzene	AREA	10			2	*2	.26	.16	0	6/80		
Ethyl Benzene	AREA	100			2	*2	2.78	2.08	0	6/80		
II-Hexane	AREA	100			2	*2	0	0	0	6/80		
Styrene	AREA	100			2	*2	0	0	0	6/80		
* Unloading condensate oil												

MAP 005166

LAM000993

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Dock 5
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS	
		PPM	Mg/M3	Other		TOTAL SAMPLES	LAST SURVEY			NO. > PEL			DATE
							SAMPLES	HIGH	AVERAGE				
Acetone Cyanohydrin	AREA	1000			3	3	.02	.01	0	5/79			
	MAINT.	10			4	4	.18	.07	0	5/79			
	Pipe Fitter				4	4	18.12	17.37	0	12/78	No	Barge connect	
Acetone	AREA				4	4	.41	.18	0	12/78	No	Barge connect	
Noise-Dosimeters				90 dBA	X								

MAP 005167

LAM000994

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Fence Line
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
		PPM	Mg/M ³	Other		TOTAL SAMPLES	SAMPLES	LAST SURVEY				
								HIGH	AVERAGE	NO. > PEL		
Acrylonitrile	AREA	2				168	72	.13	.10	0	10/79	Twenty-four sample points located around all sides of plant at the fence line.
Hexane	AREA	100				168	72	5.01*	.34	0	10/79	
Acetic Acid	AREA	100				168	72	.67	.11	0	10/79	
Benzene	AREA	10				168	72	.11	.02	0	10/79	
Toluene	AREA	100				168	72	.05	.01	0	10/79	
Styrene	AREA	100				168	72	.35	.09	0	10/79	
Acetone	AREA	1000				72	72	.13	.12	0	10/79	
Ethyl-Benzene	AREA	100				72	72	.16	.02	0	10/79	
O-xylene	AREA	100				72	72	.01	<.01	0	10/79	
Diethyl Benzene	AREA	100				72	72	.30	.02	0	10/79	
Napthalene	AREA	10				72	72	.01	.01	0	10/79	
Acetone Cynohydrin	AREA	HCH 10				72	72	.30	.05	0	10/79	
Di-Methyl Formamide	AREA	SKTH 10				72	72	.45	.04	0	10/79	

Downwind of Gate 3--Hexane unloading area and pellet trap

*Downwind of Gate 3--Hexane unloading area and pellet trap

LAM000995

MAP 005168

MAP 005169

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area Maint.
Date July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS	
		PPM	Mg/M ³	Other		TOTAL SAMPLES	SAMPLES	HIGH	AVERAGE	LAST SURVEY			
										NO. > PEL			DATE
Asbestos	AREA			2 fibers per cc	3	2	0	0	0	2/79	Yes		
	MAINT.			1		0	0	0	2/79				
Welding Fumes	AREA		5		49	4	5.27	1.39	0	4/79		Plasma Cutting torch	
Ozone (welding)	AREA	0.1			4	4	.20	.05	1	4/79		Welding Training Room	
Nitrous Oxide(welding)	AREA	25			4	4	1.0	.8	0	4/79			
Nitrogen Dioxide(welding)	AREA	5			4	4	1.0	.8	0	4/79			
Breathing Air	MAINT.	50(CO) 100(TC)			11	1	.20	.20	0	6/80		Portable air compressor	
	AREA				11	11	.005	<.005	0	12/78		sandblast areas	
Silica	MAINT.												
	AREA				2	1	0.05	0.05	0	6/80		Planning Office	
Microwave Ovens	AREA			5mW/cm ²	1	1	0.01	0.01	0	6/80		Zone 1 Maint. Office	
Noise Dosimeters	MAINT.			90 dBA	65	65	72.0	8	0	6/80		Shops	

LAM000996

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Misc. Areas
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)		INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS	
		PPM	Mg/M3		Other	TOTAL SAMPLES	LAST SURVEY					NO. > PEL
							SAMPLES	HIGH	AVERAGE			
Microwave Ovens	AREA			5mW/cm²		2	1	<0.1	<0.1	0	6/80	CED Temp. Bldg.
	AREA					2	1	<.05	<.05	0	6/80	Cafeteria
	AREA			5mW/cm²		1	1	<.01	<.01	0	6/80	Computer Room Kitchen
	AREA			5mW/cm²		1	1	<.01	<.01	0	6/80	Stores

MAP 005170

LAM000997

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Polyethylene Lab
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS
						TOTAL SAMPLES	LAST SURVEY			NO. > PEL		
		PPM	Hg/M ³	Other			SAMPLES	HIGH	AVERAGE		DATE	
Radiation	PROD.							<2mr	<2mr	0		Film Badges - Monthly
	MAINT. AREA			2 mr		9	9	88.4	25.7	0	3/77	
	MAINT. AREA	100										
Hexane	PROD.					252	3	10	8	0	12/79	Routine Monitoring
	AREA	10										
Chloroform	PROD.											
	AREA											
Microwave Ovens	PROD.					1	1	<.01	<.01	0	6/80	
	AREA			5mM/cm ²								

MAP 005171

LAM000998

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area Power 2 (954)
Date July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)		INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS	
		PPM	Mg/M3		Other	TOTAL SAMPLES	LAST SURVEY					
							SAMPLES	HIGH	AVERAGE			NO. > PEL
Noise-Dosimeters	PROD.				40	99	12.7	1	12/79		Chief Operator	
	MAINT.		90dBA		15	27	4.7	0	12/79			
	AREA				6	0	0	0	1/80			
Muriatic Acid	MAINT.	5			6							
Styrene Tars	PROD.											
	MAINT.											
	PROD.											
Sodium Sulfite	MAINT.											
Methane	PROD.											
	MAINT.	Asphyx.										
	PROD.											
Fuel Oil #6	MAINT.											
Zinc Chromate	PROD.											
	MAINT.											
	AREA		.05(CR)								Liquid solution	
Chlorine	MAINT.	1			8	5	0	0	6/80			
	PROD.											
	MAINT.											
Polyisobutylene	PROD.											
tert-Butyl Alcohol	MAINT.											
	PROD.											
	MAINT.											
tert-Butyl Formamide	PROD.											
Hydrogen Chloride	MAINT.											
	AREA	5			6		0	0	6/80			
	AREA	10			3		.01	.01	6/80			
Hydrogen Cyanide	AREA				1	1	<.01	<.01	6/80			
	AREA		5mW/cm2									

MAP 005172

LAM000999

MAP 005173

TEXAS CITY
INDUSTRIAL HYGIENE STATUS REPORT

Dept. or Area: Process Technology
Date: July 1980

	FUNCTION AND NUMBER	PEL (8hr. Ceiling)			INITIAL DETERMINATION NOT MONITORED	PERSONNEL SAMPLING					BREATHING EQUIPMENT USED	CORRECTIVE ACTION OR STATUS	
		LAST SURVEY				TOTAL SAMPLES	SAMPLES	HIGH	AVERAGE	NO. > PEL			
		PPM	Mg/M3	Other						DATE			
*Non Aromatics (Hexane)	PT												*Cumene B.U., Styrene B.U., Slipstream Unit
	MAINT.	100			36	2	.01	.01	0	6/80	As Required		
	PT												
	MAINT.	10			36	2	.58	.53	0	6/80	As Required		
*Benzene	PT												
	MAINT.	100			36	2	.07	.07	0	6/80	As Required		
	PT												
	MAINT.	100			36	2	.06	.06	0	6/80	As Required		
*Ethyl Benzene	PT												
	MAINT.	100			36	2	.06	.06	0	6/80	As Required		
	PT												
	MAINT.	100			36	2	.08	.05	0	6/80	As Required		
*Styrene	PT												
	MAINT.	100			36	10	.02	.01	0	6/80	As Required		
	PT												
	MAINT.	40			96	10	0	0	0	6/80	As Required		
*Di Ethyl Benzene	PT												
	MAINT.	0.1			96	10	1.92	.69	0	6/80	As Required		
	PT												
	MAINT.	1000			96	10	.60	.13	0	6/80	As Required		
Acetonitrile	PT												
	MAINT.	2		2 fibers per cc	96	4	6.61	3.96	2	2/79	Yes		AN Bench Units & Analytical Labs
	PT												
	MAINT.				4	4	2.82	1.22	0	12/79			AN Bench Units & Analytical Labs
Acrolein	PT												
	MAINT.	50			4								AN Bench Units & Analytical Labs
	PT												
	MAINT.		.05										AN Bench Units & Analytical Labs
Acetone	PT												
	MAINT.												AN Bench Units & Analytical Labs
	PT												
	MAINT.												AN Bench Units & Analytical Labs
Acrylonitrile	PT												
	MAINT.												AN Bench Units & Analytical Labs
	PT												
	MAINT.												AN Bench Units & Analytical Labs
Asbestos	PT												
	MAINT.												Stripping A.C. Lines
	PT												
	MAINT.												Unit Not Yet in Operation
Carbon Monoxide	PT												
	MAINT.												Film Badges - Monthly
	PT												
	MAINT.												
Lead	PT												
	MAINT.												
	PT												
	MAINT.												
Radiation	PT												
	MAINT.												
	PT												
	MAINT.												
Stilbene	PT												
	MAINT.	1 (DMEH)			20	10	.01	<.01	0	6/80			R-1 1106
	PT												
	MAINT.				2	1	.02	.02	0	6/80			R-2 Hall
Microwave Ovens	PT												
	MAINT.												
	PT												
	MAINT.												
Welding Fumes	PT												
	MAINT.												
	PT												
	MAINT.												
Welding Fumes	PT												
	MAINT.												
	PT												
	MAINT.												

*May be high due to analytical interference.

LAM001000

TABLE IV

INITIAL DETERMINATION (ID)

Based on the following assessments, determination is made as to whether the chemical or physical agent may be eliminated from actual measurement for initial baseline determination due to low personnel exposure potential.

1. High TLV (100 ppm)
2. Low Vapor Pressure
3. Odor Threshold
4. Method of Handling
5. Work Practices
6. Ventilation
7. Concentration
8. Toxic Properties

The following chemicals, in our judgment, meet the above criteria for initial determination and will be so indicated in our listing.

MAP 005174

LAM001001

MAP 005175

		Departments	High TLV	Low Vapor Pressure	Odor Threshold	Handling	Work Practices	Ventilation	Concentration	Toxic Properties
1.	Acetylene	10, 35P	X		X	X	X	X		X
2.	Aluminum Powder	13		X				X		X
3.	Butane	10	X			X	X	X		X
4.	n-Butanol	70, 71	X		X	X	X			X
5.	Calcium Hydroxide	34F	X	X		X	X	X		X
6.	Carbon Dioxide	44	X			X	X	X		X
7.	Carbon Dust	56, 33				X	X	X		X
8.	Condensate (SNIFO)	10, 73	X		X	X	X	X		X
9.	Copper Salts-Cat.	48		X		X	X	X		
10.	Diisobutyl Aluminum Hydride	35P	X			X	X	X		X
11.	Ethylene	13, 35P	X		X	X	X	X		X
12.	Flux Oil	14		X	X	X	X	X		
13.	Isobutylene	25, 35P	X		X	X	X	X		X
14.	Napthalene Conc.	10	X	X	X	X	X	X		X
15.	Nickel Salts	44, 48		X		X	X	X		X
16.	Nitrilotriacetic Acid	13, 44	X	X		X	X	X		X
17.	Noise (selected areas) Grds, Docks, 513, Off. Labs, Trk, Str, Instr.						X		X	
18.	Phosphoric Acid	27	X	X		X	X	X		
19.	Phthalic Tars	53		X	X	X	X	X		
20.	Platinum-Rhodium Catalyst	19		X	X	X	X	X		X
21.	Polyethylene Antistats	35F		X		X	X	X		X
22.	Polyethylene Glycol	35F	X	X		X	X	X		X
23.	Polyisobutylenes	25	X	X		X	X	X		X
24.	Propane	10	X			X	X	X		X

LAM001002

	Departments	Departments	High TLV	Low Vapor Pressure	Odor Threshold	Handling	Work Practices	Ventilation	Concentration	Toxic Properties
25. Propylene		51	X		X	X	X	X		X
26. Quench Oils-Dept. 10		10		X	X	X	X	X		
27. Rhodium Iodide		50		X		X	X	X	X	
28. SAB		70,71	X	X		X	X	X		X
29. Sodium Formate		25	X	X		X	X	X		X
30. Sodium Hydroxide	44, 51, 53, 70, 71, 13, 16, 25, 27, 33, 35P		X	X		X	X	X		
31. Sodium Phosphite-Solid	44, 46		X	X	X	X	X	X		X
32. Sodium sulfite	51, 53, 954		X	X	X	X	X	X		X
33. Styrene Tars	16, 954			X	X	X	X			
34. Sulfuric Acid	19, 25, 56, 51, 53		X	X		X	X	X		

MAP 005176

TABLE V
ANALYTICAL METHODS IN USE AT TEXAS CITY

<u>T.C. No.</u>	<u>Analysis</u>	<u>Sample Device</u>	<u>Compounds</u>
IH-1	GRV	Filter	Dust by filter (PE, cat. silica, asbestos, cobalt, etc.)
IH-2	P. Balance	P. Balance	Dust by Piezo Balance (dust and welding fumes, cobalt)
IH-3	G.C.	Biol.	Phenol in urine (Bz exposure)
IH-4	G.C.	T	TBA
IH-5	G.C.	N	N-Hex.
IH-105	G.C.	Badge	N-Hex.
IH-6	G.C.	N	Phenol
IH-7	G.C.	N	Hex, Bz, Tol, EB, SM, DiEB
IH-107	G.C.	Badge	Hex, Bz, Tol, EB, SM
IH-8	G.C.	T	MEI, MEA, HOAC
IH-9	G.C.	N	ACN, DMK, ACK, AN
IH-109	G.C.	Badge	ACN, DMK, ACK, AN
IH-10	G.C.	101	Hex, DMK, AN, BZ, TOL, EB, SM, DiEB, Phenol Napt.
IH-11	G.C.	101	Same as above - PPB calibration
IH-11B	G.C.	T	ACY, HOAC, DMF
IH-12	G.C.	N	Hex, DMK, BZ, AN, EB, SM
IH-112	G.C.	Badge	Hex, DMK, BZ, AN, EB, SM
IH-13	G.C.	Filter	D-154
IH-15	G.C.	Sperocarb	MEOH
IH-16	G.C.	N	ACY, DMK
IH-17	G.C.	Filter	NSI
IH-18	G.C.	NIOSH Glass/C	LN, MEL, LA
IH-19	G.C.	N	DMF
IH-20			Heat
IH-21	G.C.	N	N-Butanol
IH-22	Drager T.		Carbon Monoxide
IH-23	G.C.	Filter	MEHQ (4, methoxy phenol)
IH-24	T.T.	Impinger	Iodine
IH-25	T.T.	Impinger	Hyd. Iodide
IH-26	Dosimeter		Cont. Noise
IH-27	A.A.	Filter	Stanous Oxlate
IH-28			
IH-29	G.C.	Impinger	Stilbene
IH-30			
IH-31	G.C.	FH .5 µl filter	HQ-MEHQ (most any solid material)
IH-32	See 109		
IH-33	G.C.	Impinger	O-xyl, MA, PA (area sample)
IH-34	G.C.	XAD-2 Tube	Stilbene (gas - aerosol)
IH-35	G.C.	Filter	Oxalic Acid
IH-36	G.C.	Sperocarb	ACH

MAP 005177

LAM001004

METHODS AVAILABLE NEEDING ADDITIONAL WORK

<u>Method No.</u>	<u>Areas Used</u>	<u>Work Needed</u>
IH-14	PA, MA, O-xyl	Method failed in first plant test

METHODS IN DEVELOPMENT OR RECORDING STAGE

Lead by AA

METHODS AVAILABLE BUT NOT DEVELOPED FOR TEXAS CITY

NIOSH Methods

Chromium	352, 323, 152, 182
Ethanol	56
Fuel Oil #6	160
Phosphoric Acid	216, 333
Sulfuric Acid	187
Sodium Hydroxide	241

METHODS NEEDED BY PRIORITY

1. Oxo alcohol
2. S790/S711
3. Di-isobutanol
4. Titanium tetrachloride
5. p-tert-butylcatechol
6. HCL tube
7. Condensate mix
8. Polyethylene glycol
9. Methane
10. Sulfonated alkylbenzene

MAP 005178

TABLE VI

INDUSTRIAL HYGIENE MONITORING SCHEDULE--1980

MAP 005179

LAM001006

MONITORING SCHEDULE

JANUARY 1980

<u>Assign- ment</u>	<u>Chemical and/or Physical Agent</u>	<u>Departments or Areas</u>
LW	Acetaldehyde	27
GC	Acetonitrile	51, Bulk Load, Dock 1, 2
GC	Acrolein	51, Bulk Load, Dock 1, 2
GC	Acrylonitrile (AN)	51, Bulk Load, Dock 1, 2
GC	Acetone	51, Bulk Load, Dock 1, 2
LW	Stilbene	ARMS
BM	Noise	Plant Wide
DC & LW	Chlorine	15, 16, 44, 51, 513, 15, 24 Plantwide)
DC & BM	Hydroquinone (HQ)	51
DC & BM	Methyl Ether of Hydroquinone (MEHQ)	51
LW	Hydrogen Chloride	954, 13, 14, 35P, 33
DC	Phthalic Anhydride	53, 56, Bulk Load.

MAP 005180

MONITORING SCHEDULE

FEBRUARY 1980

<u>Assign- ment</u>	<u>Chemical and/or Physical Agent</u>	<u>Departments or Areas</u>
BM	Acetaldehyde	Bulk Load
BM	Acrylonitrile (AN)	Dock, PT, Mon Lab, 513
BM	Acetylene	10, 35P
BM	Butane	10, 35P
BM	Butene	35P
GC	Chlorine	15, 16, 44, 1, 513, 25, 24 (Plantwide)
GC	Condensate (SNIFO)	10, Dock 4
GC	Dimethyl Formamide (DMF)	10
GC	Fuel Oil #6	Dock 4, Power 2
LW	Lactic Acid	33, Mat'l. Hand.
LW	Lactonitrile	27, 33
DC	Lead	ARMS
BM	Maleic Anhydride	53
BM	Phthalic Anhydride	53, 56, Bulk Load.
LW	Methyl Lactate	33
LW	Nitric Oxide	Maint. Shops (Plantwide)
LW	Nitrogen Dioxide	Maint. Shops (Plantwide)
BM	O-xylene	53, Dock 1, 2
LW	Ozone	Maint. Shops
GC	Propane	10
GC	Quench Oil	10
DC & LW	Stilbene	ARMS
GC	Styrene Tars	16, 954
BM	Noise	Plant Wide
GC	Benzene	ARMS
LW	Radiation Wipe Tests (2/19 & 20)	Plantwide

MONITORING SCHEDULE

MARCH 1980

<u>Assign- ment</u>	<u>Chemical and/or Physical Agent</u>	<u>Departments or Areas</u>
LW	Acrylonitrile (AN)	Dock, 51-N
GC	tert-Butyl Amine (TBA)	25, Bulk Load
BM	Calcium Hydroxide	35P, 35F, Power 2
LW	Carbon Dust	33, 56
LW	Diisobutyl Aluminum Hydride (DIBAH)	35P
BM	Dinitrophenol (NSI)	15, 16
BM	Ethyl Chloride	13, 14
LW	Filter Aid	56
GC	Hexane	Bulk Load., PT, 10, 35P, 35F, Mon Lab, PE Lab
BM	Hydrazine	44, 53
BM	Isobutylene	25, 35P
BM & DC	Lead	ARMS
BM	Propylene	51, 10
DC & GC	Stilbene	ARMS
BM	Welding Fumes	Maint. Shops
LW	Benzene	ARMS
BM	Carbon Monoxide (CO)	44

MAP 005182

MONITORING SCHEDULE

APRIL 1980

<u>Assign- ment</u>	<u>Chemical and/or Physical Agent</u>	<u>Departments or Areas</u>
LW	Acetone	29, Mon Lab, Dock 5, PT, 51, 513
LW	Acetone Cyanohydrin (ACY)	29, Mat'l. Hand, Dock 5
LW	Acetonitrile	51, Bulk Load, Mon Lab, Dock 1, 2, PT, 513, 51-N Daily
LW	Acrolein	51, Bulk Load, Mon Lab, Dock 1, 2, PT, 513, 51-N Daily
LW	Acrylonitrile	51, Bulk Load, Mon Lab, Dock 1, 2, PT, 513, 51-N Daily
GC	Asbestos	Plantwide
BM	Benzene	10, 13, 14, 16, Mon Lab, Dock 3, PT
BM	Styrene	10, 13, 14, 16, Mon Lab, Dock 3, PT
BM	Ethylbenzene	10, 13, 14, 16, Mon Lab, Dock 3, PT
BM	Diethylbenzene	10, 13, 14, 16, Mon Lab, Dock 3, PT
BM	Toluene	10, 13, 14, 16, Mon Lab, Dock 4, PT
GC	Breathing Air	Plantwide
GC	Ethane	10
GC	Ethylene	10, 13, 14, 35P, 35F
BM & DC	Lead	ARMS
GC	Nitrilotriacetic Acid (NTA)	13, 44
GC	Stilbene	ARMS
DC & BM	Zinc Chromate	Power 2

MAP 005183

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MONITORING SCHEDULE

MAY 1980

<u>Assign- ment</u>	<u>Chemical and/or Physical Agent</u>	<u>Departments or Areas</u>
GC	Acrylonitrile (AN)	Dock, 51-N
LW	Aluminum	13, 14
LW	Aluminum Chloride Catalyst	13, 14
LW	Ammonia	19, 33, 35P, 51, 513, PT
LW	Freon 22	Plantwide
BM & DC	Lead	ARMS
LW	Methane	19, 16, Power 2
BM	Methanol	33, 44, 35P, 35F, 50, Dock 1, 2, Bulk Load
BM	Mixed Olefins	48
GC	Oxalic Acid	56
GC	Stannous Oxalate	56
LW	Stilbene	ARMS
RM	Monomers Lab Survey	
RM	Benzene	ARMS

MAP 005184

MONITORING SCHEDULE

JUNE 1980

<u>Assign- ment</u>	<u>Chemical and/or Physical Agent</u>	<u>Departments or Areas</u>
BM	Acrylonitrile (AN)	Dock, Dept. 51-N
RM	Calgon SL 500 (NTA)	13, 14, 15, 16, 44
GC	Carbon Dioxide	44
LW	Chromates	35F, 51, 48, 56 (Plantwide CT)
GC	Copper Salts	48-56
RM	Diundecyl Phthalate (DUP)	48-56, Dock 1, Mat'l Hand
BM & DC	Lead	ARMS
DC	Oxo-alcohols	48, Dock 1
GC	Phosphoric Acid	27
DC & LW	Silica	13, 33, 56, Sandblasting
GC	Stilbene	ARMS
BM	PT Labs	
BM	Benzene	ARMS
GC	Microwave Ovens	Cafeteria, CED, Mon Lab, Shops, PT

MAP 005185

MONITORING SCHEDULE

JULY 1980

<u>Assign- ment</u>	<u>Chemical and/or Physical Agent</u>	<u>Departments or Areas</u>
BM	Acrylonitrile (AN)	51, Bulk Load, Mon Lab, Dock 1, 2, PT, 513, 51-N Daily
BM	Acetonitrile	51, Bulk Load, Mon Lab, Dock 1, 2, PT, 513, 51-N Daily
BM	Acetone	51, Bulk Load, Mon Lab, Dock 1, 2, PT, 513, 51-N Daily
BM	Acrolein	51, Bulk Load, Mon Lab, Dock 1, 2, PT, 513, 51-N Daily
LW	Asbestos	Plantwide
LW	Breathing Air	Plantwide
LW	Cobalt	48-56
LW	Heat	15, 35P, 35F, 44, Bulk Load, (Plantwide)
BM	Lead	ARMS
GC	Noise	Plant Wide
RM	S-711	48-56, Dock 1
GC	Stilbene	ARMS
GC	Benzene	ARMS
RM	Plant Chemicals	Fence Line
LW	Status Report	Plantwide

MAP 005186

MONITORING SCHEDULE

AUGUST 1980

<u>Assign- ment</u>	<u>Chemical and/or Physical Agent</u>	<u>Departments or Areas</u>
LW	Acrylonitrile (AN)	Dock, 51-N
LW	n-Butanol	Dock 1, 2
GC	tert-Butyl Alcohol	25, Power 2
LW	tert-Butyl Catechol (TBC)	15, 16, PT
LW	tert-Butyl Formamide (TBF)	25, Power 2
BM	Carbon Monoxide	44, 50, 48-56, Breathing Air
RM	Flux Oil	14
GC	Hydrogen Chloride (HCl)	Power 2, 13, 14, 35P, 33
BM	Lead	ARMS
GC	Muriatic Acid	Power 2, 15, 16
GC	Noise	Plantwide
RM	Stilbene	ARMS
GC	Titanium Tetrachloride (TiCl ₄)	35P
RM	Benzene	ARMS
LW	Radiation Wipe Tests (8/20 & 21)	

MAP 005187

LAM001014

MONITORING SCHEDULE

SEPTEMBER 1980

<u>Assign- ment</u>	<u>Chemical and/or Physical Agent</u>	<u>Departments or Areas</u>
BM	Acetic Acid	50, Bulk Load, Dock 1, 2
GC	Acrylonitrile (AN)	Dock, 51-N
LW	Benzene	10, 13, 14, 16, Mon Lab, Dock 3, PT
LW	Styrene	10, 13, 14, 16, Mon Lab, Dock 3, PT
LW	Diethyl Benzene	10, 13, 14, 16, Mon Lab, Dock 3, PT
LW	Toluene	10, 13, 14, 16, Mon Lab, Dock 3, PT
GC	Iodine	50
RM	Lead	ARMS
BM	Methyl Acetate	50
BM	Methyl Iodide	50
LW	Noise	Plantwide
BM	Propionic Acid	50
GC	Rhodium Carbonyl	50
GC	Rhodium Iodide	50
RM	Stilbene	ARMS
RM	Benzene	ARMS

MAP 005188

MONITORING SCHEDULE

OCTOBER 1980

<u>Assign- ment</u>	<u>Chemical and/or Physical Agent</u>	<u>Departments or Areas</u>
GC	Acetonitrile (AN)	51, Bulk Load, Mon Lab, Dock 1, 2, PT, 513, 51-N Daily
GC	Acrolein	51, Bulk Load, Mon Lab, Dock 1, 2, PT, 513, 51-N Daily
GC	Acrylonitrile	51, Bulk Load, Mon Lab, Dock 1, 2, PT, 513, 51-N Daily
BM	Ammonium Chloride	33
BM	Asbestos	Plantwide
LW	Breathing Air	Plantwide
LW	Lead	ARMS
LW	Noise	Plantwide
RM	Phthalic Esters	56, Dock 1, 2, 53, Bulk Load
RM	Phthalic Tars	56
BM	Stilbene	ARMS
BM	Benzene	ARMS

MAP 005189

MONITORING SCHEDULE

NOVEMBER 1980

<u>Assign- ment</u>	<u>Chemical and/or Physical Agent</u>	<u>Departments or Areas</u>
LW	Acrylonitrile (AN)	Dock, 51-N
BM	Bisphenol A	48-56
RM	Formic Acid	25
LW	Lead	ARMS
GC	Methyl Chloride	33
BM	Polyethylene Dust	35P, 35F, Mat'l Hand
GC	Polyisobutylenes	25, Power 2
RM	Sodium Formate	25
BM	Stilbene	ARMS
GC	Sulphur Dioxide	51, 53
GC	Sulfuric Acid	19, 25, 51, 56, 53
BM	Benzene	ARMS

MAP 005190

LAM001017

MONITORING SCHEDULE

DECEMBER 1980

<u>Assign- ment</u>	<u>Chemical and/or Physical Agent</u>	<u>Departments or Areas</u>
BM	Acrylonitrile (AN)	Dock, 51-N
LW	Glycerol Monostearate	35F
LW	Ionol	35F
BM	Lead	ARMS
LW	Polyethylene Anti-stats	35F
LW	Polyethylene Glycol	35F
GC	Potassium Hydroxide	50
GC	Sodium Hydroxide	10, 44, 51, 53, Dock 1, 2, 13, 16, 25, 27, 33, 35P
GC	Sodium Phosphite	44, 56
GC	Sodium Sulfite	51, 53, Power 2
RM	Stilbene	ARMS
RM	Benzene	ARMS

MAP 005191

MONITORING SCHEDULE

DO AS UNIT'S OPERATIONS PERMIT

<u>Assign- ment</u>	<u>Chemical and/or Physical Agent</u>	<u>Departments or Areas</u>
RM	Copper-Zinc Compounds	44
LW	Dehydro Catalyst	15, 16
RM	Acrylonitrile Catalyst	51, PT
BM	Hydroquinone (HQ)	51
BM	Methyl Ether of Hydroquinone (MEHQ)	51
GC	Naphthalene	Bulk Load (932), Dock 1, 2
LW	Napthalene Concentrate	Dock 4
LW	Nickel Carbonyl	44, 50
LW	Nickel Salts	44, 48
GC	Olefins Mix	48-56, Dock 2
GC	Phenol	Dock 1, 2
BM	Urine Phenol	13, 14, Dock 3
RM	Sulfonated Alky Benzene (SAB)	Dock 1, 2
GC	Vinyl Acetate	Dock 1, 2
BM	Vanadium Pentoxide	53

MAP 005192

LAM001019