



ENGINEERING DEPARTMENT

4501 Gollihar
Corpus Christi, Texas 78411

January 30, 1979

Mr. J. M. Davidson, Vice-President
The Goldston Company, Inc.
P. O. Box 9668
Corpus Christi, Texas 78408

Dear Mr. Davidson:

As an assistance to you in your accident prevention program, a safety survey of your activities at the ASARCO Plant was conducted on January 1, 1979. The survey was conducted at the request of your superintendent, Ron Howard, for the purpose of determining worker exposure to asbestosis.

As you may know, asbestosis is a lung disease caused by the prolonged inhalation of asbestos fibers between 5 and 50 microns long. Asbestosis has received increased interest of late because there has been increased incidence of lung cancer in persons with asbestosis. To evaluate exposure, it is first necessary to determine the composition of the dust suspended in the air the workmen breath. Asbestos fibers become suspended in the air during various industrial operations involving the manufacture of/or working with asbestos materials. It was understood that the only involvement of your workers at the ASARCO Plant with asbestos materials came from stripping the insulation from pipes in the several buildings which are under alteration at the plant.

At the time of the survey, it was determined during conversation with Mr. Howard and his pipefitter foreman that all such stripping for the foreseeable future had been completed. Since the Cleveland Wrecking Company also had been involved in stripping asbestos insulation, your foreman, Mr. O'Brien was asked to query the Cleveland superintendent regarding any anticipated asbestos stripping in areas where your employees might be present. The superintendent indicated that all such stripping had been completed with minor exceptions. Mr. O'Brien indicated that his workers would probably not be present when the remaining minor stripping occurred. Since no activities were underway or contemplated in the near future which would suspend asbestos fibers in the air, it was not possible to collect samples for the purpose of determining composition of the dust your workers might breath during such operations.

*C.C. To F. R. Howard
CC - J.M.D.
CC - B. Trott ASARCO
ORIGINAL - Doug BRACKEN*

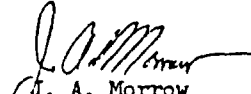
PLAINTIFF'S
EXHIBIT
ASA-342

EMPLOYERS INSURANCE OF TEXAS TEXAS EMPLOYERS INSURANCE ASSOCIATION EMPLOYERS CASUALTY COMPANY EMPLOYERS NATIONAL INSURANCE COMPANY

These matters were discussed with Mr. Howard, along with a general discussion of the safety measures he has implemented to minimize the exposure to asbestosis. Mr. Charles Ham, an Industrial Hygienist from our company, and I were favorably impressed with Mr. Howard's knowledge of safety procedures and apparent concern over the health of your workers. The attached recommendations were discussed with Mr. Howard, several of which he indicated had already been implemented. These recommendations are suggested as additions to those safety efforts you already have underway, when your activities again entail stripping asbestos insulation from pipes.

Anytime you can forecast this type of work, a few days in advance, to allow time to bring our Industrial Hygienist in from Houston, we would be pleased to conduct sampling tests for you and evaluate your worker's exposures to asbestosis. If we can be of further assistance to you on these or other safety matters, please contact the Engineering Department of our company.

Respectfully submitted,


J. A. Morrow
Safety Engineering

/dpt

CC: Mr. J. M. Goldston, President

ANZ 0004170

THE GOLDSTON COMPANY, INC.
GMC DIVISION (ASARCO)
1-15-79

RECOMMENDATIONS

1. Use only personnel who have had an initial baseline physical examination in activities involving the stripping of asbestos insulation from pipes.

(An initial physical is desirable in order to determine any preexisting abnormal lung condition. Periodic examinations should be offered to employees at least annually thereafter. A final examination should be offered to each employee upon termination of his employment.)

2. Provide special clothing, such as coveralls, to cover the whole body and provide storage and laundering as required in ANZI Z 88.2-1969 for personnel exposed to concentrations of asbestos dust.

(This special clothing is for the purpose of preventing asbestos fiber impregnated dust from becoming absorbed in the employees regular clothing, under which circumstances, his exposure to breathing asbestos fibers would be increased along with the possible exposure of other personnel. This clothing may be either of the reuseable or throw-away type. The governing consideration is that contaminated clothing should not be used without laundering if it is possible for the clothing to release airborne asbestos fibers in excess of the exposure limits prescribed by the standard. The existing standard, provides for a time waited average airborne concentration of asbestos fibers over an 8 hour period should not exceed 2 fibers, longer than 5 microns, per cubic centimeter of air. A short time exposure limit provides that a worker shall not be exposed to an excess of 10 fibers longer than 5 microns, per cubic centimeter of air, for anytime period.)

3. Furnish, and require personnel to use personal protective equipment required by the applicable standard, such as respirators.

(The type respirator required is a function of the concentration of asbestos fibers. Normally, a reuseable or single use air purifying respirator may be used when the concentration does not exceed more than 10 times the limit for the 8 hour time waited average. A full face piece powered air purifying respirator should be used when the concentration of fibers is between 10 and 100 times the 8 hour time waited average standard. If the

concentration is expected to exceed 100 times the above limits, a type "C" continuous flow or pressure demand, supplied-air respirator should be used.)

4. Provide change rooms and showers for use by personnel after exposure to concentrations of asbestos fibers in the air.

(Change rooms are advisable to isolate the contaminated conditions and all employees involved should be encouraged to take showers after exposure above the standard.)



The Continental Insurance Companies

THE CONTINENTAL INSURANCE COMPANY • FIREMEN'S INSURANCE COMPANY • PACIFIC INSURANCE COMPANY
THE FIDELITY AND CASUALTY COMPANY • COMMERCIAL INSURANCE COMPANY • BUCKEYE UNION INSURANCE COMPANY
NIAGARA FIRE INSURANCE COMPANY • THE GLENS FALLS INSURANCE COMPANY • NATIONAL BEN FRANKLIN COMPANIES
KANSAS CITY FIRE & MARINE INSURANCE COMPANY • BOSTON OLD COLONY INSURANCE COMPANY

1810 Commerce Street, Dallas, Texas 75201

December 22, 1978

Mr. Buck Shaw
GMG Construction
P. O. Box 9668
Corpus Christi, Texas 78408

Dear Mr. Shaw:

Enclosed find the asbestos results, as we discussed on the phone.

Microscopic examination revealed no asbestos like fibers. These results were confirmed by multiple analysis using x-ray diffraction, which also showed no asbestos present.

Thank you for your business. If we may be of any further service, please contact me.

Sincerely,

Virgil Doty
Lab Superintendent
Environmental Health Laboratory

VD/jt

enclosure

ANZ 0004173



The
Continental
Insurance
Companies

ENVIRONMENTAL HEALTH LABORATORY REPORT

THE ENVIRONMENTAL HEALTH LABORATORY
of
THE CONTINENTAL INSURANCE COMPANIES
1810 COMMERCE STREET
DALLAS, TEXAS 75201

P.O. # 3021

O:

Mr. Shaw
GMG CONSTRUCTION
P. O. Box 9668
Corpus Christi, TX 78408

EHL Report # 78-592

Date: December 21, 1978

The following results were obtained on samples received December 20, 1978

INSURED:

ORIGINATING DEPARTMENT:

LOCATION:

Item	EHL #	Field #	Type Sample	Sample Volume	Analysis Requested	Results
	B-9650		Bulk		Asbestos	
					MICRO	non-fibrous
					XRD	
					Chrysotile	<0.5% *

COMMENTS: PHONE RESULTS to Mr. Shaw or Mr. Davison
(512) 888-5394

* No amosite, no crocidolite, no tremolite, no anthrrophyllite, no chrysotile detected.

Virgil Dutz
ENVIRONMENTAL HEALTH LABORATORY

Industrial Hygienist

PAGE:

Date:

Printed in U.S.

ANZ 0004174

than 5 days of the finding. The employee shall also be timely notified of the corrective action being taken.

(1) **Medical examinations.**—(i) **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 (FEV₁).

(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 (FEV₁).

(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 (FEV₁).

(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.** 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.

§ 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, wood, and other organic matter.

(Sec. 8(g), 84 Stat. 1600, 29 U.S.C. 657) [39 FR 23502, June 27, 1974. Redesignated and amended at 40 FR 23073, May 28, 1975]

§ 1910.1003 4-Nitrophenyl.

(a) **Scope and application.** (1) This section applies to any area in which 4-Nitrophenyl, Chemical Abstracts Service Registry Number 92933 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to trans-shipment 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-Nitrophenyl.

(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, change, and/or remove their protective clothing and/or protective equipment in an environmentally controlled area. The clean change room shall be equipped with lockers and have an entry from a shower room, toilet, and change room.

facilities are otherwise required in this section.

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

(5) "Decontamination" means the inactivation of 4-Nitrophenyl 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-Nitrophenyl from the work environment.

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

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

(10) "Isolated system" means a fully enclosed structure other than a vessel of containment of 4-Nitrophenyl, which is impervious to the passage of 4-Nitrophenyl, and which would prevent the entry of 4-Nitrophenyl into regulated areas, nonregulated areas, or the external environment, should leakage or spillage from the vessel of containment occur.

(11) "Laboratory type hood" is a device enclosed on three sides and the top and bottom, designed and maintained so as to draw air inward at an average linear face velocity of 150 feet per minute with a minimum of 125 feet per minute; designed, constructed, and maintained in such a way that an operation involving 4-Nitrophenyl within the hood does not require the insertion of any portion of any employee's body other than his hands and arms.

(12) "Nonregulated area" means any area under the control of the employer where entry and exit is neither restricted nor controlled.

(13) "Open vessel system" means an operation involving 4-Nitrophenyl in an open vessel, which is not in an isolated system, a laboratory type hood, nor in any other system affording containment against the entry of 4-Nitrophenyl into regulated areas, nonregulated areas, or the external environment.

Chapter XVII—Occupational Safety and Health Admin.

§ 1910.1004

nated. Clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system.

(iii) Employees shall be provided with, and required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area.

(iv) Employees engaged in 4-Nitrophenyl handling operations shall be provided with and required to wear and use a half-face, filter-type respirator for dusts, mists, and fumes, in accordance with § 1910.134. A respirator affording higher levels of protection may be substituted.

(v) Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and move away from exit and at the

(d) **General regulated area requirements.**—(1) **Employee identification.** A daily roster of employees entering regulated areas shall be established and maintained. The rosters or a summary of the rosters, shall be retained for a period of 20 years. The rosters and/or summaries shall be provided upon request to maries shall be provided upon request to authorized representatives of the Assistant Secretary and the Director. In the event that the employer ceases business without a successor, rosters shall be forwarded by registered mail to the Director.

(2) **Emergencies.** In an emergency, immediate measures including, but not limited to, the requirements of subdivisions (ii), (iii), (iv), and (v) of this section shall be implemented. (i) subgraph shall be implemented. (i) The potentially affected area shall be evacuated as soon as the emergency has been determined.

(ii) Hazardous conditions created by the emergency shall be eliminated and

(iv) Where employees wear protective clothing and equipment, clean change rooms shall be provided, in accordance with § 1910.141(e), for the number of such employees required to change clothes.

(v) Where toilets are in regulated areas, such toilets shall be in a separate room.

(4) **Contamination control.** (i) Regulated areas, except for outdoor systems, shall be maintained under pressure negative with respect to nonregulated areas. Local exhaust ventilation may be used to satisfy this requirement. Clean makeup air in equal volume shall replace air removed.

(ii) Any equipment, material, or other item taken into or removed from a regulated area shall be done so in a manner that does not cause contamination in nonregulated areas or the external environment.

(iii) Decontamination procedures shall be established and implemented to remove 4-Nitrophenyl from the surfaces

regulated ment.

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(9) C

CLEVELAND WRECKING CO.
P. O. Box 10613
CORPUS CHRISTI, TEXAS 78410

November 15, 1978

RESPIRATOR TRAINING PROGRAM

The following training has been given you i a recent safety meeting held by your supervisor or safety director.

1. The respirator (MSA Type 88) assigned to you is designed only for particulate (dust) contamination. It offers absolutely no protection from toxic gases or oxygen shortages.
2. The respirator in use offers proper protection from asbestos dust hazards.
3. Each individual is responsible for cleaning his respirator after each day's use and will store it on pegs provided in the gate office.
4. Respirator filters shall be replaced daily.
5. Report any respirator malfunction to your supervisor immediately.
6. Respirators must be properly adjusted by use of adjusting straps to assure no leakage under chin, cheek or nose areas.
7. Your respirators will be inspected weekly and worn units will be replaced.

By signing the list below you have acknowledged proper respirator training and agree to use it properly in order to afford you proper health protection.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

ANZ 0004176

G. M. G. CONSTRUCTION COMPANY

INDUSTRIAL CONSTRUCTION

PHONE A/C 512 883-9381

P. O. BOX 4952

CORPUS CHRISTI, TEXAS 78408

Dear Mr.

This is to advise you that this company has made available to you, a full respiratory examination with The Doctor's Hospital, North, located at 1533 South Brownlee, Corpus Christi, Texas. The telephone number for scheduling this examination is 883-7411. Take this letter and present it at the Doctor's Hospital. This examination is made available to each employee who has been exposed to asbestos during the course of his employment.

The examination is recommended but is not mandatory. To take advantage of this offer, you must call the Doctor's Hospital before January 8, 1979 or within 10 days of receipt of this letter, whichever is later.

Please remove the bottom portion of this letter, complete entries, sign and return to the GMG office.

Sincerely,

Ron Hower

I, _____ having been advised of the free chest x-ray for asbestos related lung abnormalities do hereby accept/refuse (circle appropriate one) the offer.

I acknowledge I will contact the Doctor's Hospital for an appointment not later than 10 days from receipt of this letter.

DATE _____ SIGNATURE _____

Return this bottom portion of this letter to the GMG office.

ANZ 0004177

ATTACHMENT "B"

Dear Mr.

This is to advise you that this company has made available to you, a full respiratory examination with Dr. W.E. Anderson, Corpus Christi, Texas Telephone 853-2862. Take this letter and present at Dr. Anderson's office. This examination is made available to each employee who has been exposed to asbestos during the course of his employment.

The examination is recommended but is not mandatory. To take advantage of this offer you must call Dr. Anderson's office before December 15, 1978 or within 10 days of receipt of this letter which ever is later.

Please remove the certificate below, complete entries, sign and return to this office in the stamped envelope provided.

Sincerely,

CUT ALONG THIS LINE

I, _____ having been advised of the free chest
PRINT
exray for asbestos related lung abnormalities do hereby (accept)/ (refuse) (circle
appropriate one) the offer.

I acknowledge I will contact Dr. Anderson for appointment not later than 10 days
from receipt of this letter.

DATE _____ SIGNATURE _____

Return completed certificate to Cleveland Wrecking Company in the envelope provided.

ANZ 0004178

G. M. G. CONSTRUCTION COMPANY

INDUSTRIAL CONSTRUCTION

PHONE A/C 312 883-9381

P. O. BOX 4952

CORPUS CHRISTI, TEXAS 78408

December 29, 1978

COMPANY RESPIRATOR PROGRAM ASBESTOS HAZARD

1. The respirators in use by the employees of this Company, have been carefully selected to provide proper protection for asbestos dust exposure.
2. You have been instructed in this type of hazard and the protective factors of your assigned respirators. It is your responsibility to maintain your respirator in a clean and sanitary condition, protect it from dirt and damage and to change the auxillary filters daily.

Respirators must be cleaned after each day's use, filters changed and stored in a clean and sanitary location. Pegs will be located in the office area for this purpose.
3. The office supervisor will be responsible for weekly inspections of the respirator equipment to assure proper condition and cleanliness.
4. The assigned respirators must not be used in toxic gas or low oxygen atmospheres. This respirator is designed only for particulate protection.
5. Report any respirator malfunction or damage to your supervisor immediately.

RON HOWER

RH/do

ANZ 0004179

G. M. G. CONSTRUCTION COMPANY

INDUSTRIAL CONSTRUCTION

PHONE A/C 512 883-9381

P. O. BOX 4952

CORPUS CHRISTI, TEXAS 78408

December 29, 1978

RESPIRATOR TRAINING PROGRAM

The following training has been given you in a recent safety meeting held by your supervisor or safety director.

1. The respirator (MSA Type 88) assigned to you is designed only for particulate (dust) contamination. It offers absolutely no protection from toxic gases or oxygen shortages.
2. The respirator in use of ers proper protection from asbestos dust hazards.
3. Each individual is responsible for cleaning his respirator after each day's use and will store it on pegs provided in the gate office.
4. Respirator filters shall be replaced daily.
5. Report any respirator malfunction to your supervisor immediately.
6. Respirators must be properly adjusted by use of adjusting straps to assure no leakage under chin, cheek or nose areas.
7. Your respirators will be inspected weekly and worn units will be replaced.

By signing the list below you have acknowledged proper respirator training and agree to use it properly in order to afford you proper health protection.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

ANZ 0004180

Mr. J. W. Miller
Texas Employers' Insurance Association
Dallas 1, Texas

February 10, 1954

*Sherr: Guess the Boss doesn't
recognize my style. I wrote
this in C.C. for Waterman.
Ken*

CORPUS CHRISTI PLANT

Dear Sir:

Following is a list of work areas in our Corpus Christi plant in which air samples were taken by Mr. Herndon during his industrial hygiene survey of last October. The numbers of men working in the areas are given and, in addition, there is a brief description of operations so that there may be no misunderstanding about the type of work being done. The order of listing follows the sequence of treatment of raw material flowing through the plant.

Sulfide Plant Concentrate Storage Shed

Two men per shift work in this area. Zinc concentrates are received by rail, unloaded mechanically and stored in concrete bins of the storage shed. Since concentrates are produced by a flotation process, they are normally moist, averaging about 7% H₂O when received by us from shippers. The average lead content of concentrates is 1.6%.

Roaster Building

One man per shift works in this area. Concentrates reach the roaster building via conveyor belt from the storage shed and are given an oxidizing roast to convert zinc sulfide to zinc oxide. The processes of roasting and milling carried on in the roaster building are entirely enclosed.

Oxide Leach Building-Purification Tank Area

Two men per shift work in this area. Oxide roast is treated with dilute sulfuric acid to produce a raw zinc sulfate solution. Insoluble impurities are separated by filtration and the raw solution is treated with appropriate reagents to remove the last traces of impurities. The end result is a highly purified zinc sulfate solution.

It should be mentioned here that all of the lead originally present in the zinc concentrates is removed as insoluble lead sulfate by the filtration mentioned above. The lead-bearing filter residues are discharged as moist, mud-like pellets to a storage bin outside the leach building. Once a week the accumulated residues are removed from the bin by payloaders and transferred for shipment. The operation takes one half day per week or less and the payloaders operator is required to wear protective clothing and a U. S. Bureau of Mines-approved dust respirator.

ANZ 0004181

Mr. J. W. Miller

February 10, 1954

Oxide Cell House

Seventeen men work in this area on the day shift. Pure zinc sulfate solution pumped from the leach building is here electrolyzed to produce 99.98% pure zinc metal. The job of most of the men is to strip deposited zinc sheets from cathode blanks and to re-prepare the electrolytic cells for operation.

The zinc sheets are transferred to a small reverberatory furnace adjacent to the cell house, melted, and cast into marketable shapes.

- - - - -

Of some interest to you may be the fact that the American Smelting and Refining Company has, since 1945, maintained a completely equipped and staffed industrial hygiene laboratory at Salt Lake City. Industrial hygienists from our Hygiene Department have regularly visited the Corpus Christi plant to conduct thorough surveys of our operations. Also, urine specimens collected periodically from men with a possible exposure to lead have been shipped to Salt Lake City for lead determinations. These urinalyses have failed to show any significant lead absorption by the men.

Our employees receive pre-employment as well as annual physical examinations given by our plant physician.

I trust that the above discussion will be helpful to you. I should be glad to furnish any further information you might wish.

Very truly yours

C. H. Waterman
General Manager

CHW:J

cc:SHLevison
SamuelMetzgerJr
PhilipDrinker
KWNelson
ACJephson