U.S. DEPARTMENT OF LABOR

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

In the Matter of: Monsanto Fibers and Intermediates Co.

OSHA No.(s): 1960B-167, Citation No. 1, OTHER

INFORMAL SETTLEMENT AGREEMENT

The undersigned Employer and the undersigned Occupational Safety and Health Administration (OSHA), in settlement of the above citation(s) and penalties which were issued on August 22, 1983, hereby agree as follows:

1. The Employer agrees to correct the violations as cited in the above citations or as amended below.

2. The Employer agrees to pay the proposed penalties, if any, as issued with the above citation(s), or, if amended by this agreement, as amended below.

3. The Employer and OSHA agree that the following citations and penalties (if any) are not being amended by this agreement:

N/A

4. OSHA agrees that the following citations and penalties are being amended as shown (see attachments):

5. The Employer, by signing this informal settlement agreement, hereby waives its rights to contest the above citation(s) and penalties, as amended in paragraph 4 of this agreement.

6. The Employer agrees to immediately post a copy of this Settlement Agreement in a prominent place at or near the location of the violation(s) referred to in paragraphs 3 and 4 above. This Settlement Agreement must remain posted until the violations cited have been corrected, or for 3 working days (excluding weekends and Federal Holidays), whichever is longer.

Robert J. Hermann
FOR THE EMPLOYER

Gerald A. Baty
FOR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

9/1/83
DATE

NOTICE TO EMPLOYEES

The law gives you or your representative the opportunity to object to any abatement date set for a violation if you believe the date to be unreasonable. Any contest to the abatement dates of the citations amended in paragraph 4 of this Settlement Agreement must be mailed to the U.S. Department of Labor-OSHA, 2320 LaBranch, Room 2118, Houston, Texas 77004, within 15 working days (excluding weekends and Federal Holidays) of the receipt by the Employer of this Settlement Agreement. You or your representative also have the right to object to any of the abatement dates set for violations referred to in paragraph 3 provided that the objection is mailed to the office shown above within the 15 working day period established by the original citation.

C 002182

CBY 3103788

U.S. Department of Labor
Houston Area Office
2320 LaBranch, Room 1103
Houston, Texas 77004

Occupational Safety and Health Administration

Reply to the Attention of:

August 22, 1983

Monsanto Fibers and Intermediates Company
and its successors
P.O. Box 1311
Texas City, Texas 77590
ATTN: Mr. Gene L. Tromblee, Plant Manager

RE: M6013-167

Dear Mr. Tromblee:

Enclosed you will find citations for violations of the Occupational Safety and Health Act of 1970 (the Act) which may have accompanying proposed penalties. Also enclosed is a booklet which explains your rights and responsibilities under the Act. As indicated on page 2 of the booklet, you may request an informal conference with me during the 15-working-day notice of contest period. During the informal conference you may present any evidence or views which you believe would support an adjustment to the citation or the penalty.

If you decide to request an informal conference, please complete the form at the bottom of this letter and post it next to the citations immediately after determining the time, date, and place of the informal conference.

If you have any questions about the enclosed citations and penalties, I would welcome further discussion at the informal conference; and, where warranted, I am authorized to enter into an informal settlement agreement with you which amicably resolves this matter without litigation or contest. If you have any questions regarding the informal conference, please contact me.

Sincerely,

GERALD A. BATY
Area Director

Enclosures

Scheduled 8/29 and posted w/ citation on 8/29

An informal conference has been scheduled with OSHA do discuss the citations issued on 8-22-83. The conference will be held at the OSHA office located at 2320 LaBranch Houston (Address) on 9-1-83 (Date) at 10:30 (Time).

CBY 3103789

C 002183

ITEM NUMBER STANDARD, REGULATION OR SECTION OF THE ACT VIOLATED; DESCRIPTION	DATE BY WHICH VIOLATION MUST BE CORRECTED	PENALTY
The issuance of this 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 Review Commission. The violations described in this citation are alleged to have occurred on or about the day the inspection was made unless otherwise indicated within the description given below.		
1 29 CFR 1910.1001(f)(2)(ii): The airborne asbestos monitoring schedule was not of sufficient frequency and pattern as to represent with reasonable accuracy the levels of employee exposure to airborne asbestos fibers: (a) Monsanto Fibers and Intermediates Company in Texas City, Texas, does not conduct personal monitoring for airborne asbestos fibers at intervals of 6 months of less for employees whose exposure to asbestos may reasonably be foreseen to exceed the limits prescribed by paragraph b of 29 CFR 1910.1001.	Immediately Upon Receipt	$0
2 ITEM DELETED BY SETTLEMENT AGREEMENT 29 CFR 1910.1001(j)(2): The employer did not provide or make available, to each employee, within 30 days following his first employment in an occupation exposed to airborne levels of asbestos fibers, a comprehensive medical examination: (a) On June 30, 1983, an employee working on Unit 16 E2 was exposed to 0.23 fibers per cubic centimeter of air. This exposure occurred during an asbestos insulation removal. The sample taken was a 15-minute ceiling sample.	9/26/83	$0
14 AREA DIRECTOR FRED A. DAY		13 $0

C 002184

CBY 3103790

days (excluding weekends and Federal holidays) whichever is longer.

This citation describes violations of the Occupational Safety and Health Act of 1970. The penalty(ies) listed below are based on these violations. You must correct the violations referred to in this citation by the dates listed below and pay the penalties proposed, unless within 15 working days (excluding weekends and Federal holidays) from your receipt of this citation and penalty you mail a notice of contest to the U.S. Department of Labor Area Office at the address shown above. (See the enclosed booklet which outlines your responsibilities and courses of action and should be read in conjunction with this form.)

8 ITEM NUMBER STANDARD, REGULATION OR SECTION OF THE ACT VIOLATED: DESCRIPTION	9 DATE BY WHICH VIOLATION MUST BE CORRECTED	10 PENALTY
The issuance of this 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 Review Commission. The violations described in this citation are alleged to have occurred on or about the day the inspection was made unless otherwise indicated within the description given below.		
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2 29 CFR 1910.1001(j)(2): The employer did not provide or make available, to each employee, within 30 days following his first employment in an occupation exposed to airborne levels of asbestos fibers, a comprehensive medical examination: (a) On June 30, 1983, an employee working on Unit 16 E2 was exposed to 0.28 fibers per cubic centimeter of air. This exposure occurred during an asbestos insulation removal. The sample taken was a 15-minute ceiling sample.	9/26/83	$0

C 002185

CBY 3103791

14 AREA DIRECTOR
GERALD A. BATY Gerald A. Baty

15 $0

NOTICE TO EMPLOYEES – The law gives an employee or his representative the opportunity to object to any abatement date set for a violation if he believes the date to be unreasonable. The contest must be mailed to the U.S. Department of Labor Area Office at the address shown above within 15 working days (excluding weekends and Federal holidays) of the receipt by the employer of this citation and penalty.

EMPLOYER DISCRIMINATION UNLAWFUL – The law prohibits discrimination by an employer against an employee for filing a complaint or for exercising any rights under this Act. An employee who believes that he has been discriminated against may file a complaint no later than 30 days after the discrimination with the U.S. Department of Labor Area Office at the address shown above.

TOTAL PENALTY FOR THIS CITATION

Make check or Money Order Payable To "DOL-OSHA" Indicate OSHA No. on Remittance

EMPLOYER RESPONSIBILITIES AND COURSES OF ACTION – The enclosed booklet outlines employer responsibilities and courses of action and should be read in conjunction with this notification.

days (excluding weekends and Federal holidays) whichever is longer.

This citation describes violations of the Occupational Safety and Health Act of 1970. The penalty(ies) listed below are based on these violations. You must correct the violations referred to in this citation by the dates listed below and pay the penalties proposed, unless within 15 working days (excluding weekends and Federal holidays) from your receipt of this citation and penalty you mail a notice of contest to the U.S. Department of Labor Area Office at the address shown above. (See the enclosed booklet which outlines your responsibilities and courses of action and should be read in conjunction with this form.)

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1 **29 CFR 1910.1001(f)(2)(ii): The airborne asbestos monitoring schedule was not of sufficient frequency and pattern as to represent with reasonable accuracy the levels of employee exposure to airborne asbestos fibers:** **(a) Monsanto Fibers and Intermediates Company in Texas City, Texas, does not conduct personal monitoring for airborne asbestos fibers at intervals of 6 months of less for employees whose exposure to asbestos may reasonably be foreseen to exceed the limits prescribed by paragraph b of 29 CFR 1910.1001.**	Immediately Upon Receipt	$0
2 **29 CFR 1910.1001(j)(2): The employer did not provide or make available, to each employee, within 30 days following his first employment in an occupation exposed to airborne levels of asbestos fibers, a comprehensive medical examination:** **(a) On June 30, 1983, an employee working on Unit 16 E2 was exposed to 0.28 fibers per cubic centimeter of air. This exposure occurred during an asbestos insulation removal. The sample taken was a 15-minute ceiling sample.**	9/26/83	$0

C 002186

CBY 3/03/002186

14 AREA DIRECTOR
GERALD A. BATY Gerald A. Baty

15 $0

TOTAL PENALTY FOR THIS CITATION

Make check or Money Order Payable To "DOL-OSHA" Indicate OSHA No. on Remittance

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EMPLOYER RESPONSIBILITIES AND COURSES OF ACTION – The enclosed booklet outlines employer responsibilities and courses of action and should be read in conjunction with this notification.

For Official Use Only		
Area	Date Received	Time
3280	6/27/83	11:45 AM
Region	Received By	Formal ☒
6	LCB	Non Formal ☐

The undersigned *(check one)*

☒ Employee ☐ Representative of Employees ☐ Other *(specify)* _____

believes that a violation at the following place of employment of an occupational safety or health standard exists which is a job safety or health hazard.

Employer's Name
MONSANTO CHEMICAL

Employer's Address *(Street)* *(City)*
201 Bay Street Texas City

(State) *(Zip Code)* Telephone
Texas 77590 945 4431

1. Kind of business
Chemical plant

2. Specify the particular building or worksite where the alleged violation is located, including address.
Dept. 15 & 16; Dept. 19; Dept. 48-56 and Dept. Power #2

3. Specify the name and phone number of employer's agent(s) in charge.
Gene Tromblee, Plant Manager

4. Describe briefly the hazard which exists there including the approximate number of employees exposed to or threatened by such hazard.

Pipefitters have been removing asbestos insulation without wearing the proper personal protective equipment. Company has taken samples to determine where the asbestos is located, but some insulation has been mistakenly identified as non-asbestos.

C 002187

CBY 3103793

CONTINUED ON REVERSE SIDE

Table Z-2

Material	8-hour time weighted average	Acceptable ceiling concentration	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hour shift. Concentration	Maximum duration
Benzene (Z37.4-1969)	10 p.p.m	25 p.p.m	50 p.p.m	10 minutes.
Beryllium and beryllium compounds (Z37.29-1970)	2 μg./M³	5 μg./M³	25 μg./M³	30 minutes.
Cadmium dust (Z37.5-1970)	0.2 mg./M³	0.6 mg./M³		
Cadmium fume (Z37.5-1970)	0.1 mg./M³	0.3 mg./M³		
Carbon disulfide (Z37.3-1968)	20 p.p.m	30 p.p.m	100 p.p.m	30 minutes.
Carbon tetrachloride (Z37.17-1967)	10 p.p.m	25 p.p.m	200 p.p.m	5 minutes in any 4 hours.
Chromic acid and chromates (Z37.7-1971)		1 mg./10M³		
Ethylene dibromide (Z37.31-1970)	20 p.p.m	30 p.p.m	50 p.p.m	5 minutes.
Ethylene dichloride (Z37.21-1969)	50 p.p.m	100 p.p.m	200 p.p.m	5 minutes in any 3 hours.
Fluoride as dust (Z37.28-1969)	2.5 mg./M³			
Formaldehyde (Z37.16-1967)	3 p.p.m	5 p.p.m	10 p.p.m	30 minutes.
Hydrogen fluoride (Z37.28-1969)	3 p.p.m.			
Hydrogen sulfide (Z37.2-1966)		20 p.p.m	50 p.p.m	10 minutes once only if no other measurable exposure occurs.
Lead and its inorganic compounds (Z 37.11-1969)	0.2 mg/m³			
Mercury (Z37.8-1971)		1 mg./10M³		
Methyl Chloride (Z37.18-1969)	100 p.p.m	200 p.p.m	300 p.p.m	5 minutes in any 3 hours.
Methylene Chloride (Z37.23-1969)	500 p.p.m	1,000 p.p.m	2,000 p.p.m	5 minutes in any 2 hours.
Organo (alkyl) mercury (Z37.30-1969)	0.01 mg./M³	0.04 mg./M³		
Styrene (Z37.15-1969)	100 p.p.m	200 p.p.m	600 p.p.m	5 minutes in any 3 hours.
Tetrachloroethylene (Z37.22-1967)	100 p.p.m	200 p.p.m	300 p.p.m	5 minutes in any 3 hours.
Toluene (Z37.12-1967)	200 p.p.m	300 p.p.m	500 p.p.m	10 minutes.
Trichloroethylene (Z37.19-1967)	100 p.p.m	200 p.p.m	300 p.p.m	5 minutes in any 2 hours.

[Table Z-2, footnote 1 deleted by 46 FR 32021, June 19, 1981]

Table Z-3—Mineral Dusts

Substance	Mppcf*	Mg/M³
Silica:		
Crystalline:		
Quartz (respirable)	250 [1]	10mg/M³ [2]
	%SiO₂+5	%SiO₂+2
Quartz (total dust)		30mg/M³
		%SiO₂+2
Cristobalite: Use ½ the value calculated from the count or mass formulae for quartz.		
Tridymite: Use ½ the value calculated from the formulae for quartz.		
Amorphous, including natural diatomaceous earth	20	80mg/M³
		%SiO₂
Silicates (less than 1% crystalline silica):		
Mica	20	
Soapstone	20	
Talc (non-asbestos form)	20[3]	
Talc (fibrous). Use asbestos limit		
Tremolite (see talc, fibrous)		
Portland cement	50	
Graphite (natural)	15	
Coal dust (respirable fraction less than 5% SiO₂)		2.4mg/M³ or 10mg/M³
For more than 5% SiO₂		%SiO₂+2
Inert or Nuisance Dust:		
Respirable fraction	15	5mg/M³
Total dust	50	15mg/M³

NOTE: Conversion factors –
mppcf×35.3 = million particles per cubic meter
= particles per c.c.

* Millions of particles per cubic foot of air, based on impinger samples counted by light-field techniques.

[1] The percentage of crystalline silica in the formula is the amount determined from air-borne samples, except in those instances in which other methods have been shown to be applicable.

[2] Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics:

Aerodynamic diameter (unit density sphere)	Percent passing selector
2	90
2.5	75
3.5	50
5.0	25
10	0

The measurements under this note refer to the use of an AEC instrument. If the respirable fraction of coal dust is determined with a MRE the figure corresponding to that of 2.4 Mg./M³ in the table for coal dust is 4.5 Mg/M³.

[3] * Containing < 1% quartz; if > 1% quartz, use quartz limit.

§ 1910.1001 Asbestos.

(a) *Definitions.* For the purpose of this section, (1) "Asbestos" includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

(2) "Asbestos fibers" means asbestos fibers longer than 5 micrometers.

(b) *Permissible exposure to airborne concentrations of asbestos fibers*—(1) *Standard effective July 7, 1972.* The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed five fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(2) *Standard effective July 1, 1976.* The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed two fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(3) *Ceiling concentration.* No employee shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(c) *Methods of compliance*—(1) *Engineering methods.* (i) *Engineering controls.* Engineering controls, such as, but not limited to, isolation, enclosure, exhaust ventilation, and dust collection, shall be used to meet the exposure limits prescribed in paragraph (b) of this section.

(ii) *Local exhaust ventilation.* (a) Local exhaust ventilation and dust collection systems shall be designed, constructed, installed, and maintained in accordance with the American National Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z9.2–1971, which is incorporated by reference herein.

(b) See § 1910.6 concerning the availability of ANSI Z9.2–1971, and the maintenance of a historic file in connection therewith. The address of the American National Standards Institute is given in § 1910.100.

(iii) *Particular tools.* All hand-operated and power-operated tools which may produce or release asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, such as, but not limited to, saws, scorers, abrasive wheels, and drills, shall be provided with local exhaust ventilation systems in accordance with subdivision (ii) of this subparagraph.

(2) *Work practices*—(i) *Wet methods.* Insofar as practicable, asbestos shall be handled, mixed, applied, removed, cut, scored, or otherwise worked in a wet state sufficient to prevent the emission of airborne fibers in excess of the exposure limits prescribed in paragraph (b) of this section, unless the usefulness of the product would be diminished thereby.

(ii) *Particular products and operations.* No asbestos cement, mortar, coating, grout, plaster, or similar material containing asbestos shall be removed from bags, cartons, or other containers in which they are shipped, without being either wetted, or enclosed, or ventilated so as to prevent effectively the release of airborne asbestos fibers in excess of the limits prescribed in paragraph (b) of this section.

(iii) *Spraying, demolition, or removal.* Employees engaged in the spraying of asbestos, the removal, or demolition of pipes, structures, or equipment covered or insulated with asbestos, and in the removal or demolition of asbestos insulation or coverings shall be provided with respiratory equipment in accordance with paragraph (d)(2)(iii) of this section and with special clothing in accordance with paragraph (d)(3) of this section.

(d) *Personal protective equipment*—(1) Compliance with the exposure limits prescribed by paragraph (b) of this section may not be achieved by the use of respirators or shift rotation of employees, except:

(i) During the time period necessary to install the engineering controls and to institute the work practices required by paragraph (c) of this section;

(ii) In work situations in which the methods prescribed in paragraph (c) of

this section are either technically not feasible or feasible to an extent insufficient to reduce the airborne concentrations of asbestos fibers below the limits prescribed by paragraph (b) of this section; or

(iii) In emergencies.

(iv) Where both respirators and personnel rotation are allowed by subdivisions (i), (ii), or (iii) of this subparagraph, and both are practicable, personnel rotation shall be preferred and used.

(2) Where a respirator is permitted by subparagraph (1) of this paragraph, it shall be selected from among those approved by the Bureau of Mines, Department of the Interior, or the National Institute for Occupational Safety and Health, Department of Health, Education, and Welfare, under the provisions of 30 CFR Part 11 (37 F.R. 6244, Mar. 25, 1972), and shall be used in accordance with subdivisions (i), (ii), (iii), and (iv) of this subparagraph.

(i) *Air purifying respirators.* A reusable or single use air purifying respirator, or a respirator described in subdivision (ii) or (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed no more than 10 times those limits.

(ii) *Powered air purifying respirators.* A full facepiece powered air purifying respirator, or a powered air purifying respirator, or a respirator described in subdivision (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average concentrations of asbestos fibers are reasonably expected to exceed 10 times, but not 100 times, those limits.

(iii) *Type "C" supplied-air respirators, continuous flow or pressure-demand class.* A type "C" continuous flow or pressure-demand, supplied-air respirator shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed 100 times those limits.

(iv) *Establishment of a respirator program.* (a) The employer shall establish a respirator program in accordance with the requirements of the American National Standards Practices for Respiratory Protection, ANSI Z88.2–1969, which is incorporated by reference herein.

b. See § 1910.6 concerning the availability of ANSI Z88.2–1969 and the maintenance of an historic file in connection therewith. The address of the American National Standards Institute is given in § 1910.100.

(c) No employee shall be assigned to tasks requiring the use of respirators if, based upon his most recent examination, an examining physician determines that the employee will be unable to function normally wearing a respirator, or that the safety or health of the employee or other employees will be impaired by his use of a respirator. Such employee shall be rotated to another job or given the opportunity to transfer to a different position whose duties he is able to perform with the same employer, in the same geographical area and with the same seniority, status, and rate of pay he had just prior to such transfer, if such a different position is available.

(3) Special clothing: The employer shall provide, and require the use of, special clothing, such as coveralls or similar whole body clothing, head coverings, gloves, and foot coverings for any employee exposed to airborne concentrations of asbestos fibers, which exceed the ceiling level prescribed in paragraph (b) of this section.

(4) Change rooms: (i) At any fixed place of employment exposed to airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, the employer shall provide change rooms for employees working regularly at the place.

(ii) Clothes lockers: The employer shall provide two separate lockers or containers for each employee, so separated or isolated as to prevent contamination of the employee's street clothes from his work clothes.

(iii) Laundering: (a) Laundering of asbestos contaminated clothing shall be done so as to prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.

(b) Any employer who gives asbestos-contaminated clothing to another person for laundering shall inform such person of the requirement in (a) of this subdivision to effectively prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.

(c) Contaminated clothing shall be transported in sealed impermeable bags, or other closed, impermeable containers, and labeled in accordance with paragraph (g) of this section.

(e) *Method of measurement.* All determinations of airborne concentrations of asbestos fibers shall be made by the membrane filter method at 400–450 × (magnification) (4 millimeter objective) with phase contrast illumination.

(f) *Monitoring*—(1) *Initial determinations.* Within 6 months of the publication of this section, 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.

(2) *Personal monitoring*—(i) Samples shall be collected from within the breathing zone of the employees, on membrane filters of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken for the determination of the 8-hour time-weighted average airborne concentrations and of the ceiling concentrations of asbestos fibers.

(ii) Sampling frequency and patterns. After the initial determinations required by subparagraph (1) of this paragraph, samples shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of employees. In no case shall the sampling be done at intervals greater than 6 months for employees whose exposure to asbestos may reasonably be foreseen to exceed the limits prescribed by paragraph (b) of this section.

(3) *Environmental monitoring*—(i) samples shall be collected from areas of a work environment which are representative of the airborne concentrations of asbestos fibers which may reach the breathing zone of employees. Samples shall be collected on a membrane filter of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken for the determination of the 8-hour time-weighted average airborne concentrations and of the ceiling concentrations of asbestos fibers.

(ii) *Sampling frequency and patterns.* After the initial determinations required by subparagraph (1) of this paragraph, samples shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of the employees. In no case shall sampling be at intervals greater than 6 months for employees whose exposures to asbestos may reasonably be foreseen to exceed the exposure limits prescribed in paragraph (b) of this section.

(4) *Employee observation of monitoring.* Affected employees, or their representatives, shall be given a reasonable opportunity to observe any monitoring required by this paragraph and shall have access to the records thereof.

(g) *Caution signs and labels.* (1) *Caution signs.* (i) *Posting.* 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. Signs shall be posted at all approaches to areas containing excessive concentrations of airborne asbestos fibers.

(ii) *Sign specifications.* The warning signs required by subdivision (i) of this subparagraph shall conform to the requirements of 20" x 14" vertical format signs specified in § 1910.145(d)(4), and to this subdivision. The signs shall display the following legend in the lower panel, with letter sizes and styles of a visibility at least equal to that specified in this subdivision.

Legend	*Notation*
Asbestos	1" Sans Serif, Gothic or Block.
Dust Hazard	¾" Sans Serif, Gothic or Block.
Avoid Breathing Dust	¼", Gothic.
Wear Assigned Protective Equipment.	¼" Gothic.
Do Not Remain In Area Unless Your Work Requires it.	¼" Gothic.

[Sec. 1910.1001(g)(1)(ii)]

Legend	*Notation*
Breathing Asbestos Dust May be Hazardous To Your Health	14 point Gothic.

Spacing between lines shall be at least equal to the height of the upper of any two lines.

(2) *Caution labels*—(i) *Labeling.* Caution labels shall be affixed to all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, or to their containers, except that no label is required where asbestos fibers have been modified by a bonding agent, coating, binder, or other material so that during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation, no airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section will be released.

(ii) *Label specifications.* The caution labels required by subdivision (i) of this subparagraph shall be printed in letters of sufficient size and contrast as to be readily visible and legible. The label shall state:

CAUTION

Contains Asbestos Fibers
Avoid Creating Dust
Breathing Asbestos Dust May Cause Serious Bodily Harm

(h) *Housekeeping*—(1) *Cleaning.* All external surfaces in any place of employment shall be maintained free of accumulations of asbestos fibers if, with their dispersion, there would be an excessive concentration.

(2) *Waste disposal.* Asbestos waste, scrap, debris, bags, containers, equipment, and asbestos-contaminated clothing, consigned for disposal, which may produce in any reasonably foreseeable use, handling, storage, processing, disposal, or transportation airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section shall be collected and disposed of in sealed impermeable bags, or other closed, impermeable containers.

(i) *Recordkeeping*—(1) *Exposure records.* Every employer shall maintain records of any personal or environmental monitoring required by this section. Records shall be maintained for a period of at least 20 years and shall be made available upon request to the Assistant Secretary of Labor for Occupational Safety and Health, the Director of the National Institute for Occupational Safety and Health, and to authorized representatives of either.

[1910.1001(i)(1) amended at 41 FR 11505, March 19, 1976]

(2) *Access.* Employee exposure records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1910.20 (a)-(e) and (g)-(l).

[Section 1910.1001(i)(2) amended at 45 FR 35212, May 23, 1980, effective August 21, 1980]

(3) *Employee notification.* Any employee found to have been exposed at any time to airborne concentrations of asbestos fibers in excess of the limits prescribed in paragraph (b) of this section shall be notified in writing of the exposure as soon as practicable but not later than 5 days of the finding. The employee shall also be timely notified of the corrective action being taken.

(j) *Medical examinations*—(1) *General.* The employer shall provide or make available at his cost, medical examinations relative to exposure to asbestos required by this paragraph.

(2) *Preplacement.* The employer shall provide or make available to each of his employees, within 30 calendar days following his first employment in an occupation exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination, which 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 ($FEV_{1.0}$).

(3) *Annual examinations.* On or before January 31, 1973, and at least annually thereafter, 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 ($FEV_{1.0}$).

(4) *Termination of employment.* The employer shall provide, or make available, within 30 calendar days before or after the termination of employment of any employee engaged in an occupation exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination which 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 ($FEV_{1.0}$).

(5) *Recent examinations.* No medical examination is required of any employee, if adequate records show that the employee has been examined in accordance with this paragraph within the past 1-year period.

(6) *Medical records*—(i) *Maintenance.* Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be retained by employers for at least 20 years.

(ii) *Access.* Records of the medical examinations required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1910.20(a)-(e) and (g)-(i). These records shall also be provided upon the request to the Director of NIOSH. Any physician who conducts a medical examination required by this paragraph shall furnish to the employer of the examined employee all the information specifically required by this paragraph, and any other medical information related to occupational exposure to asbestos fibers.

[Section 1910.1001(j)(6)(ii) amended at 45 FR 35212, May 23, 1980, effective August 21, 1980; corrected by 45 FR 54333, August 15, 1980]

§ 1910.1002 Coal tar pitch volatiles; interpretation of term.

As used in § 1910.1000 (Table Z-1), coal tar pitch volatiles include the fused polycyclic hydrocarbons which volatilize from the distillation residues of coal, petroleum (excluding asphalt), wood, and other organic matter. Asphalt (CAS 8052-42-4, and CAS 64742-93-4) is not covered under the "coal tar pitch volatiles" standard.

[Sec. 1910.1002 revised by 48 FR 2768, January 21, 1983]

§ 1910.1003 4-Nitrobiphenyl.

(a) *Scope and application.* (1) This section applies to any area in which 4-Nitrobiphenyl, Chemical Abstracts Service Registry Number 92933 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to transshipment in sealed containers, except for the labeling requirements under paragraphs (e) (2), (3), and (4) of this section.

(2) This section shall not apply to solid or liquid mixtures containing less than 0.1 percent by weight or volume of 4-Nitrobiphenyl.

(b) *Definitions.* For the purposes of this section: (1) "Absolute filter" is one capable of retaining 99.97 percent of a mono disperse aerosol of 0.3 μm particles.

(2) "Authorized employee" means an employee whose duties require him to be in the regulated area and who has been specifically assigned by the employer.

(3) "Clean change room" means a room where employees put on clean clothing and/or protective equipment in an environment free of 4-Nitrobiphenyl. The clean change room shall be contiguous to and have an entry from a shower room, when the shower room facilities are otherwise required in this section.

(4) "Closed system" means an operation involving 4-Nitrobiphenyl where containment prevents the release of 4-Nitrobiphenyl into regulated areas, nonregulated areas, or the external environment.

(5) "Decontamination" means the inactivation of 4-Nitrobiphenyl or its safe disposal.

(6) "Director" means the Director, National Institute for Occupational Safety and Health, or any person directed by him or the Secretary of Health, Education, and Welfare to act for the Director.

(7) "Disposal" means the safe removal of 4-Nitrobiphenyl from the work environment.

(8) "Emergency" means an unforseen circumstance or set of circumstances resulting in the release of 4-Nitrobiphenyl which may result in exposure to or contact with 4-Nitrobiphenyl.

(9) "External environment" means any environment external to regulated and nonregulated areas.

(10) "Isolated system" means a fully enclosed structure other than the vessel of containment of 4-Nitrobiphenyl,

BRIEF SUMMARY OF OSHA INSPECTION

Last week (6/28-7/1) an OSHA inspector investigated an employee complaint on asbestos handling in the Texas City Plant. The complaint stated:

> "Pipefitters have been removing asbestos insulation without wearing the proper personal protective equipment. The Company has taken samples to determine where the asbestos is located, but some insulation has been mistakenly identified as non-asbestos."

The inspector interviewed both hourly and salaried employees, observed our work practices and reviewed our medical and industrial hygiene procedures related to asbestos handling.

The inspector was favorably impressed with much of what he saw but the possibility of citations in two instances exists. We plan further discussions with the inspector's supervisor on the areas in question.

By GWD to GLT's STAFF

GWD/ob
7-6-83

CBY 3103797

C 002191

Mark Riddle

XC-SLH

7-1-83

OSHA INSPECTION

OSHA Inspector, Rex F. McKinney, Industrial Hygienist, appeared at the gate at 13:00 hours on Tuesday, June 28. The purpose of his visit was to investigate an employee compaint stated as follows:

> "Pipefitters have been removing asbestos insulation without wearing the proper personal protective equipment. The Company has taken samples to determine where the asbestos is located, but some insulation has been mistakenly identified as non-asbestos."

This complaint was filed with OSHA on 6/27/83, at 11:45 a.m. It was specific to Departments 15 and 16, Department 19, Departments 48/56, and Power 2. The complaint was made by Charles E. Davis who is the pipefitter craft safety representative.

The visit on Monday was to hold an opening conference and go over the complaint against the Company. At the time, he reviewed our OSHA 200 form for 1981 thru the present and commented on our good safety record. He also received a copy of all our forms used by Medical for performing physicals and a copy of the procedures for removal of asbestos and the testing procedure by Pabco.

The personnel present for this opening conference were:

Charles Davis
Vernon Mapes
Dora Sendejas (to review Medical)
Greg Daues
Bob Hammann

He also mentioned that he had reviewed Roy Pigge's report on last year's general health inspection. He was here specifically on this asbestos investigation, but would cite us for any obvious violation that he happened to note in the course of his inspection. He left at approximately 2:30 after discussions with the comment that he would return the next day to interview people and look at the areas.

Day Two, Wednesday, June 29

Rex McKinney went out into the plant at approximately 9:45. Charles Davis was the craft representative and a discussion was held with Dan Campbell, Bob Hammann, and Mr. McKinney. During this discussion, which mainly revolved around sampling, he was given copies of the sampling data of personnel in the area and a copy of our "Asbestos Procedure". H.G. Bullock was called in to dicuss the interpretation of the procedure. Specifically, who was instructed to get the sample. This was stated to be normally taken by the maintenance foreman in the field. Mr. McKinney was taken to the I.H. lab and shown the procedures for determining asbestos. He also went to the field where he interviewed numerous people. The people interviewed were:

Herbert C. Doreck, pipefitter
Leonard Dinning, pipefitter
Ryan Pittman, pipefitter
W.R. Sanders, pipefitter
M.F. Whatley, pipefitter
Ed Smith, insulator
Raymond Guidry, insulator
Glenn Eierdam, insulator

From all these people he got the same story. Essentially, they were supplied with proper personal protective equipment, but they felt that insulators were better able to handle the work. The pipefitters specifically stated they didn't feel that they were qualified. On one hand they said they were willing to do the work agreed to by the contract, but on the other hand they stated they thought that the insulators should be doing work around asbestos. He was also shown the change room. He left the plant at approximately 3:15.

Day Three, Thursday, June 30

Mr. McKinney arrived at the plant at 10:00. Charles Davis, Dan Campbell, and Bob Hammann were present. They went to Department 48/56 where interviews were conducted with:

Richard Hobbs, Jr., pipefitter
Pete DeGroot, pipefitter
Charles Virgin, pipefitter

All expressed concern about not having proper training. In fact, Hobbs had not been trained because he had been off two weeks on sick leave and one week vacation just recently. No checks were made in Department 19 as they did not have maintenance personnel in the area. Contact was made with Jim Gatewood concerning any work where insulation would be removed as incidental work. It was determined that they had a job stripping insulation off piping above 16E2 and would be doing this work right after lunch. We went to the area and after the men obtained the proper equipment, sampling pumps were connected to them by both Mr. McKinney and Monsanto Industrial Hygiene for determining a 15 minute ceiling concentration. The two individuals doing this work were G.E. Hoyland and R.V. Nicol. Six pictures were also taken of the men in action stripping the insulation. Mr. McKinney requested that he have some of these pictures. These will have to be cleared through G.L. Tromblee. After sampling was completed and return made to the lab where he took a sample of insulation that determined to be asbestos. Mr. McKinney left the plant at 3:15. He will return at approximately 1:00 July 1, to give a preliminary closing conference. A final closing conference will be given once the results of the sampling are obtained.

Possible Citations

During the work on stripping the insulation material was not wetted down. This is in violation of OSHA Standard 1910.1001 Asbestos, 2. Work Practices, i) Wet Methods. Also, based on the results of the sample, we may be required to provide a physical exam for each of the employees now exposed to asbestos. Whether we are required or should do it will depend on the results of the sampling.

This statement under preplacement is that, "the employer shall provide or make available to each of his employees, within 30 calendar days following his first employment in an occupation exposed to airborne concentrations of asbestos fibers, comprehensive medical exam, which shall include, as a minimum, a chest x-ray, a history of elicit symptomatology of respiratory disease, and pulmonary function tests..." Thereafter, this would have to be an annual examination. These are the two items that he mentioned we could possibly be cited on. The second one would not probably be a citation, but would be something we would have to comply with within 30 days.

Other points noted during the inspection:

a) Training came up almost as a broken record. We did a very poor job in our initial training of personnel.

b) People are not familiar of how to take the samples, where to take the samples, where to get the proper protective equipment, though, they all new that they could at least contact an insulator to find out where to get it.

c) How to dispose of the equipment (i.e., putting the gloves in a bag), how to take the sample (i.e., put it in a plastic bag and taking it to the I.H. lab), or generally what they do when they are handling asbestos.

d) Doors to the change room are locked and it is not known who has the key in all cases. We need to work on a better system for this.

e) Comment was made that we should possibly use the insulators to assist in the training of members of other crafts.

f) We need to put more emphasis on our hearing conservation as personnel were out in areas with loud noises emitted from compressors and not wearing proper ear protection. In two cases I had to request that people get the proper ear protection. However, this was not noted by the inspector. It was corrected before he could make any comments.

R. T. Hammann

7-1-83

OSHA INSPECTON -- ASBESTOS

Telephone Conversation With Rex McKinney of OSHA on 7/26/83

A call was placed to Rex McKinney to discuss the status of OSHA's personal sampling and determine if a date could be set for the closing conference. OSHA has not received the analysis of their samples as yet. They've recently moved their lab and feel that there may be some additional delay due to this. He does not expect to get the results of their sampling back for at least two more weeks. Whenever this data is received he will contact me to set up a closing conference. I did relay to him the information concerning the results of our tests (that the personal samples were 0.21 and 0.23 fibers/cc). Also discussed with him whether he had talked with his boss concerning, ~~if or that~~ we had met the intent of the OSHA Standard which was to establish a baseline for our employees since we do have past physicals on employees as part of our medical program. He stated that he had ~~discussed it or~~ mentioned it to his boss, but that the best thing for us to do would be to wait until after the closing conference and if there was a citation on this, then we could request an informal conference with his boss in order to present our position. At that time they would accept or reject our contention.

R. T. Hammann

RTH/es

CLOSING CONFERENCE -- OSHA INSPECTION FOR 8/12/83

The closing conference with Rex McKinney, OSHA, was set for 1400 on 8/12/83. Mr. McKinney arrived at the plant at 1230 and was brought in from the Main Gate at 1300. Prior to the closing conference there was some discussion on steps that we have taken since the inspection of 6/28-7/1 concerning employee physicals. We stated that we plan to initiate yearly physicals (including medical history, pulmonary function test and chest x-ray) for those individuals doing incidental work requiring them to remove asbestos insulation. Also stated that we would not force an individual to take the chest x-ray. However, if they decided not to take the x-ray, then they would be required to sign a statement stating this.

He also requested medical information on the two workers, R.V. Nicol and G.E. Hoyland, on which personnel monitoring was done while they were performing job of stripping asbestos. Information given was as follows:

	Last Physical	Pulmonary Function Test	Chest X-ray
Nicol	03/23/83	08/81	Given slip at last physical
Hoyland	11/17/82	11/17/82	Given slip at last physical

Closing Conference

Personnel present:

Rex McKinney, OSHA
Charles Davis, Pipefitter Safety Representative
Greg Daues
Dan Campbell
Mark Riddle
Bob Hammann

Mr. McKinney started by stating that their tests showed 0.3 fibers/cc which is well below the ceiling limit and therefore indicated no overexposure. He stated there were three possible citation areas.

1. Work practices/wet methods - 1910.1001 C.2.i

   We were cited as the workers did not wet down the asbestos while they were removing it. It is our practice to wet down the asbestos. He has a copy of our procedures which state this. Abatement period - immediate. This has always been our practice.

2. Personnel monitoring - 910.1001 F.2.ii

   Personnel monitoring must be done at intervals no greater than six months. From the data that we have given him, this has not been done. Additional search for data will be made to see if we have indeed complied with this. Abatement period - immediate.

3. Employee physicals - 1910.1001 J.2

People working with asbestos shall have a physical examination within 30 calendar days. Some discussion followed concerning this when we once again stated our opinion that this initial examination is to establish baseline data. We are willing to accept data taken from earlier physicals as being the baseline data. He could not answer this other than to state that we would have to discuss it with his boss at an informal conference sometime after receiving any citations. His boss' name is Jack Fontaine and his phone number is 750-1727.

We should receive the formal citation within two weeks by registered mail. The fifteen working day period for formally contesting the citation will start the day after receipt of the citation.

Monsanto

MONSANTO FIBERS AND INTERMEDIATES CO.
P. O. Box 1311
Texas City, Texas 77590
Phone: (713) 945-4431

September 26, 1983

Gerald A. Baty, Area Director
Occupational Safety & Health Administration
U.S. Department of Labor
2320 La Branch, Room 1103
Houston, Texas 77004

Re: Citation M6013-167 dated 8/22/83, as amended by the informal settlement agreement of 9/01/83.

Dear Sir:

Monsanto Fibers & Intermediates Company is complying with 29 CFR 1910.1001 (F)(2)(ii) concerning personal monitoring of airborne asbestos. This monitoring has been done and will be continued at intervals of no more than six months for our employees whose exposure to asbestos may exceed the limits prescribed by paragraph (b) of 29 CFR 1910.1001.

Very truly yours,

R. T. Hammann, Superintendent
Loss Prevention & Safety Dept.

RTH/es

CBY 3103804

U.S. Department of Labor
Houston Area Office
2320 LaBranch, Room 1103
Houston, Texas 77004

Occupational Safety and Health Administration

Reply to the Attention of:

September 23, 1983

Mr. Gene L. Tromblee
Monsanto Fibers and Intermediates Co.
P.O. Box 1311
Texas City, Texas 77590

RE: M6013-167

Dear Mr. Tromblee:

A citation was issued to your company containing item(s) with abatement date(s) that are now past due.

As a courtesy, we wish to bring this to your attention as these dates may have been overlooked. Since your receipt of this citation, we have not received correspondence from you indicating that you have complied or abated all the items. We are in need of documentation from you indicating the status of these items. Followup inspection indicating non-abatement may result in additional proposed penalty. It is requested that reports be made upon each abatement date as indicated in the citation in order to minimize reinspection activity.

We will appreciate your prompt attention to this matter, and should you have any questions concerning this item or others regarding the Occupational Safety and Health Act of 1970, please contact this office. If you have recently mailed this abatement report, please disregard this letter as it is sent as a courtesy reminder.

Sincerely,

Gerald A. Baty

GERALD A. BATY
Area Director

CBY 3103805

C 002199

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

CITATION and NOTIFICATION OF PENALTY

Houston Area Office
2320 LaBranch - Room 1103
Houston, Texas 77004

ISSUANCE DATE	OSHA NUMBER
8/22/83	160131 167
REGION	AREA	PAGE
6	1980	1 OF 1

OTHER	1

INSPECTION DATE:
6/23/83 - 7/1/83

INSPECTION SITE:
201 South Bay Street
Texas City, Texas 77590

TO: Monsanto Fibers and Intermediates Company
and its successors
P.O. Box 1311
Texas City, Texas 77590
ATTN: Mr. Gene L. Trobblee, Plant Manager

This Section To Be Detached Before Post

ITEM NUMBER STANDARD, REGULATION OR SECTION OF THE ACT VIOLATED: DESCRIPTION	DATE BY WHICH VIOLATION MUST BE CORRECTED	PENALTY
The issuance of this 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 Review Commission. The violations described in this citation are alleged to have occurred on or about the day the inspection was made unless otherwise indicated within the description given below.		
1 29 CFR 1910.1001(f)(2)(ii): The airborne asbestos monitoring schedule was not of sufficient frequency and pattern as to represent with reasonable accuracy the levels of employee exposure to airborne asbestos fibers: (a) Monsanto Fibers and Intermediates Company in Texas City, Texas, does not conduct personal monitoring for airborne asbestos fibers at intervals of 6 months of less for employees whose exposure to asbestos may reasonably be foreseen to exceed the limits prescribed by paragraph b of 29 CFR 1910.1001.	Immediately Upon Receipt	$0
2 ITEM DELETED BY SETTLEMENT AGREEMENT 29 CFR 1910.1001(j)(2): The employer did not provide or make available, to each employee, within 30 days following his first employment in an occupation exposed to airborne levels of asbestos fibers, a comprehensive medical examination: (a) On June 30, 1983, an employee working on Unit 16 E2 was exposed to 0.28 fibers per cubic centimeter of air. This exposure occurred during an asbestos insulation removal. The sample taken was a 15-minute ceiling sample.	9/26/83	$0
AREA DIRECTOR [illegible]	C 002200	$0

CBY 3103806

Monsanto

MONSANTO FIBERS AND INTERMEDIATES CO.
P. O. Box 1311
Texas City, Texas 77590
Phone: (713) 945-4431

September 7, 1983

Gerald A. Baty, Area Director
Occupational Safety & Health Administration
U.S. Department of Labor
2320 La Branch, Room 1103
Houston, Texas 77004

Re: Citation M6013-167 dated 8/22/83, as amended by the informal settlement agreement of 9/01/83.

Dear Sir:

Monsanto Fibers & Intermediates Company is complying with 29 CFR 1910.1001 (F)(2)(ii) concerning personal monitoring of airborne asbestos. This monitoring has been done and will be continued at intervals of no more than six months for our employees whose exposure to asbestos may exceed the limits prescribed by paragraph B of 29 CFR 1910.1001.

Very truly yours,

R. T. Hammann, Superintendent
Loss Prevention & Safety Dept.

RTH/es

CBY 3103808

C 002201

HCC 950920

Monsanto

FROM (NAME & LOCATION) R.T. Hammann, LP&S - Texas City O-22 Ext. 3234

DATE September 7, 1983 CC

SUBJECT Letter of Corrective Action to OSHA Area Director

REFERENCE

TO : P.S. Park (SL) G3WB

Attached is a copy of the Informal Settlement Agreement reached with OSHA on 9/01/83.

In order to close the file we are required to send a letter of corrective action to Gerald Baty, the Area Director in Houston. Please let me know of any corrections needed to this letter.

Also, should it go out under the Plant Manager's signature?

Thank you for your assistance.

R.T. Hammann

Attachment

RTH/es

CBY 3103809

C 002202

U.S. DEPARTMENT OF LABOR

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

In the Matter of: Monsanto Fibers and Intermediates Co.

OSHA No.(s): 1601B-167, Citation No. 1, OTHER

INFORMAL SETTLEMENT AGREEMENT

The undersigned Employer and the undersigned Occupational Safety and Health Administration (OSHA), in settlement of the above citation(s) and penalties which were issued on August 22, 1983, hereby agree as follows:

1. The Employer agrees to correct the violations as cited in the above citations or as amended below.

2. The Employer agrees to pay the proposed penalties, if any, as issued with the above citation(s), or, if amended by this agreement, as amended below.

3. The Employer and OSHA agree that the following citations and penalties (if any) are not being amended by this agreement:

N/A

4. OSHA agrees that the following citations and penalties are being amended as shown (see attachments):

CBY 3103810

C-002203

5. The Employer, by signing this informal settlement agreement, hereby waives its rights to contest the above citation(s) and penalties, as amended in paragraph 4 of this agreement.

6. The Employer agrees to immediately post a copy of this Settlement Agreement in a prominent place at or near the location of the violation(s) referred to in paragraphs 3 and 4 above. This Settlement Agreement must remain posted until the violations cited have been corrected, or for 3 working days (excluding weekends and Federal Holidays), whichever is longer.

Robert J Hamman
FOR THE EMPLOYER

Harold A Baty
FOR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

9/1/83
DATE

NOTICE TO EMPLOYEES

The law gives you or your representative the opportunity to object to any abatement date set for a violation if you believe the date to be unreasonable. Any contest to the abatement dates of the citations amended in paragraph 4 of this Settlement Agreement must be mailed to the U.S. Department of Labor-OSHA, 2320 LaBranch, Room 2118, Houston, Texas 77004, within 15 working days (excluding weekends and Federal Holidays) of the receipt by the Employer of this Settlement Agreement. You or your representative also have the right to object to any of the abatement dates set for violations referred to in paragraph 3 provided that the objection is mailed to the office shown above within the 15 working day period established by the original citation.

CBY 3103811

INFORMAL CONFERENCE WITH OSHA
Held 9/01/83

Meeting was held with Gerald A. Baty, OSHA Area Director, and Jack Fontaine, Industrial Hygiene Supervisor, concerning the citation issued 8/23/83. This was as a result of the inspection of 6/28-7/01/83, on asbestos handling.

Present for Monsanto were: Dan Campbell, Industrial Hygienist, and R.T. Hammann, LP&S Superintendent.

Discussion of the citation consisted of the following:

Point I - Asbestos Monitoring

Monitoring done in January included a source sample which, although not attached to the individual, was construed to be a personal sample as it was hung in the breathing zone.

Point II - Preplacement Exam

A. History of the complaint.

B. Monsanto policy on medical exams.

C. Felt that we have complied with the intent of the regulation in establishing baseline data.

An informal settlement agreement was reached whereby OSHA deleted Point II and Point I will be abated by the Texas City plant.

Additional Information Received During This Conference:

OSHA considers that when monitoring of personnel shows greater than 0.1 fbrs/cc for an 8 hour time weighted average that these employees must receive the annual physical.

R. T. Hammann

RTH/es

CBY 3103812

C 002205

Texas City, Texas

July 7, 1983

OSHA Inspection (6/28-7/1/83)

To: G. W. Daues

Copies to: Clayton Callis - B3CA
R. L. Hammond
John L. Henshaw - G4WG
D. E. Kaldenberg
V. Mapes - SS-17
C. D. Norlander - G5WB
Steve D. Paul - G2WB
H. O. Reid
G. L. Tromblee
W. D. Walker

(See Attached)

CBY 3103813

C 002206

Monsanto

FROM (NAME & LOCATION) R.T. Hammann/M.A. Riddle, LP&S O-22 Ext. 3234/3236

DATE July 7, 1983 CC:

SUBJECT OSHA INSPECTION (6/28--7/1/83)

REFERENCE

TO : G. W. Daues O-10A

OSHA Inspector, Rex F. McKinney, Industrial Hygienist, appeared at the gate at 13:00 hours on Tuesday, June 28. The purpose of his visit was to investigate an employee compaint stated as follows:

> "Pipefitters have been removing asbestos insulation without wearing the proper personal protective equipment. The Company has taken samples to determine where the asbestos is located, but some insulation has been mistakenly identified as non-asbestos."

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The visit on ~~Monday~~ Tuesday was to hold an opening conference and go over the complaint against the Company. At the time, he reviewed our OSHA 200 form for 1981 thru the present and commented on our good safety record. He also received a copy of all our forms used by Medical for performing physicals and a copy of the procedures for removal of asbestos and the testing procedure by Pabco.

The personnel present for this opening conference were:

Charles Davis
Vernon Mapes
Dora Sendejas, R.N.
Greg Daues
Bob Hammann

He also mentioned that he had reviewed OSHA inspector, Roy Pigge's report on last year's general health inspection of the plant. He was here specifically on this asbestos investigation, but would cite us for any obvious violation that he happened to note in the course of his inspection. He left at approximately 2:30 after discussions with the comment that he would return the next day to interview people and look at the areas.

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field. Mr. McKinney was taken to the I.H. lab and shown the procedures for determining asbestos. He also went to the field where he interviewed numerous people. The people interviewed were:

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Leonard Dinning, pipefitter
Ryan Pittman, pipefitter
W.R. Sanders, pipefitter
M.F. Whatley, pipefitter
Ed Smith, insulator
Raymond Guidry, insulator
Glenn Eierdam, insulator

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Pete DeGroot, pipefitter
Charles Virgin, pipefitter

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Contact was made with Jim Gatewood concerning any work where asbestos insulation would be removed as incidental work. It was determined that they had a job stripping insulation off piping above 16E2 and would be doing this work right after lunch. We went to the area and after the men obtained the proper equipment, sampling pumps were connected to them by both Mr. McKinney and Monsanto Industrial Hygiene for determining a 15 minute ceiling concentration. The two individuals doing this work were G.E. Hoyland and R.V. Nicol. Six pictures were also taken of the men in action stripping the insulation.

Possible Citations

During the work on stripping the insulation material was not wetted down. This is in violation of OSHA Standard 1910.1001 Asbestos, 2. Work Practices, i) Wet Methods. Also, based on the results of the air sampling, we may be required to provide a physical exam for each of the employees now exposed to asbestos.

This statement under preplacement is that, "the employer shall provide or make available to each of his employees, within 30 calendar days following his first employment in an occupation exposed to airborne concentrations of asbestos fibers, comprehensive medical exam, which shall include, as a minimum, a chest x-ray, a history of elicit symptomatology of respiratory disease, and pulmonary function tests..." Thereafter, this would have to be an annual examination. These are the two items that he mentioned we could possibly be cited on. The second one would not probably be a citation, but would be something we would have to comply with within 30 days.

Day Four, Friday, July 1

Rex McKinney was scheduled to return to the plant at 1300 for the closing conference. He arrived at 1100 and asked to talk with the supervisor, Larry Young, pipefitter leadman, Marvin Janicek, and pipefitters, R.V. Nicol and G.E. Hoyland that were involved in the asbestos stripping job observed on Thursday, June 30. He talked with these people individually and asked some basic questions to verify the area and the type of work that they were doing. Mark Riddle, Charles E. Davis, craft safety representative, and Dan Campbell were present during these discussions.

After the above gentlemen who were interviewed left, Mr. McKinney asked a few other housekeeping type questions. He then said he would not hold the final closing conference until sampling results were obtained which would take at least 30 days. He did say there was the possibility of citations and just reiterated the possible citations that were discussed on Thursday.

He stated to the pipefitter safety representative that he could be contacted at any time by phone if he had further questions. We escorted Mr. McKinney to the gate and on the way he asked if we had got approval for the pictures that were taken the day before. We told him that we had and that we needed to go to Greg Daues' office to obtain them.

We went to Greg Daues' office to get the pictures and while there had a short informal discussion with Daues concerning Mr. McKinney's future course of action. We discussed the statement that he had made previously that we would probably have to provide an examination for all employees within 30 days following their first exposure to asbestos fibers. We discussed our opinion that we had met the intent of the law which is to establish a baseline data, and that we have already done this due to our ongoing medical program. He said he could not make that decision himself, but that he would discuss this with his supervisor and that we should call his supervisor to discuss our opinions further. His supervisor's name is Jack Fontaine. We then provided Mr. McKinney with the pictures he requested of the asbestos removal job on Thursday, and he was escorted to the gate.

Other Points Noted During The Inspection:

a) Training came up almost as a broken record. Our initial training of personnel could have been improved.

b) Some said they were not familiar of how to take the samples, where to take the samples, where to get the proper protective equipment. They all knew, however, that they could at least contact an insulator

to find out what to do, how to dispose of the equipment (i.e., putting the gloves in a bag), how to take the sample (i.e., put it in a plastic bag and taking it to the I.H. lab), or generally what they do when they are handling asbestos.

c) Doors to the change room are locked and it is not known who has the key in all cases.

d) Comment was made that we should possibly use the insulators to assist in the training of members of other crafts.

e) We need to put more emphasis on our hearing conservation as personnel were out in areas with loud noises emitted from compressors and not wearing proper ear protection. In two cases we had to request that people get the proper ear protection. However, this was not noted by the inspector. It was corrected before he could make any comments.

Bob Hammann

Mark Riddle

es

Texas City, Texas

July 7, 1983

OSHA Inspection (6/28-7/1/83)

To: G. W. Daues

Copies to: Clayton Callis - B3CA
R. L. Hammond
John L. Henshaw - G4WG
D. E. Kaldenberg
V. Mapes - SS-17
C. D. Norlander - G5WB
Steve D. Paul - G2WB
H. O. Reid
G. L. Tromblee
W. D. Walker

(See Attached)

CBY 3103818

C 002211

Monsanto

FROM (NAME & LOCATION) R.T. Hammann/M.A. Riddle, LP&S O-22 Ext. 3234/3236

DATE July 7, 1983 CC:

SUBJECT OSHA INSPECTION (6/28--7/1/83)

REFERENCE

TO : G. W. Daues O-10A

OSHA Inspector, Rex F. McKinney, Industrial Hygienist, appeared at the gate at 13:00 hours on Tuesday, June 28. The purpose of his visit was to investigate an employee compaint stated as follows:

> "Pipefitters have been removing asbestos insulation without wearing the proper personal protective equipment. The Company has taken samples to determine where the asbestos is located, but some insulation has been mistakenly identified as non-asbestos."

This complaint was filed with OSHA on 6/27/83, at 11:45 a.m. It was specific to Departments 15 and 16, Department 19, Departments 48/56, and Power 2. The complaint was made by Charles E. Davis who is the pipefitter craft safety representative.

The visit on Monday was to hold an opening conference and go over the complaint against the Company. At the time, he reviewed our OSHA 200 form for 1981 thru the present and commented on our good safety record. He also received a copy of all our forms used by Medical for performing physicals and a copy of the procedures for removal of asbestos and the testing procedure by Pabco.

The personnel present for this opening conference were:

Charles Davis
Vernon Mapes
Dora Sendejas, R.N.
Greg Daues
Bob Hammann

He also mentioned that he had reviewed OSHA inspector, Roy Pigge's report on last year's general health inspection of the plant. He was here specifically on this asbestos investigation, but would cite us for any obvious violation that he happened to note in the course of his inspection. He left at approximately 2:30 after discussions with the comment that he would return the next day to interview people and look at the areas.

Day Two, Wednesday, June 29

C 002212

Rex McKinney entered the plant at approximately 9:45. A discussion was held with Dan Campbell, Bob Hammann, Charles Davis, and Mr. McKinney. During this discussion, which mainly revolved around sampling, he was given copies of the sampling data of personnel in the area and a copy of our "Asbestos Procedure". H.G. Bullock, Maintenance foreman for insulators, was called in to dicuss the interpretation of the procedure, specifically, who was instructed to get the sample. This was stated to be normally taken by the maintenance foreman in the

field. Mr. McKinney was taken to the I.H. lab and shown the procedures for determining asbestos. He also went to the field where he interviewed numerous people. The people interviewed were:

Herbert C. Doreck, pipefitter
Leonard Dinning, pipefitter
Ryan Pittman, pipefitter
W.R. Sanders, pipefitter
M.F. Whatley, pipefitter
Ed Smith, insulator
Raymond Guidry, insulator
Glenn Eierdam, insulator

From all these people he got the same story. Essentially, they were supplied with proper personal protective equipment, but they felt that insulators were better able to handle the work. The pipefitters specifically stated they didn't feel that they were qualified. On one hand they said they were willing to do the work agreed to by the contract, but on the other hand they stated they thought that the insulators should be doing work around asbestos. He was also shown the change room. He left the plant at approximately 3:15.

Day Three, Thursday, June 30

Mr. McKinney arrived at the plant at 10:00. Charles Davis, Dan Campbell, and Bob Hammann were present. They went to Department 48/56 where interviews were conducted with:

Richard Hobbs, Jr., pipefitter
Pete DeGroot, pipefitter
Charles Virgin, pipefitter

All expressed concern about not having proper training. In fact, Hobbs had not been trained because he had been off two weeks on sick leave and one week vacation just recently.

No checks were made in Department 19 as they did not have maintenance personnel in the area.

Contact was made with Jim Gatewood concerning any work where asbestos insulation would be removed as incidental work. It was determined that they had a job stripping insulation off piping above 16E2 and would be doing this work right after lunch. We went to the area and after the men obtained the proper equipment, sampling pumps were connected to them by both Mr. McKinney and Monsanto Industrial Hygiene for determining a 15 minute ceiling concentration. The two individuals doing this work were G.E. Hoyland and R.V. Nicol. Six pictures were also taken of the men in action stripping the insulation.

Possible Citations

During the work on stripping the insulation material was not wetted down. This is in violation of OSHA Standard 1910.1001 Asbestos, 2. Work Practices, i) Wet Methods. Also, based on the results of the air sampling, we may be required to provide a physical exam for each of the employees now exposed to asbestos.

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Bob Hammann

Mark Riddle

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TECHNICAL BULLETIN

FIREMAN'S FUND LOSS CONTROL

Number 12
November 1977
Revised
October 1980

INDUSTRIAL CARCINOGENS

INTRODUCTION

For the last 20 to 30 years, science and technology have taken giant steps. Massive amounts of new machines, processes and products are designed, produced and marketed annually. Thousands of new previously unknown chemicals are introduced into the market every year.

Only in the last few years have we realized that the great advantages of these new chemicals may be counteracted by posing serious health hazards to the manufacturer and user of these chemicals. The most serious of these hazards, the potential for carcinogenicity (cancer) to man, has alarmed industry and the public in general.

STANDARDS

Research into the carcinogenic potential of the myriad of chemicals has been very slow and in most cases inconclusive. Identification of cancer agents is further complicated by the difficulty of correlating animal experiments with actual human epidemiological data. The Occupational Safety & Health Administration (OSHA) has produced regulations for only 21 chemicals with carcinogenic potential to man. Strict standards and regulations have been established which are included in the Code of Federal Regulations 29 CFR 1910. Even for these, only a few have established permissible exposure limits. The American Conference of Governmental Industrial Hygienists (ACGIH) further recognizes that a few more are so toxic that no exposure or contact is permissible. However, more than half of these do not have any established Threshold Limit Values (TLV) or other permissible exposure limits.

Table No. 1 shows the carcinogens listed and regulated by OSHA.

The standards established by OSHA for the chemicals in Table No. 1 are specific on the various requirements. They further include exceptions by use and by percentage of carcinogen content.

CONTROL PROGRAM

The following is a summary of the basic requirements for a good carcinogen control program. For specific details, please consult the individual standard.

1. Substitute less toxic materials for known carcinogens.
2. A written, well-defined set of procedures should be established for the storage, use, and general control of these chemicals. Strict maintenance, cleaning, spillage control, and waste disposal procedures should be established. These procedures should be approved and implemented by top management.
3. Workers and supervisors who may be engaged in the use of these chemicals should be thoroughly trained as to the recognition, use and all other aspects relating to the chemicals. Regularly scheduled retraining sessions should also be established.

4. Establish and maintain a separate inventory on all carcinogenic products.
5. Containment of the chemicals at all stages from storage to final use is vital. Open vessel systems should not be used.
6. Areas where these materials are being used or stored should be regulated and access to and exit from them should be restricted. Posted signs and documentation should be maintained as to the names of employees entering and leaving the restricted area.
7. If possible, only one well-trained person should handle these chemicals. All operations, especially the weighing and scooping of these chemicals, should be done within an effective local exhaust ventilation system. A laboratory type hood with front doors is recommended so that only the worker's hands, properly protected by gloves or glove boxes, are required to be introduced into the hood, leaving the face behind the glass window. Intermediate transfer of these materials should always be done in closed and tightly secured containers. These chemicals should be stored in closed containers in segregated areas under lock and key.
8. Adequate, approved respiratory and skin protection should be worn as required for each type of chemical. In most cases they may involve the use of self-contained breathing apparatus, full-body airtight suits or high efficiency filter respirators.
9. The removal of the personal protective equipment and work clothes should be done in wash areas adjacent to, but separate from, the work area. Employees should wash their hands and shower thoroughly before leaving the plant. Work clothes should never be taken home.
10. All employees exposd to the chemicals should undergo periodic medical examinations and the results of which, as well as the personnel exposure history, be maintained and documented as required.

RECOGNIZED HUMAN CARCINOGENS

In addition to the OSHA listed carcinogens, the ACGIH has listed substances (as **recognized** human carcinogens) associated with industrial processes. These are shown in Table No. 2 with any applicable TLV's.

SUSPECTED HUMAN CARCINOGENS

ACGIH has also listed industrial substances **suspect** of carcinogenic potential for man. Included in this series of chemicals are substances which are associated with inducing cancer but are based on either (1) limited epidemiological evidence, exclusive of clinical reports of single cases, or (2) demonstration of carcinogenesis in one or more animal species by appropriate methods. These chemicals, as opposed to those in Table No. 1, are presently used in a large variety of industries and processes with a great number of workers being exposed to them.

For the chemicals listed in Table No. 3, worker exposure by all routes should be carefully controlled to levels consistent with the animal and human experience data including those substances with a listed TLV.

As more information becomes available, chemicals in Table No. 3 may become regulated. It is also very likely that more chemicals will be associated with human carcinogenicity.

CONCLUSION

Continuing research will surely develop significant conclusions. While the chemicals mentioned in this bulletin are the most likely to be found in the work place, many more have or will be identified in pollution breakdown chains, natural animal and vegetable food items, among others. On the other hand, media

reports tend to implicate many other compounds as potential cancer agents. When reviewing the latter, one has to scrutinize these reports as to their actual scientific background, completeness of research, and dose-response relationship (how much consumption will actually increase the potential for cancer).

TABLE 1
OSHA LISTED AND REGULATED CARCINOGENS

Standard	Name	Use	Type of cancer	TLV
1910.1001	Asbestos (a)	Various. Insulation filler	Lung & liver	2 fibers/cc greater than 5 micrometers in length
1910.1002	Coal Tar Pitch Volatiles (b)	Manufacture of steel asphalt, etc.	Mainly bladder	0.2 mg/m^3
1910.1003	4-Nitrobiphenyl	Intermediate in production of 4-Aminodiphenyl	Bladder as 4-Aminodiphenyl	NECC (ACGIH)
1910.1004	alpha-Naphthylamine	Intermediate in dyes, herbicides and antioxidants	Bladder with beta-naphthylamine	No TLV
1910.1005 (Deleted)	4,4' Methylene bis (2-chloroaniline) (MOCA) (c)	Curing agent for isocyanate-containing polymer.	Non conclusive data	No TLV
1910.1006	Methyl chloromethyl ether	Production of ion-exchange resins and as chloromethylating agent	Lung (oat-cell)	No TLV
1910.1007	3,3' Dichlorobenzidine (and its salts)	Production of dyes, curing agent for isocyanate containing polymers.	Bladder (suspected)	No TLV
1910.1008	bis-Chloromethyl ether	Intermediate in production of various textile aids.	Lung	0.001 ppm (ACGIH)
1910.1009	beta-Naphthylamine	Intermediate in dyes, antioxidants	Bladder	NEOC(ACGIH)
1910.1010	Benzidine	Dye manufacture	Bladder	NEOC (ACGIH)
1910.1011	4-Aminodiphenyl	Rubber antioxicant	Bladder	NEOC (ACGIH)
1910.1012	Ethyleneimine	Used to manufacture polyethyleneimine; flocculant in water treatment; intermediate oil additive, adhesives, surfactants	Liver-cell & pulmonary (animals)	0.5 ppm (ACGIH)
1910.1013	beta-Propiolactone	Manufacture of acrylic acid and its esters.	(animals)	No TLV
1910.1014	2-Acetylaminofluorene	Initially as pesticide	Various (animals)	No TLV
1910.1015	4-Dimethylaminoazo-benzene	Manufacture of coloring polishes and other wax products.	Liver & bladder (animals)	No TLV
1910.1016	n-Nitrosodimethylamine	Solvent and in manufacture of rocket fuel, antioxidants, lubricant additives, and in condensers to increase dielectric constant.	Liver & kidney (animals)	No TLV
1910.1017	Vinyl chloride (monomer)	Mainly PVC manufacture	Liver	1 ppm
1910.1018	Inorganic Arsenic	Foundries & smelters. Pigment glass & paint manufacture	Lung & skin	10 ug/m^3
1910.1028	Benzene	Solvents. Chemical intermediate	Leukemia, bone marrow	10 ppm
1910.1029	Coke oven emissions	Coke ovens (Steel foundries)	Lung, liver & skin	150 ug/m^3
1910.1044	1,2 dibromo-3-chloro-propane (DBCP)	Pesticide	Cancer & sterility	1 ppb
1910.1045	Acrylonitrile	Plastics, pesticide	Lung & colon	2 ppm

(a) All forms: Chrysotile, amosite, crocidolite, tremolite, anthophyllite and actinolite.

(b) Particulate Polycyclic Aromatic Hydrocarbons. (Benzene soluble fraction.) Anthracene, benz(a)pyrene, phenanthrene, acridine, chrysene, pyrene.

(c) MOCA has been deleted from the OSHA carcinogen list.

TLV = Threshold Limit Value

ACGIH = American Conference of Governmental Industrial Hygienists.

NEOC = No Exposure or Contact.

mg/m^3 = milligrams of contaminant per cubic meter of air.

ppm = parts of contaminant per million parts of air, by volume.

ppb = parts of contaminant per billion parts of air, by volume.

TABLE 2

Recognized Human Carcinogens. Substances, or substances associated with industrial processes, recognized to have carcinogenic or cocarcinogenic potential with an assigned TLV

	TLV
Chromite ore processing (chromate)	0.05 mg/m^3 (as Cr)
Nickel sulfide roasting, fume & dust	1.0 mg/m^3 (as Ni)
1,2 Dibromoethane (ethylene dibromide)	NEOC

TABLE 3

Suspected Human Carcinogens.
Industrial Substances Suspect of Carcinogenic Potential for Man.

	TLV
3-Amino 1,2,4-Triazole	—
Antimony trioxide production*	—
Arsenic trioxide production	—
Benzene—Skin	10 ppm
Benz(a)pyrene	—
Beryllium	2.0 ug/m^3
Cadmium oxide production	—
Carbon tetrachloride	5 ppm
Chloroform	10 ppm
Chromates of lead and zinc (as Cr)	0.05 mg/m^3
Dimethylcarbamyl chloride	—
1, 1-Dimethyl hydrazine	0.5 ppm
Dimethyl sulfate—Skin	0.1 ppm
Ethylene dibromide—Skin	—
Hexachlorobutadiene	0.02 ppm
Hexamethyl phosphoramide—Skin	—
Hydrazine	0.1 ppm
4,4'-Methylene bis (2-chloroaniline)—Skin	0.02 ppm
Methyl hydrazine	0.2 ppm
Methyl iodide	2 ppm
2-Nitropropane	25 ppm (Ceiling Value)
n-Phenyl-beta-naphthylamine	—
Propane sultone	—
Propylene imine—Skin	2 ppm
o-Tolidine	—
Vinyl bromide	5 ppm
Vinyl cyclohexene dioxide	10 ppm

* Cigarette smoking can enhance the incidence of respiratory cancers from this or others of these substances or processes.

Prepared by: G. Gruenwald, CIH
Industrial Hygienist

As of Jan 14, 1975

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NIOSH Criteria Documents - Current

Ammonia	Inorganic Lead
Asbestos	Noise
Benzene	Sulfur Dioxide
Chloroform	Toluene
x Inorganic Arsenic	x Toluene Diisocyanate
x Beryllium	Trichloroethylene
Carbon Monoxide	UV Radiation
Chromic Acid	Sulfuric Acid Mist
x Cotton Dust	Vinyl Chloride
Heat Stress	
Inorganic Mercury	
x Coke Oven Emissions	
Crystalline Silica	

TLV = 10 ppm

½ TLV = 5 ppm (Action Level)

CBY 3103827

C 002220

NIOSH Recommended Standards Developed under the Occupational Safety and Health Act

Substance	Exposure Estimates	Date Transmitted To DOL
Ammonia	500,000	July 15, 1974
Arsenic	1,500,000	January 21, 1974
Revised		June 23, 1975
Asbestos		January 21, 1972
Benzene	2,000,000	July 24, 1974
Beryllium	30,000	June 30, 1972
Carbon Monoxide		August 3, 1972
Carbon Tetrachloride		December 22, 1975
Chloroform	80,000	September 11, 1974
Chromic Acid	15,000	July 17, 1973
Chromium(VI)		December 1, 1975
Coke Oven Emissions	10,000	February 28, 1973
Cotton Dust	230,000	September 26, 1974
Emergency Egress from Elevated Workstations		December 1, 1975
Fluorides	350,000	June 30, 1975
Hot Environments		June 30, 1972
Identification System for Occupationally Hazardous Materials		December 20, 1974
Inorganic Lead		January 5, 1973
Inorganic Mercury	150,000	August 13, 1973
[illegible]		January 21, 1975
Noise		August 10, 1972
Silica	1,200,000	November 11, 1974

CBY 3103828

19 DEC. 1975

trifluoride, bromine, chlorine dioxide, chlorine trifluoride, decaborane, [illegible]ane, hydrazine, iodine, nitrogen trifluoride, nitrotoluene, pentaborane, [illegible]rchloryl fluoride, picric acid, propyl nitrate, selenium hexafluoride, tetranitromethane, tetryl, trinitrotoluene (TNT)

GROUP R: 30 JAN. 1976

benzoyl peroxide, carbon black, carbon dioxide, carbon disulfide, cyanide, dimethyl acetamide, dimethyl formamide, hydrogen chloride, oxygen difluoride, phosphorus pentachloride, phosphorus pentasulfide, phosphorus trichloride, silica, sulfur hexafluoride, sulfur pentafluoride, sulfuryl fluoride, talc, thiram

GROUP S: 27 FEB. 1976

aldrin, ANTU, Guthion, boron oxide, Sevin, chlorodane, DDT, ethyl silicate, graphite, hydrogen peroxide, methyl isocyanate, mica, oil mist, perchloromethyl mercaptan, Portland cement, silica, soapstone, sulfur monochloride

GROUP T: 26 MAR. 1976

2,4- D, Systox, dichlorobenzene, dichlorvos, dieldrin, endrin, EPN, ethylene oxide, heptachlor, hydrogen cyanide, lead arsenate, lindane, methyl formate, naphthalene, nicotine, paraquat, parathion, Phosdrin

GROUP U: 23 APR. 1976

benzene, Crag, malathion, nitric acid, nitric oxide, nitrogen dioxide, pentachlorophenol, pyrethrum, ronnel, rotenone, sodium fluoroacetate, strychnine, 2,4,5- T, TEDP, TEPP, thallium, warfarin, xylene

GROUP V: 21 MAY 1976

acetaldehyde, allyl glycidyl ether, ammonia, chlorine, dichloroethyl ether, diisobutyl ketone, ethoxyethanol, ethyl mercaptan, ferbam, fluorine, formaldehyde, furfuryl alcohol, isophorone, isopropylether, methyl mercaptan, sulfur dioxide, toluene, TDI

GROUP W: 18 JUNE 1976

ammonium sulfamate, butyl mercaptan, cadmium, carbon monoxide, coal tar pitch volatiles, cotton dust, dimethylsulfate, ethylene imine, fluoride, methoxychlor, methycyclohexanone, methylcyclohexanol, organo mercury compounds, sodium hydroxide, tetraethyl lead, tetramethyl lead

CBY 3103829

C 002222

NIOSH-OSHA STANDARDS COMPLETION PROGRAM DRAFT TECHNICAL STANDARDS AVAILABILITY AND DATES BY CHEMICAL GROUP

Dates indicate due date of projects by NIOSH Contractors

(Schedules estimated as of January 31, 1975)

GROUP A: DELIVERED

acetone, antimony, methyl ethyl ketone, cyclohexanone, methyl isobutyl ketone, hydrogen sulfide, manganese, MDI, nitroaniline, pentanone

GROUP B: DELIVERED

camphor, chloroacetaldehyde, chloroacetophenone, ethyl butyl ketone, mesityl oxide, methyl (n-amyl) ketone, ethyl sec-amyl ketone, ozone, Fival

GROUB C: DELIVERED

acrolein, butyltoluene, cumene, cyclohexane, biphenyl, ethyl benzene, furfural, methyl styrene, styrene, terphenyls, vinyl toluene

GROUP D: DELIVERED

amyl acetate, butyl acetate, butyl acetate, n-butyl acetate, dibutylphthalate, dimethylphthalate, ethoxyethylacetate, ethyl acrylate, ethyl formate, hexyl acetate, isoamyl acetate, isobutyl acetate, methyl acetate, methyl acrylate, methyl cellosolve acetate, methyl methacrylate, octyl phthalate, propyl acetate

GROUP E: DELIVERED

allyl alcohol, amyl acetate, butyl alcohol, cyclohexanol, diacetone alcohol, ethyl acetate, ethanol, hydroquinone, isoamyl alcohol, isobutyl alcohol, isopropyl acetate, isopropyl alcohol, methanol, methyl isobutyl carbinol, propyl alcohol

GROUP F: 14 FEB. 1975

butyl cellosolve, butyl glycidyl ether, toxaphene, cyclohexene, cyclopentadiene, Bisphenol A, dipropylene glycol methyl ether, ethyl ether, glycidol, isopropyl glycidyl ether, methyl acetylene, methyl cellosolve, methylal, phenyl ether, phenyl glycidyl ether, propylene oxide, tetrahydrofuran

GROUP G: 14 MAR. 1975

butadiene, dioxane, heptane, hexane, ketene, liquified petroleum gas, MAPP, methyl-cyclohexane, coal tar naptha, octachloronaphthalene, octane, pentachloronapthalene, pentane, petroleum naphtha, propane, propylene dichloride, stoddard solvent, turpentine

GROUP H: 11 APR. 1975

benzyl chloride, bromoform, chlorobromomethane, chloroprene, dichlorodifluoromethane, dichloroethylene, dichloromonofluoromethane, dichlorotetrafluoroethane, difluorodibromo-methane, ethyl bromide, ethyl chloride, ethylene chlorohydrin, ethylene dibromide, fluorotrichloromethane, hexachloroethane, hexachloronaphthalene, methyl chloride, methyl iodide

CBY 3103830

C 002223

CLOSING CONFERENCE -- OSHA INSPECTION FOR 8/12/83

The closing conference with Rex McKinney, OSHA, was set for 1400 on 8/12/83. Mr. McKinney arrived at the plant at 1230 and was brought in from the Main Gate at 1300. Prior to the closing conference there was some discussion on steps that we have taken since the inspection of 6/28-7/1 concerning employee physicals. We stated that we plan to initiate yearly physicals (including medical history, pulmonary function test and chest x-ray) for those individuals doing incidental work requiring them to remove asbestos insulation. Also stated that we would not force an individual to take the chest x-ray. However, if they decided not to take the x-ray, then they would be required to sign a statement stating this.

He also requested medical information on the two workers, R.V. Nicol and G.E. Hoyland, on which personnel monitoring was done while they were performing job of stripping asbestos. Information given was as follows:

	Last Physical	Pulmonary Function Test	Chest X-ray
Nicol	03/23/83	08/81	Given slip at last physical
Hoyland	11/17/82	11/17/82	Given slip at last physical

Closing Conference

Personnel present:

Rex McKinney, OSHA
Charles Davis, Pipefitter Safety Representative
Greg Daues
Dan Campbell
Mark Riddle
Bob Hammann

Mr. McKinney started by stating that their tests showed 0.3 fibers/cc which is well below the ceiling limit and therefore indicated no overexposure. He stated there were three possible citation areas.

1. Work practices/wet methods - 1910.1001 C.2.i

   We were cited as the workers did not wet down the asbestos while they were removing it. It is our practice to wet down the asbestos. He has a copy of our procedures which state this. Abatement period - immediate. This has always been our practice.

2. Personnel monitoring - 910.1001 F.2.ii

   Personnel monitoring must be done at intervals no greater than six months. From the data that we have given him, this has not been done. Additional search for data will be made to see if we have indeed complied with this. Abatement period - immediate.

3. Employee physicals - 1910.1001 J.2

People working with asbestos shall have a physical examination within 30 calendar days. Some discussion followed concerning this when we once again stated our opinion that this initial examination is to establish baseline data. We are willing to accept data taken from earlier physicals as being the baseline data. He could not answer this other than to state that we would have to discuss it with his boss at an informal conference sometime after receiving any citations. His boss' name is Jack Fontaine and his phone number is 750-1727.

We should receive the formal citation within two weeks by registered mail. The fifteen working day period for formally contesting the citation will start the day after receipt of the citation.

The Industrial Hygiene

Monitor

Volume 1, No. 5 September, 1980

Certification—Closer Look

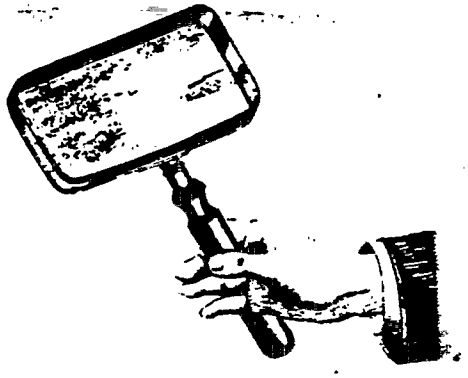
The field Industrial Hygiene network staff is relatively young in Monsanto compared with other professional disciplines. With this in mind, J. T. Garrett, Industrial Hygiene Director, has explored in a two part article the subject of professional certification and its impact on industrial hygienists and hygiene chemists.

It is important for a Professional Industrial Hygienist or Hygiene Chemist to be certified by the American Board of Industrial Hygiene (ABIH). In the eyes of others in the public health field, this signifies that the hygienist or hygiene chemist has acquired the training and skills to be called a true professional. In addition to this obvious benefit, there are several other benefits that accrue to Monsanto and to the hygienist or hygiene chemist who reaches this plateau in his or her professional development. These are in part:

OSHA and NIOSH Relations: It is abundantly obvious that governmental agency representatives, including inspectors, are impressed with the certification status of an individual and consider the programs that include certified professionalism as an important element superior to those that don't. In addition, both OSHA and NIOSH encourage certification within their own hygiene staff and hygiene chemists and these agencies pay the necessary expenses as a part of doing business in this field.

Professional Testimony: Governmental agencies routinely determine the technical qualifications of witnesses and other professionals in this field through their certification status. In many cases the first question asked of a witness is whether he or she is certified and in what speciality. Certification is, therefore, important to Monsanto not only as a symbol of achievement in the profession but also a symbol of quality in its Industrial Hygiene Program.

Program Recognition within the Profession: Programs are invariably judged by industrial health professionals in all disciplines by the degree of certification



achieved by the program participants. This is true in occupational medicine as well as industrial hygiene and will soon be true in the case of toxicology. Certification of laboratories by the American Industrial Hygiene Association (AIHA) requires certification of certain of the laboratory professionals before it is granted. Certification in the field has, in fact, become essential to program recognition.

Advancement in the Field: Virtually all industrial hygiene programs have certification as one of the requirements for advancement. This is, for example, true in the DMEH Industrial Hygiene Section. It is equally true in published job offers. There are very few such offers that do not require certification or in-training status. This is true of OSHA and NIOSH offers in advanced civil service grades as well.

For the above reasons and many others certification for industrial hygienists and industrial hygiene chemists is an intelligent move.

Asbestos and Monsanto

The following is in answer to a question posed by J. T. Roberts, hygienist at the Greenwood, NC location. The question concerned the Monsanto policy on asbestos use and possible inconsistencies between Monsanto policy and CED specifications for the material on certain projects.

DMEH has found no formal, written Monsanto "policy" for asbestos although there is a relatively long standing corporate "guideline" which recommends that substitute materials be used where they are available and meet the requirements for the application. For some years now, Monsanto has made a conscious effort to remove asbestos from the existing workplace and prevent its use to the greatest degree possible for new installations. Under this informal guideline, a substitute material should be used whenever risks and cost are reasonable and process considerations are not jeopardized. Experience has shown that substitute materials have been used in the vast majority of cases, although there are some applications, even today, where a suitable substitute has not been found and asbestos must be used. Plant and CED design engineers are aware of this guideline and its intent and are routinely using asbestos substitutes where available and applicable. In addition, during the LPEC&E review process, DMEH normally checks this requirement for acceptability.

In our view, the spirit of the guideline is being honored through the corporate system in essentially all cases. If you are aware of a particular situation which appears to be inconsistent, make your concerns known to plant or CED project management and your DMEH industrial hygienist.

Ceiling Values—An Overview

Recently, R. A. Baxter, Manager Industrial Hygiene/Europe, posed concern over the seemingly inconsistent definition being used in the field for ceiling concentrations, and suggested some light be shed on the subject.

In Search of a Definition

The inconsistencies Richard refers to are probably no more evident than in the OSHA health statutes. When one refers to the 1910.1000 section of the OSH Act, you can find two definitions of ceiling values. If referred to Table Z-1, the definition states you:

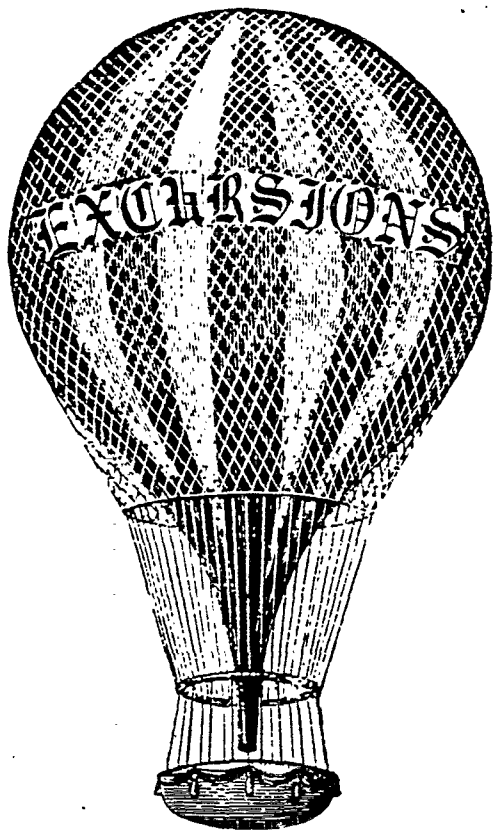
- "...shall at no time exceed the ceiling value given for that material in the table."
- The second definition refers to Table Z-2 where an exception to the above explanation allows an excursion above the ceiling:
- "...up to a concentration not exceeding the maximum duration and concentration allowed in the column under "acceptable maximum peak above the acceptable ceiling concentration for an 8 hour shift"."
- This later definition more closely follows the concept of a STEL described in the ACGIH TLV booklet. The major difference being that most of the values in Table Z-2 don't follow the 15 minute duration criteria used in the STEL definition.

Without belaboring the reader with the other specific OSHA standards, suffice to say that certain standards define ceilings as that concentration which cannot be exceeded as *averaged* over a certain duration of time. In a word, yes, there are inconsistencies in OSHA's definition of ceiling values, and, yes, many definitions exist for the concept of ceiling values.

Richard suggested in his inquiry that to minimize confusion when speaking of ceiling values, mention of the observation time would be appropriate. We at DMEH think this is a step in the right direction. We also felt it appropriate to review the fundamental concept of ceiling values so as to provide guidance and uniformity to its use in the field.

Ceiling Concept

The ACGIH introduces a judgmental approach for the short term exposure



limit (STEL) values by qualifying the conditions they seek to protect against, namely:

- irritation
- chronic or irreversible tissue change
- narcosis of sufficient degree to increase accident proneness, impair self rescue, or materially reduce work efficiency.

This rationale is compatible with DMEH's approach to this subject and should provide guidance in determining ceiling levels for materials with no listing as such. The excursion factor table appearing below is a good source to consult when a question arises in this area.

New TLV's Available

DMEH has received the 1980 TLV booklets. They will be distributed in September. If you don't get one or need more, contact your staff hygienist.

M²COS&H

It's time to mark your 1981 calendar with a few important dates. The Monsanto Management Conference on Occupational Safety and Health will be held March 15-19th here in St. Louis. This will be a joint conference with members present from the Medical, Industrial Hygiene, and Safety & Property Protection functions throughout Monsanto. As usual, we are all looking for interesting, informative, and, yes, even controversial subjects to present at the conference, so call or write your respective contact in DMEH or S&PP and suggest topics you feel would be useful. It's not that far away!

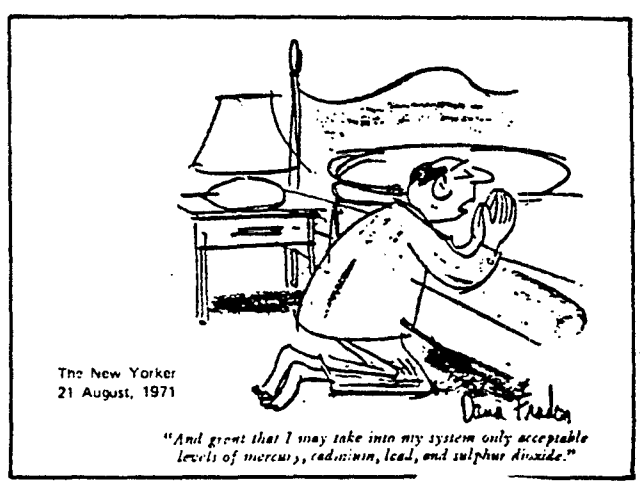
Excursion Factors

For all substances not bearing C notation

		Excursion	
TLV 0-1	(ppm or mg/m).	Factor	= 3
TLV 1-10	"	"	= 2
TLV 10-100	"	"	= 1.5
TLV 100-1000	"	"	= 1.25

The number of times an excursion above the TLV is permitted is governed by conformity with the Time-Weighted Average TLV.

Remembering that STEL's are guidelines, and recognizing that hypersusceptible individuals are present in the workforce, each location should judge acceptable ceiling levels for materials on empirical data as well as consensus guides. When a question occurs in this area, DMEH should be consulted.



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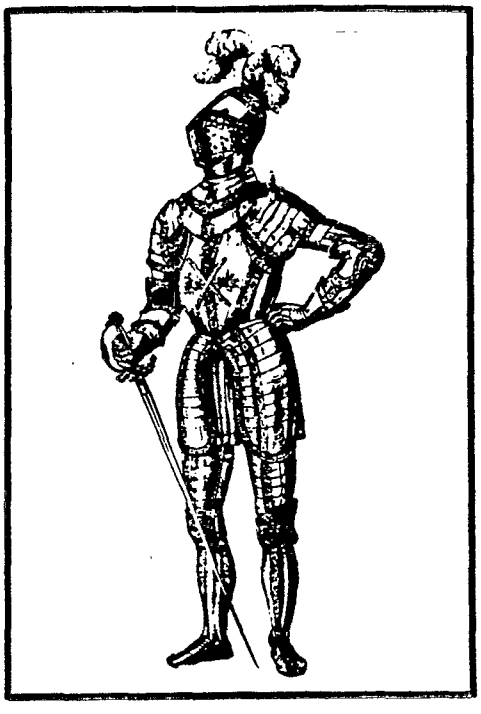


Facts On Fiberglass You're Itching To Know

by Tom Blank

The use of fibrous glass, as a replacement for asbestos in certain applications, has grown in recent years. Along with this increased use stems concern about health effects surrounding the use of fibrous glass. This review should help clear some of the misconceptions and fears.

Glass is one of the oldest and most versatile materials used by man. However it wasn't until 1841 that man developed the technology for spinning glass fibers. The Germans were the first to use fibrous glass for heat insulation. This resulted from a shortage of asbestos during World War I. In the 1930's, two U.S. companies, Owens Illinois Glass Company and Corning Glass Works developed a commercial method of fiberizing glass. Since that time, fibrous glass has been used in over 35,000 individual product applications. Major uses include acoustical and thermal insulation and the reinforcement of plastics. However, an increased number of textile products are now being developed and marketed. The outstanding properties of fibrous glass include: chemical resistivity, heat resistance, non-flammability and resistance to microbial degradation. Since these fibers are made of glass, they have an inherent brittleness that can be reduced through the use of coating agents (4 to 14% by weight), including binders and lubricants.

Many of us have experienced the burning, itching, and/or pricking sensation from handling fibrous glass, whether at home or on the job. The resulting dermatitis, generally observed, is caused by the transient mechanical, cutaneous irritation of the skin and the sequelae of scratching. In Scotland, workers accepted this dermatitis as a condition of employment and labeled it the "badge of the trade". This condition results in approximately 10% of new glass workers leaving the job. However, it is not a disabling form of dermatitis. The cutaneous nerve endings mediate both pain and itch, so these modes of sensation are closely related. The stimulation of these nerve endings, following contact with the fibrous glass, result in the discomfort many observe. It is important to note that the larger the fiber the higher the potential for skin irritation. Conjunctival (eye) irritation and nasopharyngitis (upper airway irritation) have also been reported.

Animal studies involving the inhalation of glass fibers have neither demonstrated pulmonary fibrosis nor the presence of pulmonary or mesothelial cancers and resulted in minimal macrophage reaction. Epidemiological studies have not demonstrated an excess in mortality, increased chronic bronchitis, the presence of mesotheliomas or harmful tissue damage. Upper airway irritation appears to be the only respiratory system problem of any consequence.

The body of evidence summarized here has lead the ACGIH to classify fibrous glass a nuisance dust. Following is a list of precautions and recommended safety/industrial hygiene practices:

1) Clothing should be loose-fitting and changed on a daily basis. They should cover the extremities leaving few areas of the skin exposed.

2) Fibers should be washed off with ample amount of lukewarm or cool water. Showering, following a specific task or work shift, is advisable in addition to a fresh change of clothing.

(Continued on page 2)

The "Monitor" is a forum for ideas, comments, and useful news relating to occupational health, issued by the Industrial Hygiene Section, DMEH, Monsanto, St. Louis, MO.

Quality Control for the Occupational Exposure Module of MEHI

by Paul Easterday

As part of any computer data collection system it is essential that the data entering the system is accurate. The saying "garbage in, garbage out" is appropriate for computer systems where no provisions have been made to verify the accuracy of the data generated. With the exponential growth of data in MEHI, a need was identified to verify the accuracy of the data. Based on this need DMEH has developed a program designed to ensure data entering the MEHI system is accurate.

The MEHI quality assurance program has been implemented to determine the accuracy of the MEHI header, work, and industrial hygiene records. This program has been designed to provide the plant immediate feedback concerning the quality of the data in their master files. This will provide an error rate for the records that were entered during the previous calendar quarter, and will allow the plant to observe the types of errors, if any, that may be unique to that location. Both direction in correcting errors and information on how effective the program is in collecting accurate work history and industrial hygiene data will be returned to the plant.

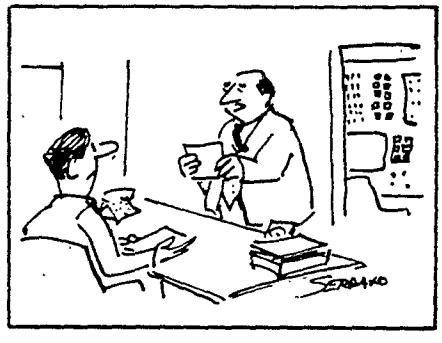
Each quarter the plant will be sent an evaluation report based upon MEHI records that were entered during the previous quarter. The report will contain up to five computer printouts:

1. all new header records for hourly employees,
2. all new header records for salary employees,
3. a random sample of work records for hourly employees,
4. a random sample of work records for salary employees,
5. a random sample of industrial hygiene records.

The number of printouts that each plant will receive will depend on whether header, work, or industrial hygiene records were entered during the previous quarter.

As part of the MEHI quality assurance program, it will be the plant's responsibility to compare MEHI records on the computer printouts with plant records that document all work history changes for each employee. The records may be personnel records, payroll records, and/or departmental logs, as long as they are an original, accurate source of information (not the MEHI keypunch schedules). For industrial hygiene data, compare the MEHI records on the computer printout with the original monitoring forms (this is not the 10, 20, 30 record layouts) at each of your locations. Whatever the source of information, the objective will be to determine the accuracy of the MEHI with respect to the plant records.

Health evaluations including responding to proposed health regulations, epidemiology (morbidity and mortality) needs, and responding to potential litigation require a data base that is both accurate and verifiable. We believe this program is a first step at answering this expressed need. If you have any questions concerning the program, contact your DMEH industrial



"Mr. Easterday, the computer informs me that you've been kicking it."

Fiberglass (Cont.)

3) It is recommended that workers not use air hoses and/or brooms to clean themselves. Such actions could result in driving the fibers deeper into the skin.

4) The use of personal protective equipment should include some form of gloves for hand protection and the possible use of a dust respirator to reduce the potential of upper airway irritation. A phenomenon known as "hardening" occurs in fibrous glass workers from which they no longer exhibit signs of skin irritation from exposure to the fibers.

5) The laundering of work clothing creates yet a different problem.

> Family epidemics of itching and irritation have been reported when work clothing has been included with other family laundry in the family washing machine. It is suggested that clothing be washed by itself in a tub or basin. The tub or basin should then be thoroughly rinsed. Additionally, rubber gloves should be worn by the launderer to prevent further incidence of dermatitis.

In conclusion, evidence indicates that fibrous glass causes transient, mechanical, cutaneous irritation of the skin and the sequelae of scratching and in severe instances upper respiratory irritation. Long term effects of fibrous glass exposure have not been reported. Should you have any questions, contact your DMEH industrial hygienist.

OSHA's Position on Sampling When Wearing Air Supplied Hoods

by Joe Wolfsberger

On March 30, 1984 OSHA published a long awaited revision to the Industrial Hygiene Field Operations Manual (FOM). Of particular interest is a change in the requirements for sampling when employees use air supplied hoods. In Chapter II, Section F(3) the manual directs the OSHA industrial hygienist that:

> "In sampling for employee exposure to air contaminants generated during work operations where air-supplied hoods are used (i.e., painters or foundry chippers and grinders), ensure that the filter cassette is located inside the employee's hood."

The FOM also specifies that when sampling for air contaminants generated during burning and welding operations the filter cassette should be located inside the employee's welding hood.

Sampling inside personal protective equipment (PPE) worn by employees can provide useful information regarding the effectiveness of the PPE. This information can be invaluable when showing the effectiveness of PPE versus other control measures. Developing a valid sampling protocol and strategy,

(Continued on page 3)

OSHA (Cont.)

however, can be very difficult when dealing with respiratory protection other than air supplied hoods. When these sampling technique problems are overcome, this type of sampling will provide a tool to evaluate the effectiveness of PPE programs. Until it is feasible to perform this type of sampling for all respirators remember the OSHA FOM's Directive for sampling employees wearing air supplied hoods and welding helmets.

Jackie Gaul Promoted

by Steve Paul

Jackie Gaul, the Chocolate Bayou Plant industrial hygienist, was recently promoted to Distribution Operations Superintendent at the Texas City Plant.

In the past, some network industrial hygiene professionals have been concerned with the lack of mobility in the IH area. Jackie's promotion has offered some encouragement that they may be considered for other assignments.

We congratulate Jackie on her promotion and hope that others may be considered for assignments which broaden their experience and improve their organizational mobility if they choose to pursue other career paths.

EPA Chemical Advisory On Used Motor Oil

by Glenn Hachey

A few months back EPA issued one of what it refers to as "Chemical Advisories". These advisories are designed to give individuals and organizations information to make informed decisions on how to safely handle chemicals. The advisory stated that:

> In a laboratory study, mice developed skin cancer after their skin was exposed to used motor oil twice a week without being washed off, for most of their life span. While this one study is not conclusive, substance found to cause cancer in laboratory animals may also cause cancer in humans.

We felt that although there might possibly be some occupational exposure out there to some of our mechanics, there probably was a potentially even larger non-occupational threat from people who handle this material infrequently at home. I know I personally do my own routine maintenance on my vehicles and even my lawnmower (forget the lawnmower - I lied) and I have had a few bouts of dermatitis with certain lubricants. The EPA advice certainly got my attention and I have now saved enough plastic milk jugs to dispose of a year's worth of oil changes and I now take them to the recycling center at my local garage. I have even broken down (with some subliminal encouragement from my wife) and discarded some of my favorite wipe rags that were beyond the laundering stage. I should probably know better anyway from my safety background that oil soaked rags are not good to keep around from a fire risk standpoint, but it's funny how a lot of safety/health professionals do things at home that they wouldn't even consider at work. I guess we shouldn't expect our workers to be much different.

Here are some helpful DO's and DON'T's supplied by EPA for handling used motor oil that you may want to pass along to your maintenance workers and weekend mechanics.

Recommendations

DO's

- DO follow work practices that minimize the amount of skin exposed, and the length of time used oil stays on skin.
- DO thoroughly wash used oil off skin as soon as possible with soap and water. A waterless hand cleaner can be used when soap and water are not available. Always apply skin cream after using waterless hand cleaner.
- DO wash oil-soaked clothing before wearing it again. Discard oil-soaked shoes.
- DO use gloves made from nitrile, Neoprene, Viton or other material that oil cannot penetrate, if practical for your kind of work.

DON'T's CBY 3103837

- DON't use kerosene, thinners or solvents to remove used motor oil They remove the skins natural protective oils, and can cause dryness, irritation, and possibly more serious toxic effects.
- DON'T over-use waterless hand cleaners, soaps or detergents. They can remove the skin's natural protective barrier oils.
- DON'T put oily rags in pockets, or tuck them under a belt: this can cause continuous skin contact.
- DON'T pour used engine oil on the ground or down drains and sewers; it is a violation of federal law. EPA encourages collection of used motor oil at collection points in compliance with appropriate state and local ordinances.

A Brief History Of Detector Tubes

by Gerry W. Buttler

One of the most common direct reading tools used by industrial hygienists for the determination of gases and vapors in workplace atmospheres is the detector tube. The impetus for their development first came from the mining industry where the use of animals - usually white mice or canaries was the only means of providing an immediate warning of dangerous carbon monoxide build-up. Most other techniques available prior to 1920 used conventional sampling techniques and subsequent laboratory analyses, often hours or even days later. Even the use of the simpler colorimetric analytical procedures could not yield instantaneous evaluation of the carbon monoxide levels in the mines.

Two Americans, A. B. Lamb and C. R. Hoover, patented a detector tube for measuring carbon monoxide in 1919. It was based on the colorimetric reaction of carbon monoxide with iodine pentoxide and fuming sulfuric acid. Pumice was used as the carrier material and, along with the reagent chemicals, was referred to as "Hoolamite" and packed into thin glass tubes. As air containing carbon monoxide was drawn through the tube by some sort of pumping device, the "Hoolamite" changed color to green. The intensity of the color could then be related to the concentration of carbon monoxide.

Although this was a significant advance in the field of industrial hygiene

(Continued on page 4)

C 002230

Detector Tubes (Cont.)

monitoring, it was not until the mid-1930's that another detector tube emerged, this time for hydrogen sulfide. The major stumbling block in the advance of this monitoring technique was the lack of adequate technology in preparing the colorimetric reactive fillings for the tubes. Many of the common wet-chemical reactions that could be used for gases and vapors could not proceed in a dry-medium such as that in the tubes. Additionally, many reagent mixtures were not stable over a long period of time for them to have the durability and reliability necessary for practical use. Inevitably, these problems were overcome or at least circumvented because of the potential speed, convenience, and simplicity that this technique could provide.

In the early 1950's, more suitable chemical reagents impregnated on granular supports were prepared and new detector tubes for other vapors were developed: alcohol, benzene, and water vapor. In 1952, Grosskopf reported on tubes developed for determining carbon disulfide, chlorine, methyl bromide, nitrous fumes, and sulfur dioxide. Concentrations were indicated in different ways as detector tube technology began to grow. In some instances, color changes were compared directly with charts of color tints: in other cases, the concentration was indicated by the length-of-stain on the indicator gel. Throughout the 1960's and 1970's, the use of this form of monitoring greatly expanded as the number of materials which could be detected increased. Today, over 200 different types of detector tubes have been developed and marketed by such companies as Drager, Matheson-Kitagawa, MSA, and Bendix-Gastec. Both short term tubes for task or STEL sampling and long term tubes for TWA sampling are available. More recently, diffusion detector tubes which require no pumps have come into use, such as the ones Drager makes for ammonia, hydrogen chloride, and hydrogen sulfide.

While detector tubes remain important aids to the industrial hygienist, they are not without their limitations. There are still many materials for which detector tubes are not available or feasible. Also, many of the colorimetric reactions frequently used in the tubes determine only classes of compounds or functional groups and may not provide the specificity desired. Cross-interferences are common, and the hygienist should take care that he doesn't use a particular tube that is affected by nontarget compounds known to be the atmosphere he is monitoring. Deviations in the amount of air drawn through the tubes from that for which they were designed can yield errors. Nevertheless, detector tubes remain a valuable resource for the immediate assessment of air quality as long as their use is supervised and their results are interpreted by trained industrial hygienists.

Field Validation Entries into MEHI

by Paul M. Jeannot

"Field validation" is an integral component of a quality industrial hygiene monitoring program. The scheme(s) provides a means to determine the long-term effectiveness/performance of an entire monitoring method in the actual workplace environment where interfering components may exist. As such, it is equally as important to document into MEHI the levels and recoveries of the field validation sample(s) as it is to document the field data itself. In this regard, a temporary and somewhat unwieldy procedure for inputting field validation data into MEHI, was described by Jeannot, P. M., "Field Validation Into MEHI", *Industrial Hygiene Monitor,* Volume 4, No. 3, March, 1983, p. 3.

This present article will describe a simpler inputting system which will allow both DMEH and the locations greater capabilities to retrieve and evaluate past validation data. This system should be integrated into the plant MEHI program as soon as practicable. The data will be used by DMEH to audit method performance and validation frequency for the purpose of method validity classifier assignment.

With respect to the "Validation" (V) determination type *only*, data should be entered with the following modifications:

1) Multiple "30" cards on the Data Transmittal Form may be submitted for materials with the *same* CAS No. and the *same* Determination No.

2) In field 34 (L/G) of the "30" card use "B" for background sample(s) and use "S" for spiked (validation) sample(s).

3) Record the appropriate concentration level(s) for the background sample(s) in the "Results" fields using the appropriate unit code, using "B" for background in field "34".

4) Record the calculated theoretical spiked level(s) for the appropriate sampling period in the "Result" fields using the same unit code as the background, using "S" for spike in field "34".

5) Enter the spike recovery for the spiked sample(s) in the "Result" fields using the Percent (PC) unit code, also using "S" for spike in field "34".

6) Note: Sample types for validations must either be Personal (P) or General Area (G) on the "10" card.

Example:

Parallel Background Result - 0.52 ppm
1st Validation Level Spiked - 1.05 ppm
1st Validation Result (Recovery) - 97.05%
General Area Sample - NW Wall of Kettle No. 4
DMEH Method Number - 3081A

CARD NO.	DETERMINATION NO. MO	DAY		MONITORING LOCATION OR DESCRIPTION			
16-17	18		23	24			67 / 68 / 69
10	10	01	01	NW WALL OF KETTLE NO. 4			G / V / A
10							

CARD NO.	DETERMINATION NO. MO	DAY		SUB. CODE NO.	L/G	RESULT	UNIT CODE	DMEH Method No
16-17	18		23	24 32	34	35 40	41-42	43 47
30	10	01	01	00005000	B	0.52	PM	3081A
30	10	01	01	00005000	S	1.05	PM	3081A
30	10	01	01	00005000	S	97.05	PC	3081A

Other information for validation samples should be entered onto the Data Transmittal Form, as appropriate.

Please recall that field recoveries should not be used to correct field data for MEHI entry.

IDEASCAN

Monsanto

ENVIRONMENTAL ANALYTICAL SCIENCES CENTER

MONSANTO RESEARCH CORPORATION
DAYTON LABORATORY

Volume 3, Number 7, July 1980

A SYNOPSIS OF MONSANTO AND ENVIRONMENTAL PROTECTION AGENCY ACTIVITIES IN THE IDENTIFICATION AND CONTROL OF PRIORITY POLLUTANTS

Since late 1977, both the Environmental Protection Agency (EPA) and Monsanto Company have been very active in identifying and quantifying the presence of the 129 "priority" pollutants in our plants' process and discharge wastestreams. This article presents a brief history of both EPA's and Monsanto's activities, the findings as of the present, and future regulations expected.

HISTORY OF THE "PRIORITY" POLLUTANTS

In 1975, a group of environmentalists and public interest organizations spearheaded by the National Resources Defense Council (NRDC) filed suit against the EPA for failing to issue regulations limiting the discharge of toxic pollutants. A consent order, which was entered in this suit in 1976, became known as the "Flannery Decision" and committed the EPA to develop effluent limitations for 21 major industries, covering a list of 65 chemical classes, from which specific chemical species were selected. A list of 129 species have become known as the "priority" pollutants. In addition, effluent limitations for these priority pollutants are to be based on "best available technology" (BAT). Thus, regulations to be issued have become known as BAT limitations.

EPA AND MONSANTO DATA GATHERING EFFORTS

Screening Studies

When the consent order was agreed to, little or no information was available on the existence of these pollutants in industrial discharges. In order to do the vast job before them, EPA settled on a two-phase approach. In the first phase, analytical methods referred to as the "Screening Protocol" were used to collect data. These methods have a high probability of identifying any of the priority pollutants present in a stream in concentrations greater than 10 ppb provided the matrices are "clean" (i.e., contain very few other compounds). Further, these methods permit an accurate measurement of the amount of any of the observed species if the methods are validated in the matrices encountered. But for reasons of cost, this validation was not performed by EPA in this first phase of data gathering. Consequently, little is known about whether individual pieces of data collected using the "screening" protocol are either qualitatively correct or quantitatively accurate.

tumors in one or more animal species or to induce benign tumors that are generally recognized as early stages of malignancies, and/or if positive epidemiologic studies indicated they were carcinogenic. Although the CAG has determined that there is substantial evidence of carcinogenicity for each chemical substance on the list, the data varies to some extent with respect to the scope and quality of the studies."

The EPA list was drawn up primarily for use by its own offices. Here, then, is its list of chemicals having "substantial evidence" of carcinogenicity (meaning evidence provided by animal tests that demonstrate the induction of malignant tumors in one or more species or of benign tumors generally recognized as early stages of malignancies):

2-Acetylaminofluorene; Acrylonitrile; Aflatoxins; Aldrin; 4-Aminobiphenyl; Amitrole; Aramite; Arsenic and Arsenic Compounds; Asbestos; Auramine; Azaserine; Benz(c)acridine; Benz(a)anthracene; Benzene; Benzidine; Benzo(a)pyrene; Benzo(b)fluoranthene; Benzo(j)fluoranthene; Beryllium and Beryllium Compounds; N,N-Bis(2-Chloroethyl)-2-Napthylamine; Cadmium and Cadmium Compounds; Carbon Tetrachloride; Chlorambucil; Chloroalkyl Ethers; Chlordane; Chlorinated Ethanes; Chlorobenzilate; Chloroform; Chromium Compounds, Hexavalent; Chrysene; Citrus Red No. 2; Coal Tar and Soot; Coke Oven Emissions; Creosote (CAG); Cycasin (IARC); Cyclophosphamide.

Daunomycin; DDT; Diallate; Dibenz(a,h)acridine; Dibenz(a,j)acridine; Dibenz(a,h)anthracene; 7H-Dibenzo(c,g)carbazole; Dibenzo(a,e)pyrene; Dibenzo(a,h)pyrene; Dibenzo(a,i)pyrene; 1,2-Dibromoethane; 3,3'-Dichlorobenzidine; Dieldrin; Diepoxybutane; 1,2-Diethylhydrazine; Diethylstilbestrol; Dihydrosafrole; 3,3'-Dimethoxybenzidine; p-Dimethylaminoazobenzene; 7,12-Dimethylbenz(a)anthracene; 3,3'-Dimethylbenzidine (o-Tolidine); Dimethylcarbamoyl Chloride; 1,1-Dimethylhydrazine; 1,2-Dimethylhydrazine; Dimethyl Sulfate.

2,4-Dinitrotoluene; 1,4-Dioxane; 1,2-Diphenylhydrazine; Epichlorohydrin; Ethylene Bis Dithiocarbamate; Ethyleneimine; Ethylene Oxide; Ethylenethiourea; Ethyl Methanesulfonate; Formaldehyde; Glycidaldehyde; Heptachlor; Hexachlorobenzene; Hexachlorobutadiene; Hexachlorocyclohexane; Hydrazine; Indeno(1,2,3-cd)pyrene; Iron Dextran; Isosafrole; Kepone; Lasiocarpine.

Melphalan; Methapyriline; 3-Methylcholanthrene; Methyl Methanesulfonate; N-Methyl-N'-nitro-N-nitrosoguanidine; Methylthiouracil; Mitomycin C; Mustard Gas; 1-Naphthylamine, technical grade; 2-Naphthylamine; Nickel and Nickel Compounds; Nitrogen Mustard and its hydrochloride; Nitrogen Mustard N-oxide and its hydrochloride; 5-Nitro-o-toluidine; 4-Nitroquinoline-1-oxide.

Pentachloronitrobenzene; Phenacetin; Polychlorinated Biphenyls; Pronamide; 1,3-Propane Sultone; B-Propiolactone; Propylthiouracil; Reserpine; Saccharin; Safrole; Selenium Sulfide; Streptozotocin; 2,3,7,8-Tetrachlorodibenzo-p-dioxin; Tetrachloroethylene (Perchloroethylene); Thioacetamide; Thiourea; o-Toluidine Hydrochloride; Toxaphene; Trichloroethylene; 2,4,6-Trichlorophenol; Tris(1-aziridinyl)phosphine sulfide (Thio-TEPA); Tris(2,3-dibromopropyl)phosphate; Trypan Blue, commercial grade; Uracil Mustard; Urethane; Vinyl Chloride; Vinylidene Chloride.

In publishing its "candidate list," OSHA emphasized that it was a tabulation only of chemicals designated for further scientific review and possible identification, classification and regulation as potential occupational carcinogens.

The list does not mean that OSHA has determined that a substance is carcinogenic or that regulatory action on the substance is necessary, nor is such a listing intended as a pre-classification warning, OSHA emphasized. In its notice in the Federal Register, OSHA states:

"It is OSHA's view that the compilation and publication of this list of substances accomplishes the following: informs the public at the very first step in OSHA's standard-setting process that a substance is a candidate for closer scientific review; makes available to the public the data base for substances OSHA is considering for further scientific review; reduces the number of substances to be subjected to such a review; guides the research community in focusing its resources on those substances for which there is a need for testing and further research; stimulates early public comment regarding the availability and appropriateness of new or additional scientific data; and, over-all, assists OSHA in setting of priorities and selecting of substances for regulation."

Remember again that OSHA's list does not duplicate any of the chemicals on the EPA list and does not include any substances currently being regulated by OSHA as carcinogens.

With those caveats in mind, here is the OSHA chemical candidates list, which again the agency emphasizes is not an indication of carcinogenicity but merely indicates the need for closer scientific review (synonyms are used here where they are more familiar):

Acenaphthene, 5-nitro-; methanecarboxamide; 4-Acetylaminobiphenyl; Antol; 3-Amino 4-ethoxyacetanilide; 3-Nitro-p-acetophenetide; Aniline; Aniline, N,N-dimethyl-p-nitroso-; Aniline, N,N-dimethyl-p-(m-tolylazo)-; Aniline hydrochloride; Aniline, N-methyl-N-nitroso-; Michler's Base; Dapsone; Aniline, 4,4'-thiodi-; 2,4,6-Trichloroaniline; Aminomesitylene; p-Cresidine; 2-Amino-r nitroanisole; Anthraquinone, 2-amino; asphalt; azobenzene.

2,4-Diaminoanisole sulfate; Benzidine dihydrochloride; Benzimidazole, 5-nitro-; Amiben; Benzoyl hydrazide; Michler's Ketone; Quinone dioxime; Diacetylbenzidine; Diaminobenzidine tetrahydrochloride; DL Ethionine; Enthionine; Carbamic acid, bis(2-hydroxyethyl)dithio-, monopotassium; Carbazole, 3-amino-9-ethyl; o-toluidine, 4-chloro-, hydrochloride; C.I. Direct Black 38, disodium salt; C.I. Direct Blue 6, tetrasodium salt; C.I. Direct Brown 95; C.I. Disperse Black 6, dihydrochloride; C.I. Disperse Orange 11; C.I. Solvent Orange 2; C.I. Solvent Yellow 1; C.I. Solvent Yellow 3; C.I. Solvent Yellow 34; Benzene hexachloride.

Mechloroethamine hydrochloride; Acetomethoxan; p-Nitroso-N-phenylaniline; Diphenylnitrosamine; ethylene glycol bis (chloromethyl) ether; TDE; p,p'-Ethyl-DDD; beta-Hydroxyethylhydrazine; Ether, 2,4-dichlorophyl p-nitrophenyl; Vinyl Bromide; p,p'-DDE; Fluoren-9-one, 2,4,7-trinitro-; Fluorene, 2-nitro; Nitrofurazone; sym-Dimethylhydrazine dihydrochloride; Hydrazomethane; Methylhydrazine monosulfate; Hydrazine hydrate; phenylhydrazine hydrochloride; Hydrazine hydrogen sulfate; Cupferron.

Dacarbazine; m-Tetrachlorophthalonitrile; Mirex; Naphthylamine mustard; Peracetic acid; C.I. 76555; r-Chlorophene-1,3-diamine; 4-Chloro-1,2-benzenediamine; 1,2-benzenediamine; 1,2-Benzenediamine dihydrochloride; C.I. 76070; Tetrachlorvinphos; Methyl phosphate; HMPA; Picloram; N-N'-Dinitrosopiperazine; Bisphenol A diglycidyl ether; Isonitropropane; Phenazopyridine hydrochloride; Quinoline; Quinoline, 8-nitro-; Carbamylhydrazine; Carbamylhydrazine hydrochloride; Cryogenenine; Diethylstilbestrol diproprionate; Terpene polychlorinate; Daminozide.

Sulfamethoxazole; Ethyl sulfate; Ethyl tellurac; PCT; Entramin; Procarbazine hydrochloride; m-Toluenediamine; o-Toluidine; o-Toluidine, 5-chloro; Trifluralin; Uracil, 2-thio-; Monuron; N,N'-Diethylthiourea; TMTU; N,N,N'-Trimethylthiourea.

12 U.S. AGENCIES TO INCREASE ENVIRONMENTAL HEALTH RESEARCH SUPPORT NEXT YEAR:

Total Federal agency funding for environmental health research in the fiscal year starting Oct. 1, 1980, is projected to $727.7 million, an increase of $22.2 million over the current fiscal year (3.1 percent) and an

J.E. Fox, LP&S O-22 - Texas City

October 27, 1980

TELEPHONE CALL FROM TEXAS CITY HARBOR MASTER

D.E. Kaldenberg O-7
Fred Herzog WG
Gordon Lunsford O-21
J.T. White FD
D. N. Campbell 2R-9

J.A. Glass O-22

On Friday morning, October 24, 1980, Mr. "Doc" Holbrook, Texas City Harbor Master, called concerning the organic vapors that entered our plant from the south or dock side the previous night. Mr. Holbrook stated that he had been visited by the County Health Unit concerning the problem and he was interested in any information we could provide to help him trace down the source of the contaminants that entered our plant. I provided him with the time, wind direction, wind speed, and the locations where it was entering our plant from his property. He appeared cooperative and concerned about the contaminants and stated that he would definitely try to find the source of the material and try to see that it did not happen again.

Mr. Holbrook said that he has someone on duty around-the-clock in the Harbor Master Office and they would be happy to help up try to run down any contaminants that were coming from his direction. He left his telephone number which is 945-5011. He asked that we call him at any time that there appeared to be a problem from the dock areas.

Mr. Holbrook stated that one of their potential problems is the flare located near the new ARCO dock. On several occasions, this flare has either blown out or has been turned off. He asked that any time we have a problem would we please first check to be sure as to whether the flare is lit and if it is not, to call it to his attention and he would see that something was done.

John E. Fox

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CBY 3103841

C 002234

medical Dept. T.C Plant

Prepared by BioTechnology, Inc. UPDATE ACCORDING TO CURRENT FEDERAL AND STATE REGULATIONS

C 002235

WORKER EXPOSURE (OSHA standards are in bold type; all others are from NIOSH criteria documents)	TIMING (PRE = PRE-EMPLOYMENT, ANN = ANNUALLY, NS = NOT SPECIFIED)	HISTORIES: WORK EXPOSURE	HISTORIES: MEDICAL/ PERSONAL	PHYSICAL EXAM: FAMILY	PHYSICAL EXAM	LABORATORY TESTS: X-RAY	PULMONARY FUNCTION (FVC, FEV 1.0)	LIVER FUNCTION (SGOT, SGPT)	HEMATOLOGY	BLOOD CHEMISTRY	BLOOD/URINE TRACE METALS	URINALYSIS	ECG	URINE CYTOLOGY	SPUTUM CYTOLOGY	OTHER CYTOLOGY	OTHERS AS DBRP	OTHERS (SPECIFY)	
11/78	PRE	X	X	X	X														
Acetylaminofluorene	ANN	X	X	X	X														
7/76	PRE	X	X		X														
Acetylene	NS	X	X		X														
10/76	PRE	X	X		X														
Acrylamide	ANN or as DBRP	X	X		X														
10/78	PRE*	X	X		X	P-A												X	Intestinal tract for ≥ 40, as DBRP
Acrylonitrile	ANN*	X	X		X	P-A												X	
3/77	PRE	X	X		X														
Alkanes	ANN	X	X		X														
9/76	PRE	X	X		X	Chest	X	X	X			X		X					
Allyl chloride	ANN	X	X					X				X		X					
11/78	PRE	X	X	X	X														
4-Aminodiphenyl	ANN	X	X	X	X														
7/74	PRE				X		X												
Ammonia	NS																		
9/78	PRE	X	X		X	P-A	X								X				
Antimony	ANN	X	X		X	P-A	X								X				
7/78	PRE*	X	X		X	P-A											X	X	
Arsenic (inorganic)	ANN<45* SEMI-ANN≥45	X	X		X	P-A											X	X	
11/78	PRE†		X		X	P-A	X												
Asbestos	ANN†		X		X	P-A	X												
10/78	PRE	X	X		X														
Asphalt fumes	As DBRP	X	X		X														

*For those exposed to substance at or above action level

†For those exposed to airborne concentrations

DBRP = DETERMINED BY RESPONSIBLE PHYSICIAN

CBY 3103842

Asbestos Workers Examinations

Asbestos workers will be given the routine physical examination every 12 months, and in compliance with OSHA the following is done:

1. Chest X-ray, PA and lateral views, prior to examination by doctor, for comparison
2. Pulmonary function test
3. Interval history
4. Hemoccult slide (not required by OSHA)
5. Fasting lab is optional

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Asbestos Medical Workers Exam

Institute for Occupational Safety and Health, and to authorized representatives of either.

(2) *Employee access.* Every employee and former employee shall have reasonable access to any record required to be maintained by subparagraph (1) of this paragraph, which indicates the employee's own exposure to asbestos fibers.

(3) *Employee notification.* Any employee found to have been exposed at any time to airborne concentrations of asbestos fibers in excess of the limits prescribed in paragraph (b) of this section shall be notified in writing of the exposure as soon as practicable but not later than 5 days of the finding. The employee shall also be timely notified of the corrective action being taken.

(j) *Medical examinations*—(1) *General.* The employer shall provide or make available at his cost, medical examinations relative to exposure to asbestos required by this paragraph.

(2) *Preplacement.* The employer shall provide or make available to each of his employees, within 30 calendar days following his first employment in an occupation exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination, which 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 ($FEV_{1.0}$).

(3) *Annual examinations.* On or before January 31, 1973, and at least annually thereafter, 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 ($FEV_{1.0}$).

(4) *Termination of employment.* The employer shall provide, or make available, within 30 calendar days before or after the termination of employment of any employee engaged in an occupation exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination which 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 ($FEV_{1.0}$).

(5) *Recent examinations.* No medical examination is required of any employee, if adequate records show that the employee has been examined in accordance with this paragraph within the past 1-year period.

(k) *Medical records*—(1) *Maintenance.* Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be retained by employers for at least 20 years.

(ii) *Access.* The contents of the records of the medical examinations required by this paragraph shall be made available, for inspection and copying, to the Assistant Secretary of Labor for Occupational Safety and Health, the Director of NIOSH, to authorized physicians and medical consultants of either of them, and, upon the request of an employee or former employee, to his physician. Any physician who conducts a medical examination required by this paragraph shall furnish to the employer of the examined employee all the information specifically required by this paragraph, and any other medical information related to occupational exposure to asbestos fibers.

3. A new § 1910.19 is added to Subpart B of Part 1910, reading as follows:

§ 1910.19 Asbestos dust.

Section 1910.93a shall apply to the exposure of every employee to asbestos dust in every employment and place of employment covered by § 1910.12, § 1910.13, § 1910.14, § 1910.15, or § 1910.16, in lieu of any different standard on exposure to asbestos dust which would otherwise be applicable by virtue of any of those sections.

Effective date. Paragraph (b)(2) of § 1910.93a shall become effective July 1, 1976. All other provisions of §§ 1910.93a, 1910.93, and 1910.19 shall become effective July 7, 1972. The current emergency temporary standard remains in effect until July 7, 1972.

(Secs. 6, 8, 84 Stat. 1593, 1600; 29 U.S.C. 655, 657; 29 CFR 1910.4; Secretary of Labor's Order No. 12-71, 36 F.R. 8754)

Signed at Washington, D.C., this 2d day of June 1972.

G. C. GUENTHER,
Assistant Secretary of Labor.

[FR Doc.72-8574 Filed 6-6-72;8:48 am]

Title 41—PUBLIC CONTRACTS AND PROPERTY MANAGEMENT

Chapter 9—Atomic Energy Commission

PART 9-1—GENERAL

Subpart 9-1.1—Procurement Regulations

MISCELLANEOUS AMENDMENTS

The changes made in AECPR Subpart 9-1.1, Procurement Regulations, have been made in order to establish the AECPR Temporary Regulations, which are a part of the AEC Procurement Regulations and the Federal Procurement Regulations System. The AECPR Temporary Regulations implement and supplement the FPR Temporary Regulations. They also contain policies and procedures initiated by the AEC which are to be effective for a period of 6 months or less. The AEC Procurement Instruction section has been revised accordingly. Minor editorial changes have also been made.

1. Section 9-1.101 *Scope of subpart,* is revised to read as follows:

§ 9-1.101 Scope of subpart.

This subpart describes the Atomic Energy Commission Procurement Regulations and the AECPR Temporary Regulations. It also describes exclusions from the AECPR as contained in the AEC Procurement Instructions.

2. Section 9-1.102 *Establishment of AEC Procurement Regulations,* is revised to read as follows:

§ 9-1.102 Establishment of the AEC Procurement Regulations and the AECPR Temporary Regulations.

§ 9-1.102-1 AEC Procurement Regulations.

(a) The AEC Procurement Regulations (AECPR) are hereby established.

(b) These regulations implement and supplement the Federal Procurement Regulations (FPR) and are a part of the Federal Procurement Regulations System.

(c) The effective date of FPR issuances throughout AEC will be the date indicated in the respective issuances unless otherwise provided in the AEC Procurement Regulations.

(d) The effective date of AECPR issuances throughout AEC will be the date indicated in the respective issuances.

§ 9-1.102-2 AECPR Temporary Regulations.

(a) The AECPR Temporary Regulations are hereby established.

(b) These regulations implement and supplement the Federal Procurement Regulations Temporary Regulations. They also contain policies and procedures initiated by the AEC which are expected to be effective for a period of 6 months or less.

(c) The effective date of the FPR Temporary Regulations issuances throughout AEC will be the date indicated in the respective issuances unless otherwise provided in the AECPR Temporary Regulations.

(d) The effective date of the AECPR Temporary Regulations issuances throughout AEC will be the date indicated in the respective issuances.

(e) The AECPR Temporary Regulations are a part of the AEC Procurement Regulations and the Federal Procurement Regulations System. All references to the AEC Procurement Regulations or AECPR in §§ 9-1.103 through 9-1.109 of this subpart shall be deemed to include the AECPR temporary regulations.

3. Section 9-1.103 *Authority,* is revised to read as follows:

§ 9-1.103 Authority.

The AEC Procurement Regulations are prescribed by the General Manager, Assistant General Manager for Administration, or the Director, Division of Contracts of the AEC, pursuant to the authority of the Atomic Energy Act of 1954, and the Federal Property and Administrative Services Act of 1949.

CBY 3103844

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