

* Filed
OSHA



CELANESE CHEMICAL COMPANY
Chemcel Plant
Bishop, Texas

To: W. H. Meyer

From: A. E. Retherford

AER-37-76

June 22, 1976

OSHA Organization Meeting

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Dr. B. J. Bland
W. T. McNair
Central Files (2)

Uniterns

OSHA
Organization
Update
Sampling
Monitoring
Priorities

File: 259.0

000979

CELANESE CHEMICAL COMPANY
Chemcel Plant
Bishop, Texas

To: W. H. Meyer

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OSHA Organization Meeting

On April 22, 1976, J. M. Ramey (NYO), C. S. Laubly (NYO Corporate Industrial Hygienist) and Dr. B. J. Bland (CCCTC) were in the Bishop Plant for a meeting on the organization of the Bishop Plant OSHA program. Those attending from Bishop were W. L. Sharp (Production), R. N. Updike (Safety), G. D. Boyd (Laboratory) and the writer.

The objective of the meeting was to outline an OSHA program for the Bishop Plant that would mesh with the overall Chemical Company OSHA program. Major topics of the meeting included types of sampling programs required, the monitoring priority of each airborne contaminant, setting up a retrievable file system, and a discussion of sampling and analytical methods. The following items detail the discussions:

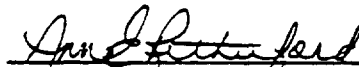
1. A July 1, 1977 objective for completion of the initial OSHA survey was set. Eight-hour time weighted averages (TWA) will be obtained for all airborne contaminants in the initial survey.
2. Following the initial eight-hour TWA (personnel) survey, an area sampling program will be carried out. Plot diagrams of the Bishop Plant are to be used to map high contaminant concentration areas. This will aid in implementing the area (stationary) sampling programs.
3. A third type of sampling program is planned. It will be to monitor both personnel and areas during unusual conditions, e.g. unit upsets, maintenance turnarounds, etc.
4. A retrievable file system is to be initiated for OSHA monitoring data. Data will be filed under three separate categories: a production unit file, chemical contaminant file and a personnel file.

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5. All sampling data is to be documented whether it is personnel sampling, Dräger tubes, area sampling, etc.
6. For sampling where no NIOSH-approved TWA exists, Dräger tubes may be used until more accurate methods are developed.
7. Mr. Ramey requested and received a list of all chemicals, catalyst and raw materials used in the plant, and their major suppliers. This is to help in preparing material safety data sheets.
8. A status report of progress on the survey will be issued approximately every two months.
9. Airborne contaminants in each unit were assigned priorities (1 - 3). An updated list of these are attached (Table I) with each contaminant's TLV (threshold limit value) also listed. Probable sampling and analytical methods for items on this list were discussed.
10. Maintenance personnel are exposed to a greater variation of air contaminants. More monitoring will be required in this department to obtain the proper base case data needed for the survey.
11. All monitoring results are to be reported as mg/M³ for standardization purposes.
12. Approximate costs of OSHA engineering controls are to be included in the bimonthly status reports.
13. It was suggested that all Chemical Company OSHA personnel meet periodically to discuss surveying progress and problems, analytical and monitoring techniques, and to exchange ideas.


A. E. Retherford

AER/jm
Attachment

See Attached Distribution List

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Table I
Airborne Contaminant Priorities

Area/Unit	Compound	Priority	TLV Mg/M ³	Ceiling Limit Mg/M ³ (Minutes of Exposure)
Polvol/Paraform Area				
TMP Unit	Formaldehyde	2	4	12 (30)
	Ethyl Acetate	3	1,400	-
	Acrolein	3	0.25	-
	Trimethylolpropane	3	-	-
	Formic Acid	2	9	-
PE Unit	Acetaldehyde	1	360	-
	Formaldehyde	2	4	12 (30)
	Dust	3	10	-
	Ozone	Completed	0.2	-
	Acetic Acid	3	25	-
	Sulfuric Acid	2	1	-
	Formic Acid	2	9	-
Diacetone Alcohol	Acetone	2	2,400	-
	Mesityl Oxide	Completed	100	-
	Diacetone Alcohol	Completed	240	-
1,3-Butylene Glycol	Acetaldehyde	1	360	-
	Acetic Acid	3	25	-
	Crotonaldehyde	1	6	-
	Nickel	3	1	-
	Butanol	2	300	-
	Hydrogen	3	(A)	-
Weak Formaldehyde Unit	Formaldehyde	2	4	12 (30)
	Methyl Formate	3	250	-
Ester Unit	n-Butyl Acetate	2	710	-
	n-Propyl Acetate	2	840	-
	Acetic Acid	2	25	-
	1-Butanol	2	300	-
	1-Propanol	2	500	-
	Isobutyl Acetate	2	700	-
	Isobutyl Alcohol	2	300	-
	Methane Sulfonic Acid	3	-	-
Methylal Unit	Formaldehyde	2	4	12 (30)
	Methanol	Completed	260	-
	Methylal	Completed	3,100	-
Formcel Unit	Methanol	Completed	260	-
	1-Butanol	Completed	300	-
	Formaldehyde	2	4	12 (30)
Paraform Unit	Formaldehyde	1	4	12 (30)
MS/Oxo Area				
MS Unit	Carbon Dioxide	Completed	9,000	-
	Methane	Completed	(A)	-
	Methanol	Completed	260	-
	Iron Pentacarbonyl	1	0.08	-
	Carbon Monoxide	Completed	55	-
	Hydrogen	Completed	(A)	-
	Ethanol Amine	2	6	-
1-Butanol	Nickel	3	1	-
	Hydrogen	Completed	(A)	-
	1-Butanol	Completed	300	-

(A) Simple Asphyxiants - the minimal oxygen content should be 18 per cent by volume under normal atmospheric pressure

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Table I (Continued)
Airborne Contaminant Priorities

Area / Unit	Compound	Priority	TLV Mg / M ³	Ceiling Limit Mg/M ³ (Minutes of Exposure)
MS/Oxo Area (Cont.)				
1-Propanol	Hydrogen	Completed	(A)	-
	1-Propanol	Completed	500	-
	n-Propionaldehyde	Completed	-	-
	Nickel	3	1	-
n-Butyraldehyde	Rhodium	1	.001	-
	Hydrogen	Completed	(A)	-
	Carbon Monoxide	Completed	55	-
	n-Butyraldehyde	Completed	-	-
	Isobutyraldehyde	Completed	-	-
	Triphenylphosphine	1	-	-
Utilities/MO Area				
Utilities	Methane	Completed	(A)	-
	Carbon Dioxide	Completed	9,000	-
	Dust-Hydrated Lime	1	10	-
	Ethanol Amine	2	6	-
Loading Racks	Methylal	1	3,100	-
	Ethyl Acetate	1	1,400	-
	1-Butanol	Completed	300	-
	1-Propanol	1	500	-
	Diacetone Alcohol	1	240	-
	Acetone	1	2,400	-
	n-Butyl Acetate	Completed	710	-
	n-Propyl Acetate	1	840	-
	Acetaldehyde	1	360	-
	Formaldehyde	1	4	12 (30)
	Methyl Ethyl Ketone	1	590	-
	Sodium Hydroxide	1	2	-
	Sulfuric Acid	1	1	-
	n-Butyraldehyde	1	-	-
MO Units	Isobutyraldehyde	1	-	-
	Silver	3	0.01	-
	Methanol	Completed	260	-
	Formaldehyde	2	4	12 (30)
Maintenance*				
	Formaldehyde	1	4	12 (30)
	Methyl Ethyl Ketone	Completed	590	-
	Toluene	Completed	-	-
	Diacetone Alcohol	1	240	-
	Oil Mist	2	5	-
	1-Butanol	1	300	-
	1-Propanol	1	500	-
	n-Butyl Acetate	1	710	-
	n-Propyl Acetate	1	840	-
	Asbestos	Completed	fibers/cc >5 in length	10 fibers/cc >5 in length
	Chromium	1	25 g/M ³	50 g/M ³ (15)
	Ozone	1	0.2	-
SH-I, II				
	Boron Trifluoride	1	3	3 (Shall not exceed at anytime)
	Dioxane	Completed	360	-
	Ethylene Oxide	1	90	-
	Triethyl Amine	1	100	-
	Monoethanol Amine	1	6	-
	Formaldehyde	1	4	12 (30)
	Methanol	Completed	260	-
	Methylal	2	3,100	-
	Cyclohexane	2	1,050	-

(A) Simple Asphyxiants - the minimal oxygen content should be 18 per cent by volume under normal atmospheric pressure.

* Incomplete List - Will Depend on Work Area

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Table I (Continued)
Airborne Contaminants Priorities

Area / Unit	Compound	Priority	TLV Mg / M ³	Ceiling Limit Mg / M ³ (Minutes of Exposure)
	Formaldehyde	1	4	12 (30)
	Methanol	Completed	260	-
	Dioxane	Completed	360	-
	Trioxane	1	-	-
	Benzene	Completed	30	155 (10)
	Dioxalane	3	-	-
	Sulfuric Acid	3	1	-
	Asbestos	Completed	5 fibers/cc >5 μ in length	10 fibers/cc >5 μ in length (Not to be exceeded at anytime)
	Dust	1	10	-
	Antimony Trioxide	1	0.5	-
Finishing	Formaldehyde	2	4	12 (30)
	Dust	1	10	-
	Zinc Stearate	1	10	-
Products	Formaldehyde	2	4	12 (30)
	Dust	1	10	-
	Carbon Black	1	3.5	-
	Formaldehyde	1	4	12 (30)
	Triethyl Amine	1	100	-
	Dioxalane	3	-	-
	Trioxalane	1	-	-
	Benzene	1	30	155 (10)
	Methylal	2	3,100	-
	Ethylene Oxide	1	90	-
	Boron Trifluoride	1	3	3 (Not to be exceeded at anytime)
Paint	Carbon Black	1	3.5	-
	Cyclohexane	2	1,050	-
	Dibutyltin dilaurate	3	-	-
Plastics	Benzene	1	30	155 (10)
	Formaldehyde	1	4	12 (30)
	Ethylene Oxide	1	90	-
	Oil Mist	2	5	-
	Asbestos	1	5 fibers/cc >5 μ in length	10 fibers/cc >5 μ in length (Not to be exceeded at anytime)
	Methanol	1	260	-
	Trioxane	1	-	-

Complete List - Will Depend on Work Area