CELANESE CHEMICAL COMPANY
Chemcel Plant
Bishop, Texas

UNITERM COPY

G.D. Boyd GDB-3-76 BI
Ann Retherford AER-9-76
BISHOP NJS

KEYPUNCH OPERATOR:
Duplicate for each author.

February 23, 1976

OSHA Industrial Hygiene Inspection - Bishop Plant

1976

MONITOR
FORMALDEHYDE
DIACETONE ALCOHOL
BENZENE
ASBESTOS
CO
OZONE
PARAFORM

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UNITERMS:
OSHA, NIOSH
Monitoring
Inspection
Citation
Formaldehyde
DAA
Benzene
Asbestos
CO
Ozone
Paraform

43030 File: 259.0

*with attachments

000559

PLAINTIFF'S EXHIBIT
CEL-319

CELANESE CHEMICAL COMPANY
Chemcel Plant
Bishop, Texas

To: *See Distribution List

From: G. D. Boyd GDB-3-76
A. E. Retherford AER-9-76
N. J. Sternadel NJS February 23, 1976

OSHA Industrial Hygiene Inspection - Bishop Plant

Summary:

From 11-17-75 to 12-12-75, the Bishop Plant was the subject of an OSHA Industrial Hygiene Inspection by Mr. Ray Skinner, the Corpus Christi Area OSHA Representative. Throughout his inspection, Mr. Skinner was accompanied by the writers. Included in his inspection was the monitoring of employees for exposure to airborne contaminants. This monitoring included Formaldehyde in both the Celcon Natural Finishing Unit and Paraform Bagging Warehouse, Diacetone Alcohol in the Polyol Unit, Benzene in the Trioxane II Unit (Celcon), and Asbestos in the Celanex Unit (Celcon). The Laboratory obtained duplicate samples, when possible, and sampled by the best technique available when duplicate samples could not be taken. All monitoring results were well within OSHA limits.

Several minor citations resulted from the OSHA inspection. They involved failure to monitor CO in the Plant fresh air system, failure to monitor asbestos which resulted from sawing Transite, failure to wear protective equipment, failure to post OSHA-approved asbestos warning signs, failure to give medical examinations to employees sawing Transite who were or may have been exposed to airborne asbestos, and improper guard rails. All violations which resulted in citations have been corrected by the OSHA deadline, except for one. This violation consisted of excessive noise (119 D.B.) on the front of ten - 250 pound boilers. Three of the boilers had been equipped with sound dampening boxes and the plant was given until October, 19[illegible] to install all other sound reducing boxes on the other boilers.

Discussion:

Plant Familiarization

Mr. Skinner began his inspection by familiarizing himself with the Plant. His first day (11-10-75) was spent in conference with Joe Cantrell (Plant Safety Director) in

*Reference to "Plant" throughout this report implies both Chemical and Plastics Plants.

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which he reviewed the Plant safety program. His primary concern was the overall respiratory program, i.e., the location and type of protective equipment, and if written SOP's for the use of this equipment were available. Other areas of concern were written permit procedures, vessel entry procedures, and the monitoring program for CO in the Plant fresh air system.

The next two days (11-11-75 and 11-12-75) involved a walk-through visual inspection of the Plant. He visited each unit to obtain a general layout of the Plant and to find out what products and raw materials were present in each unit. At all times, Mr. Skinner was alert to chemical odors and was able to identify benzene, DAA, and formaldehyde by smell. It is assumed that most of his information as to what to monitor and where, was gathered in this two-day walk-through.

Monitoring

Each day Mr. Skinner monitored for airborne contaminants, he arrived at the Plant Safety Department at approximately 7:30 a.m. From here, he and Joe Sternadel (Plant Safety) would proceed to the Laboratory to be joined by the writers (Gary Boyd, Special Problems Group Leader and Ann Retherford, Plant OSHA Representative). At this time, Mr. Skinner would announce what unit and contaminant was to be monitored that day, and the group would immediately proceed to that unit. Since the Laboratory was making an effort to obtain duplicate samples, we had to be ready to monitor anything on any given morning of his inspection.

Arriving at the unit to be monitored, Mr. Skinner would talk to the Shift Supervisor to determine which operator or helper would have the chance for the greatest exposure to the contaminant to be monitored. This was usually the man who spent the most time outside the control room. Mr. Skinner would then take the man selected aside for a short private talk. On their return, the monitoring procedure would begin. This was generally before 9:00 a.m.

Throughout the inspection, it was Mr. Skinner's objective to obtain samples of an individual's actual breathing air, as continuously as possible, for as close to an eight-hour period as possible. This was to obtain the best possible 8-hour time weighted average (TWA) exposure (see Appendix I) to a contaminant. Obtaining this type of sample was accomplished by attaching a portable sampling device to a man for a full shift. It was intimated by Mr. Skinner that this is the only type of data that will hold up in court, should a citation be contested.

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Formaldehyde in the Celcon Natural Finishing Unit

On 11-17-75, Mr. John L. Moore, operator of Extruder No. 131, was monitored for formaldehyde exposure by the Chromotropic Acid Method (see attached Chemcel Plant Method A-1-30). Impinger No. 1 (see Figure III of Method A-1-30) was attached to Mr. Moore's collar by means of an MSA Midget Impinger Holster (see Table II). Impinger No. 2 was taped to the pump which was attached to Mr. Moore's belt. The pump was started and Mr. Moore was allowed to perform his normal duties. Impingers were recharged periodically with fresh bisulfite solution. The interval between recharges ranged up to 2 hours. Shorter intervals were measured whenever Mr. Skinner wanted to check for ceiling level violations. A combination of all bisulfite charges approximated a continuous sample from which an 8-hour TWA could be calculated.

At the time of the OSHA inspection, the Laboratory was not equipped for personal monitoring of formaldehyde. We were, instead, geared for area sampling. That is, we would situate the equipment (described in Chemcel Plant Method A-1-30) in a work area where the worst possible exposure was expected. From this type of data, a "worst case" 8-hour TWA exposure could be estimated.

The Bishop Laboratory and OSHA Inspector monitoring results for formaldehyde in the Celcon Natural Finishing Unit are shown in Table I.

Formaldehyde in the Paraform Bagging Warehouse

Joe L. Molina and Rudy Ibañez, bagging operators, were monitored 11-18-75 for formaldehyde exposure. Mr. Skinner's procedure and monitoring method were as discussed in the previous section. The Laboratory again obtained area samples for a "worst case" TWA exposure estimation.

At the time the Paraform Bagging Warehouse was monitored, we thought there was a good chance Skinner's results would show the operators' exposure to be near the 8-hour TWA max. For this reason, we asked advice as to how to lower the exposure level. Unofficially, several suggestions were offered:

1. Better vacuum system to remove dust and vapor as the bags are being filled.

2. Completely enclose the bag conveyor system with removable panels so that Paraform from bag breakage can be confined and more easily removed.

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3. A better ventilation system. Skinner said that we have the poorest system, i.e., a portable fan directed at the bagging machine. He used an MSA Ventilation Smoke Tube (see Table II) to demonstrate how the fan was circulating formaldehyde (from bag breakage) to the operators.

4. Better housekeeping procedures, e.g., remove spilled Paraform by vacuum instead of dry sweeping.

5. Rotate bagging operators to other duties more often in a given day. This reduces their time of high formaldehyde exposure, thus reducing the 8-hour TWA exposure.

Monitoring results (Bishop and OSHA) for this unit are shown in Table I.

Polyol Unit for Diacetone Alcohol (DAA)

On 11-19-75, Mr. Skinner requested to be taken to the Polyol Unit where he selected Mr. F. C. Hornsby, operator, to be monitored for DAA exposure. The monitoring method was by NIOSH P. and CAM 127, attached. Skinner's equipment included a Sipin No. SP-1 personal sampling pump, and NIOSH certified SKC charcoal tubes (see Table II). The pump was attached to Hornsby's belt and the tube to his collar. (All equipment for personal sampling by this method, except NIOSH certified charcoal tubes, is included with the Sipin pump upon purchase). The Sipin pump rate is slow enough (40-100 cc/min.) to allow sample times of 5 hours + per tube (charcoal tube capacity 10ℓ). Shorter duration samples (10 min.) were taken whenever Skinner wanted to check for ceiling levels and concentration changes. The only interruption in the sampling procedure was the time required to change charcoal tubes (<1 min.); therefore, a good approximation of an 8-hour TWA exposure was possible by this method.

The Bishop Lab also monitored Hornsby 11-19-75. Our pump (MSA Portable, Table II) could not be operated at slow enough rates (MSA range: 1-2.5ℓ/min.) for continuous sampling. We took 10-minute samples, one per hour.

DAA monitoring results (Bishop and OSHA) are shown in Table II.

Oxo and MS Units for Carbon Monoxide (CO)

Mr. Skinner did not monitor for an 8-hour TWA exposure to CO in Oxo and MS. The The Ecolyzer 2106 CO Monitor (Table II) used by OSHA in obtaining this type of sample is cumbersome and must be hand-carried by the person being monitored. Instead,

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Skinner spot checked the syn gas system for leaks (11-20-75). He was very careful to check gauges, valves, etc. where operator exposure would be likely. He intimated that if the spot checks warranted, he would obtain an 8-hour TWA. The spot checks were made with Dräger Tubes, but any of the detector tubes listed in Table II would be suitable, according to Skinner.

The only thing Mr. Skinner commented on in Oxo/MS was that the CO level around the MS compressors was high (100 ppm vs. 50 ppm TWA). All other high CO areas (Oxo) are well marked with proper warning signs. He was very concerned with, and asked several questions about the high CO level warning system in the Oxo control room.

Trioxane II for Benzene

On 11-24-75, Mr. Skinner monitored Mr. E. R. Pinkerton, an operator in the Celcon Trioxane II Unit, for Benzene exposure. The method and procedure were identical to those used for DAA in Polyol (NIOSH P. and CAM 127, attached). By this time, the Laboratory had received a Sipin SP-1 pump and was able to obtain duplicate samples. Bishop and OSHA results are shown in Table I.

Celanex for Asbestos

On 11-25-75, Mr. Skinner reviewed medical records and asbestos monitoring records with Plant Safety. He returned 12-12-75 to monitor Bruno B. Garcia and Ruban Tanez, operator helpers in Celanex, for exposure to asbestos. The method involved sampling the subjects' breathing air through a millipore 8 μ aerosol filter (Table II) at 2 ℓ/min. by means of an MSA portable pump (Federal Register, Vol. 39, No. 125, sec. 1910.93A, page 23544). Identical samples were obtained by the Laboratory. Results are shown in Table I.

Loading Racks, etc.

It was Mr. Skinner's intention to inspect and monitor the loading racks. However, on the day he had scheduled this part of his inspection, it was raining. He did drive by the loading racks and ask several questions about procedures.

Skinner also made a brief inspection of the Laboratory, but admitted that OSHA rules concerning laboratories were vague.

While in the Paraform Bagging Warehouse, Skinner observed a forklift loading Para pallets into a box car. He spot checked the box car for CO; later discovered the forklift was electric, and rechecked the box car for ozone. The spot checks were made with Dräger Tubes (Table II).

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Inspection Results

The monitoring results (Table I) are all well within OSHA limits. However, this data was taken during normal unit operations. Should an OSHA Inspector be monitoring during upset conditions, a time when exposures are usually higher, a citation is more likely. The best protection against this situation is a good back-file of self monitoring data taken during normal operations. The data is also invaluable should an accident occur.

Attached is a copy of citations resulting from the OSHA inspection. All violations have been corrected by the OSHA deadline (except as noted in the summary) and copies of the violations have been posted as required by law. The Laboratory has initiated a program to daily monitor and document CO in the Plant air system (Item 7, Citation Report) until on-stream analyzers are installed. This monitoring is by NIOSH-certified Dräger tubes (see Table II). The Laboratory has also initiated a program to monitor and document all Plant operations involving asbestos (Item 10, Citation Report).

Since the citations were issued, Mr. Skinner has revisited the Plant to check for compliance. He noted, among other things, compliance with the posting of citations and monitoring of Plant air for CO.

G. D. Boyd A. E. Retherford N. J. Sternadel

GDB/dh
Attachments*

See Attached Distribution List

File: 259.0

Table I - Monitoring Results

Area Monitored	Name	Position	Contaminant Monitored	Monitoring Method	TWA Exposure		Acceptable 8-Hour TWA[2]	Highest Exposure		Ceiling Level (Duration)
					Bishop[1]	OSHA		Bishop	OSHA	
Celcon - Natural Finishing Unit	John L. Moore	Operator	Formaldehyde	Chromotropic Acid[3]	0.60 ppm	Not Significant	3 ppm	0.91 ppm	.27 ppm	10 ppm (30 min.)
Paraform Bagging Warehouse	Joe L. Molina	Bagging Operator	Formaldehyde	Chromotropic Acid[3]	1.3 ppm	1.13 ppm	3 ppm	1.55 ppm	4.71 ppm	10 ppm (30 min.)
Paraform Bagging Warehouse	Rudy Ibanez	Bagging Operator	Formaldehyde	Chromotropic Acid[3]	1.3 ppm	.87 ppm	3 ppm	1.55 ppm	4.71 ppm	10 ppm (30 min.)
Diacetone Alcohol Unit	F.C. Hornsby	Operator	DAA	Organic Vapor Sampling Tubes[4]	<1 ppm	<2.5 ppm	50 ppm	<1 ppm	<2.5 ppm	Not Applicable
Trioxane-II Unit - Celcon	E.R. Pinkerton	Operator	Benzene	Organic Vapor Sampling Tubes[5]	.79 ppm	Not Significant	10 ppm	7.2 ppm	0.7 ppm	50 ppm (10 min.)
Celanex Unit Celcon	Bruno B. Garcia	Helper	Asbestos	Aerosol Filter attached to portable pump[4]	0.02 fibers	.04 fibers	≤5 fibers longer than 5 micrometers per cu. centimeter of air	0.04	1 fiber	≤10 fibers longer than 5 micrometers per cubic centimeters of air
Celanex Unit Celcon	Ruban Tamez	Helper	Asbestos	Aerosol filter attached to portable pump[4]	0.025 fibers	.02 fibers	≤5 fibers longer than 5 micrometers per cubic centimeters of air	0.02	.4 fibers	≤10 fibers longer than 5 micrometers per cubic centimeters of air.

[1] See Appendix I.

[2] Federal Register, Volume 39, No. 125, pp. 23541-23543.

[3] Laboratory analysis by Chromotropic Acid Method, Chemcel Plant Method A-1-30.

[4] Analysis by National Loss Control Service Corporation, Environmental Science Laboratory, Long Grove, Illinois, 1-06-76.

[5] Analysis Method NIOSH Occupational Exposure to Benzene Document (HEW Publication No. 74-137), E. S. Ramey, CCCTC, ESR-282-76.

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Table II - Equipment Information

Equipment	Possible Use	Where to Obtain
Midget Impinger Holster Midget Impinger with Fritted Glass Scrubber	Determination of various components in the air by absorption, such as Formaldehyde, Sulfur Dioxide, dust, and ozone.	Mine Safety Appliances Co. Pittsburgh, PA 15208
MSA Portable Pump with Sampling Range 1-2.5 liters/min.	To be used with impingers, aerosol filter discs, charcoal tubes, etc.	Mine Safety Appliances Co. Pittsburgh, PA 15208
NIOSH-Approved Charcoal Tubes	Organic Vapor Detection	SKC P. O. Box 8538 Pittsburgh, PA 15220
Sipin Personal Sampler Model No. SP-1 with range of 40-200 cc/min.	(Small volume pump) to be used with charcoal tubes for organic vapors.	Anatole J. Sipin Co. 425 Park Ave., So. New York, N. Y. 10016
Pocket Sampling Pump	Same as above.	SKC P. O. Box 8538 Pittsburgh, PA 15220
Detector Tubes (Various brands:) with respective pumps	Dräger, MSA, Bendix Caster — Can be used for spot checks and some ceiling concentrations.	Various Distributors
Ecolyzer 2106 CO Monitor with strip chart recorder.	Gives automatic time weighted average.	Energetics Science, Inc. Elmsford, N. Y.
MSA Ventilation Smoke Tubes	For correct air current patterns.	Mine Safety Appliances Co. Pittsburgh, PA 15208
Millipore Aerosol Filters	Used with MSA portable pump for asbestos monitoring and nuisance dust. (.8 micrometer porosity used with asbestos).	Millipore Corporation Bedford, Mass.

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Appendix I

8-Hour Time Weighted Average Calculations[1]

The cumulative exposure for an 8-hour work shift shall be computed as follows:

$$E = \frac{CaTa + CbTb + \cdots CnTn}{8}$$

Where:

E is the equivalent exposure for the working shift.

C is the concentration during any period of time T where the concentration remains constant.

T is the duration in hours of the exposure at the concentration C.

Reference:

[1]Federal Register, Vol. 39, No. 125, p. 23540.

File: 259.0

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

CSHO NO.	OSHA-1 NO.	FY
59361	129	00
AREA	REGION	
3030	6	

1. U. S. Department of Labor
Occupational Safety & Health
1325 S. 77 Sunshine Strip, Suite 9
Harlingen, Texas 78550

512/425-6811

TO: 2. Celanese Corporation
1211 Avenue of the Americas
New York, New York 10036

Atts: John McCombe, President

3. Date January 9, 1976
THERE IS NO REQUIREMENT THAT THIS NOTIFICATION BE POSTED.

NOTIFICATION OF PROPOSED PENALTY

This notification and the penalty(ies) proposed by the Treasury of Labor shall be deemed to be the final order of the Occupational Safety and Health Review Commission (an independent agency with authority to issue decisions respecting citations and proposed penalties) and not subject to review by any court or agency unless, within 15 working days from the date of receipt of this notification, you submit a letter of contest. The letter of contest should be mailed or otherwise delivered to the Area Director named below at the address shown at the top of this notification. If no notice of contest is filed within the 15 working day period the proposed penalty(ies) becomes final and is immediately payable.

Payment of all penalties shown is to be made by check or money order payable to the order of "Occupational Safety and Health-Labor". Payment of penalties should be remitted to the Area Director at the address shown above.

Section 17(1) of the Act states: "Civil penalties owed under this Act shall be paid into the Treasury of the United States and shall accrue to the United States and may be recovered in a civil action in the name of the United States brought in the United States district court for the district where the violation is alleged to have occurred or where the employer has its principal office."

4. On the 9th day of January, 1976 a citation(s) was issued to you in accordance with the provisions of Section 9(a) of the Occupational Safety and Health Act of 1970 (Pub. Sec. 1600; 29 U.S.C. 651, et seq.) hereinafter referred to as the Act. You were thus notified of certain alleged violations of the Act, as specified in that citation(s).

YOU ARE HEREBY NOTIFIED that pursuant to the provisions of Section 10(a) of the Act, the penalty(ies) set forth below is/are being proposed, based on the citation(s).

5. VIOLATIONS

5A. Citation No.	5B. Item No.	5C. Proposed Penalty

6. NONSERIOUS VIOLATIONS

6A. Citation No.	6B. Item No.	6C. Proposed Penalty
1	1	None
1	2	None
1	3	50.00
1	4	None
1	5	50.00
1	6	None
1	7	None
1	8	35.00
1	9	None
1	10	None
1	11	None
1	12	30.00

7. Total Proposed Penalty for All Alleged Violations $ 165.00

Area Director: THOMAS T. CURRY
Date: January 9, 1976

The proposed penalty for Nonserious Violations of safety and health standards reflects a 50 percent adjustment factor for corrective action to be taken within the period prescribed in the citation. If a particular alleged violation is not corrected within this period, the 50 percent adjustment will be added to such other penalty as may subsequently be proposed for failure to correct a violation within the abatement period. No abatement credit is allowed for violations of recordkeeping or posting requirements.

GPO 930-035

OSHA-3
Rev. Nov. 1972

000569

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

CSHO NO.	OSHA-1 NO.	FY
59361	129	00
AREA	REGION	
3030	6	

CITATION

1. U. S. Department of Labor
Occupational Safety & Health
1325 S. 77 Sunshine Strip, Suite 9
Harlingen, Texas 78550

512/425-6811

TO: 2. Celanese Corporation
1211 Avenue of the Americas
New York, New York 10036

Attn: John McComber, President

3. Citation Number 1

4. Page 1 of 5. 5

6. TYPE OF ALLEGED VIOLATION(S): NONSERIOUS

An inspection was made on 7. 11/11 - 12/15, 1975 of a place of employment located at:

8. U. S. Highway 77, Bishop, Texas 78343 and described as follows:

9. Chemical and Plastics Plant

On the basis of the inspection it is alleged that you have violated the Occupational Safety and Health Act of 1970, 29 U.S.C. 651 *et seq.*, in the following respects:

10. Item number	11. Standard, regulation or section of the Act allegedly violated	12. Description of alleged violation	13. Date by which alleged violation must be corrected
1	29 CFR 1910.22(d)(1)	Approved load limit was not posted at the following locations: (a) Mezannine in instrument shop. (This was noted on 11/12/75.) (b) Storage area above lunch room in maintenance shop located in the plastic section. (This was noted on 11/13/75.)	January 19, 1976
2	29 CFR 1910.23(1)(1)	Open-sided floor more than four (4) feet above the adjacent floor level in the following location was not guarded by a standard railing or the equivalent: Catwalk adjacent to Boiler No. 9 in the enclosed boiler house.	January 13, 1976
3	29 CFR 1910.95(a)	Protection against the effects of noise exposure was not provided employee exposed to noise levels exceeding those shown in Table G-16, at the following location: In area around Faraday noise horn at control panel near celcon extruder #131, employee was exposed to noise levels in excess of 115dB(A). This was noted on 11/17/75.	January 13, 1976
4	29 CFR 1910.95(b)(1)	Administrative or engineering controls were not utilized at the following locations where employee was subjected to sound levels exceeding those listed in Table G-16: (a) Employee was working around Faraday horn near celcon extruder #131 where noise levels were in excess of 115dB(A). This was noted on 11/17/75. (b) Employee was exposed to noise levels in excess of 115 dB(A) in the enclosed boiler house. This was noted on 12/12/75.	By February 23, 1976, submit and obtain approval of OSHA for a program of engineering or administrative controls which will lead to abatement.

The law requires that a copy of this citation shall be prominently posted in a conspicuous place at or near each place that an alleged violation referred to in the citation occurred. The citation must remain posted until all alleged violations cited therein are corrected, or for 3 working days*, whichever period is longer.

RIGHTS OF EMPLOYEES

Any employee or representative of employees who believes that any period of time fixed in this citation for the correction of a violation is unreasonable has the right to contest such time for correction by submitting a letter to the U.S. Department of Labor at the address shown above within 15 working days* of the issuance of this citation.

"No person shall discharge or in any manner discriminate against any employee because such employee has filed any complaint or instituted or caused to be instituted any proceeding under or related to this Act or has testified or is about to testify in such proceeding or because of the exercise by such employee on behalf of himself or others of any right afforded by this Act." Sec. 11(c)(1) of the Occupational Safety and Health Act of 1970, 29 U.S.C. 651, 660(c)(1).

*Under the Occupational Safety and Health Act, the term "Working Day" means Mondays through Fridays but does not include Saturdays, Sundays, or Federal Holidays.

14. Area Director's Signature: Thomas T. Curry THOMAS T. CURRY Issuance Date January 9, 1976

(NOTICE: Additional Important Information On Reverse Side)

Form OSHA-2

43030

000570

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

CSHO ID	INSPECT NO	FY
59361	129	00
AREA	REGION	
3030	6	

CITATION

U. S. Department of Labor
Occupational Safety & Health
1325 S. 77 Sunshine Strip, Suite 9
Harlingen, Texas 78550

512/425-6811

TO: 2. Celanese Corporation
1211 Avenue of the Americas
New York, New York 10036

Attn: John McComber, President

3. Citation Number 1

4. Page 2 of 5 5

6. TYPE OF ALLEGED VIOLATION(S): NONSERIOUS

7. An inspection was made on 11/11 - 12/15, 1975 of a place of employment located at:

8. U. S. Highway 77, Bishop, Texas 78343 and described as follows:

9. Chemical and Plastics Plant

On the basis of the inspection it is alleged that you have violated the Occupational Safety and Health Act of 1970, 29 U.S.C. 651 *et seq.*, in the following respects:

10. Item Number	11. Standard, regulation or section of the Act allegedly violated	12. Description of alleged violation	13. Date by which alleged violation must be corrected
4	29 CFR 1910.95(b)(1) continued from page 1		The plan must include a step-by-step procedure with a time-table for completion of each step. Voluntary progress report should be submitted at the end of each 30 day period until abatement is complete. Voluntary progress reports will be considered as evidence of good faith. Once the plan is approved, it must be implemented in accordance with the approved time limit.

The law requires that a copy of this citation shall be prominently posted in a conspicuous place at or near each place that an alleged violation referred to in the citation occurred. The citation must remain posted until all alleged violations cited therein are corrected, or for 3 working days*, whichever period is longer.

RIGHTS OF EMPLOYEES

Any employee or representative of employees who believes that any period of time fixed in this citation for the correction of a violation is unreasonable has the right to contest such time for correction by submitting a letter to the U.S. Department of Labor at the address shown above within 15 working days* of the issuance of this citation.

"No person shall discharge or in any manner discriminate against any employee because such employee has filed any complaint or has instituted or caused to be instituted any proceeding under or related to this Act or has testified or is about to testify in such proceeding or because of the exercise by such employee on behalf of himself or others of any right afforded by this Act." Sec. 11(c)(1) of the Occupational Safety and Health Act of 1970, 29 U.S.C. 651, 660(c)(1).

*Under the Occupational Safety and Health Act the term "Working Day" means Mondays through Fridays but does not include Saturdays, Sundays, or Federal Holidays.

14. Area Director's Signature [illegible] Issuance Date January 9, 19 76

(NOTICE: Additional Important Information On Reverse Side) Form OSHA-2

000571

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

CITATION

U. S. Department of Labor
Occupational Safety & Health
1325 S. 77 Sunshine Strip, Suite 9
Harlingen, Texas 78550

512/425-6811

EMPLOYEE NO.	ESTAB. NO.	FY
59361	129	00
AREA	REGION	
3030	6	

TO: a. Celanese Corporation
1211 Avenue of the Americas
New York, New York 10036

Attn: John McCumber, President

3. Citation Number 1

4. Page 3 of 5

6. TYPE OF ALLEGED VIOLATION(S): NONSERIOUS

7. An inspection was made on 11/11 - 12/15, 19 76 of a place of employment located at:

8. U. S. Highway 77, Bishop, Texas 78343 and described as follows:

9. Chemical and Plastics Plant

On the basis of the inspection it is alleged that you have violated the Occupational Safety and Health Act of 1970, 29 U.S.C. 651 *et seq.*, in the following respects:

10. Item number	11. Standard, regulation or section of the Act allegedly violated	12. Description of alleged violation	13. Date by which alleged violation must be corrected
5	29 CFR 1910.133(a)(1)	Protective eye equipment was not worn by employee working in the following location: Benzene extraction section of Trioxane Unit, employee took a number of benzene samples without wearing adequate protective eye equipment. This condition was noted on 11/24/75.	January 13, 1976
6	29 CFR 1910.134(b)(6)	The following respirator was not stored in a clean, sanitary location: Organic vapor respirator was stored out in the open on top of a shelf in the corner of the MO_4 control room. This was noted on 11/12/75.	January 13, 1976
7	29 CFR 1910.134(d)(2)(ii)	The compressor for supplying air shall be equipped with the necessary safety and standby devices. A breathing air-type compressor shall be used. Alarms to indicate compressor failure and overheating shall be installed in the system. If an oil-lubricated compressor is used, it shall have a high-temperature or carbon monoxide alarm, or both. If only a high-temperature alarm is used, the air from the compressor shall be frequently tested for carbon monoxide to insure that it meets the specifications for Grade D breathing air as described in the Compressed Gas Association Commodity Specification G-7.1-1966: Five compressors are utilized to produce plant air, three of which are in continual service while two are standby compressors. Of the three continual use compressors, one has an alarm while the remaining two have shut-down protective devices. The two standby compressors are neither equipped with alarms nor shutdown protective devices. Laboratory tests have been performed in the past for carbon monoxide, but these tests were not frequent. This was noted on 11/26/75.	January 13, 1976

The law requires that a copy of this citation shall be prominently posted in a conspicuous place at or near each place that an alleged violation referred to in the citation occurred. The citation must remain posted until all alleged violations cited thereon have been corrected, or for 3 working days*, whichever period is longer.

RIGHTS OF EMPLOYEES

Any employee or representative of employees who believes that any period of time fixed in this citation for the correction of any violation is unreasonable has the right to contest such time for correction by submitting a letter to the U.S. Department of Labor at the address shown above within 15 working days* of the issuance of this citation.

"No person shall discharge or in any manner discriminate against any employee because such employee has filed any complaint or instituted or caused to be instituted any proceeding under or related to this Act or has testified or is about to testify in such proceeding or because of the exercise by such employee on behalf of himself or others of any right afforded by this Act." Sec. 11(c)(1) of the Occupational Safety and Health Act of 1970, 29 U.S.C. 651, 660(c)(1).

*Under the Occupational Safety and Health Act, the term "Working Day" means Mondays through Fridays but does not include Saturdays, Sundays, or Federal Holidays.

14. Area Director's Signature THOMAS T. CURRY Issuance Date January 9, 19 76

(NOTICE: Additional Important Information On Reverse Side)

Form OSHA-2

000572

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

CITATION

U. S. Department of Labor
Occupational Safety & Health
1325 S. 77 Sunshine Strip, Suite 9
Harlingen, Texas 78550

512/425-6811

OSHA NO.	OSHA-1 NO.	PE
59361	129	00
AREA	REGION	
3030	6	

TO: Celanese Corporation
1211 Avenue of the Americas
New York, New York 10036

Attn: John McComber, President

2. Citation Number 1

4. Page 4 of 6. 5

6. TYPE OF ALLEGED VIOLATION(S): NONSERIOUS

7. An inspection was made on 11/11 - 12/15, 19 75 of a place of employment located at:

8. U. S. Highway 77, Bishop, Texas 78343 and described as follows:

9. Chemical and Plastics Plant

On the basis of the inspection it is alleged that you have violated the Occupational Safety and Health Act of 1970, 29 U.S.C. 651 *et seq.*, in the following respects:

10. Item number	11. Standard, regulation or section of the Act allegedly violated	12. Description of alleged violation	13. Date by which alleged violation must be corrected
8	29 CFR 1910.134(f)(2)(i)	All respirators shall be inspected routinely before and after each use. A respirator that is not routinely used but is kept ready for emergency use shall be inspected after each use and at least monthly to assure that it is in satisfactory working condition: A chlorine gas canister located in the safety warehouse which was available for use had seal broken on 4/22/74. According to the manufacturer's recommendations, it should have been discarded one year after the seal was broken. This was noted on 11/12/75.	January 13, 1976
9	29 CFR 1910.1001(f)(1)	Every employer shall cause every place of employment where asbestos fibers are released to be monitored in such a way as to determine whether every employee's exposure to asbestos fibers is below the limits prescribed in paragraph (b) of this section. If the limits are exceeded, the employer shall immediately undertake a compliance program in accordance with paragraph (c) of this section: There was absolutely no monitoring performed of the asbestos sheet sawing operation in outside area adjacent to the carpenter shop. This was noted on 11/25/75.	January 13, 1976
10	29 CFR 1910.1001(g)(1)(i)	Caution signs shall be provided and displayed at each location where airborne concentrations of asbestos fibers may be in excess of the exposure limits prescribed in paragraph (b) of this section. Signs shall be posted at such a distance from such a location so that an employee may read the signs and take necessary protective steps before entering the area marked by the signs: There were absolutely no warning signs in the area around the carpenter shop where sheets containing asbestos were sawed. This was noted on 11/25/75.	January 13, 1976

The law requires that a copy of this citation shall be prominently posted in a conspicuous place at or near each place that an alleged violation referred to in the citation occurred. The citation must remain posted until all alleged violations cited therein are corrected, or for 3 working days*, whichever period is longer.

RIGHTS OF EMPLOYEES

Any employee or representative of employees who believes that any period of time fixed in this citation for the correction of a violation is unreasonable has the right to contest such time for correction by submitting a letter to the U.S. Department of Labor at the address shown above within 15 working days* of the issuance of this citation.

"No person shall discharge or in any manner discriminate against any employee because such employee has filed any complaint or instituted or caused to be instituted any proceeding under or related to this Act or has testified or is about to testify in such proceeding or because of the exercise by such employee on behalf of himself or others of any right afforded by this Act." Sec. 11(c)(1) of the Occupational Safety and Health Act of 1970, 29 U.S.C. 651, 660(c)(1).

*Under the Occupational Safety and Health Act, the term "Working Day" means Mondays through Fridays but does not include Saturdays, Sundays, or Federal Holidays.

14. Area Director's Signature THOMAS T. CURRY Issuance Date January 9, 19 76

(NOTICE: Additional Important Information On Reverse Side)

Form OSHA-2

43050

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

U. S. Department of Labor
Occupational Safety & Health
1325 S. 77 Sunshine Strip, Suite 9
Harlingen, Texas 78550

512/425-6811

CASE NO.	OSHA-1 NO	PV
59361	129	00
AREA	REGION	
3030	6	

CITATION

TO: a. Celanese Corporation
1211 Avenue of the Americas
New York, New York 10036

Attn: John McCombe: , President

3. Citation Number 1

4. Page 5 of 5 pages

6. TYPE OF ALLEGED VIOLATION(S): NONSERIOUS

7. An inspection was made on 11/11 - 12/15, 19 75 of a place of employment located at:

8. a. U. S. Highway 77, Bishop, Texas 78343 and described as follows:

9. Chemical and Plastics Plant

On the basis of the inspection it is alleged that you have violated the Occupational Safety and Health Act of 1970, 29 U.S.C. 651 et seq., in the following respects:

10. Item number	11. Standard, regulation or section of the Act allegedly violated	12. Description of alleged violation	13. Date by which alleged violation must be corrected
11	29 CFR 1910.1001(g)(1)(ii)	Asbestos warning signs did not meet the requirements and specifications of this section, in the following areas: (a) In the asbestos glove box operation in Bldg. 533, 6th floor, elevation 125.6(special products bldg.) where the warning sign did not conform to the standard color requirements of vertical format signs specified in 29 CFR 1910.145(d)(4). In addition, the wording requirements of section 29 CFR 1910.1001(g)(1)(ii) were not complied with. (b) In the asbestos dust collection and disposal area located on the outside where the standard color requirements of vertical format signs specified in 29 CFR 1910.145(d)(4) were not complied with, neither was the spacing requirements complied with in 1910.1001(g)(1)(ii). The above conditions were noted on 11/13/75.	January 13, 1976
12	29 CFR 1910.1001(j)(3)	At least annually, every employer shall provide, or make available, comprehensive medical examinations to each of his employees engaged in occupations exposed to airborne concentrations of asbestos fibers. Such annual examination shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second (F.E.V.1.0). Employees working in the carpenter shop area who sawed sheets containing asbestos material were not given a medical examination relative to asbestos exposures. This was noted on 11/25/75.	January 13, 1976

The law requires that a copy of this citation shall be prominently posted in a conspicuous place at or near each place that an alleged violation referred to in the citation occurred. The citation must remain posted until all alleged violations cited therein are corrected, or for 3 working days*, whichever period is longer.

RIGHTS OF EMPLOYEES

Any employee or representative of employees who believes that any period of time fixed in this citation for the correction of a violation is unreasonable has the right to contest such time for correction by submitting a letter to the U.S. Department of Labor at the address shown above within 15 working days* of the issuance of this citation.

"No person shall discharge or in any manner discriminate against any employee because such employee has filed any complaint or instituted or caused to be instituted any proceeding under or related to this Act or has testified or is about to testify in such proceeding or because of the exercise by such employee on behalf of himself or others of any right afforded by this Act." Sec. 11(c)(1) of the Occupational Safety and Health Act of 1970, 29 U.S.C. 651, 660(c)(1).

*Under the Occupational Safety and Health Act, the term "Working Day" means Mondays through Fridays but does not include Saturdays, Sundays, or Federal Holidays.

14. Area Director's Signature THOMAS T. CURRY Issuance Date January 9, 19 76

(NOTICE: Additional Important Information On Reverse Side)

Form OSHA-9

43030

000574

The issuance of a citation does not constitute a finding that a violation of the Act has occurred unless there is a failure to contest as provided for in the Act or, if contested, unless the citation is affirmed by the Occupational Safety and Health Review Commission.

DESCRIPTIONS OF TYPES OF VIOLATIONS

NONSERIOUS violation is one which is not a serious violation within the meaning of the Act but which has a direct or immediate relationship to occupational safety and health.

SERIOUS violation, according to the Act, "shall be deemed to exist in a place of employment if there is a substantial probability that death or serious physical harm could result from a condition which exists, or from one or more practices, means, methods, operations, or processes which have been adopted or are in use, in such place of employment unless the employer did not, and could not with the exercise of reasonable diligence, know of the presence of the violation."

WILLFUL violation exists under the Act where the evidence shows (1) that the employer committed an intentional and knowing violation of the Act and the employer is conscious of the fact that what he is doing constitutes a violation of the Act, or (2) even though the employer was not consciously violating the Act, he was aware that a hazardous condition existed and made no reasonable effort to eliminate the condition.

REPEATED violation exists where the employer has abated an earlier violation, for which a citation was issued, and, upon later inspection, is found to have committed the same violation.

Correspondence, or other forms of communication, relative to this citation should be directed to the office shown at the top of front page of this form. In correspondence, please refer to the OSHA-1 No. which appears in the upper right-hand corner of front page of this citation.

Revised OSHA-2

000575