PLAINTIFF'S EXHIBIT

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RESPIRATORY PROTECTION TRAINING PACKAGE

by

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RESPIRATORY PROTECTION TRAINING PACKET

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RESPIRATORY PROTECTION TRAINING

I. American National Standards Institute Z88.2 - 'Practices for Respiratory Protection'. Standard Section 7.4 - 'Training and Education in Proper Use'.

"7.4 - Training and Education in Proper Use. For safe use of any respirator, it is essential that the user be properly instructed in its selection, use and maintenance. Both supervisors and workers shall be so instructed by competent persons.

Minimum training shall include the following:

(1) Instruction in the nature of the hazard, whether acute, chronic, or both, and an honest appraisal of what may happen if the respirator is not used.

(2) Explanation of why more positive control is not immediately feasible. This shall include recognition that every reasonable effort is being made to reduce or eliminate the need for respirators.

(3) A discussion of why this is the proper type of respirator for the particular purpose.

(4) A discussion of the respirator's capabilities and limitations.

(5) Instruction and training in actual use of the respirator (especially a respirator for emergency use) and close and frequent supervision to assure that it continues to be properly used.

(6) Classroom and field training to recognize and cope with emergency situations.

(7) Other special training as needed for special use.

Training shall provide the men an opportunity to handle the respirator; have it fitted properly, test its facepiece-to-face seal, wear it in normal air for a long familiarity period, and, finally, to wear it in a test atmosphere."

RESPIRATORY PROTECTION TRAINING

II. Suggested Format for Training

I.	Opening Trainer Initial Discussion: (This information is found in the 'Respiratory Protective Training Outline'.)	a. Nature of the hazard-whether acute/chronic or both and what happens if the respirator is not worn. b. Why more positive control is not immediately feasible and recognize that every reasonable effort is being made to reduce or eliminate the need for respirators. c. Emphasize that only approved respirators are used. d. A discussion of the respirators' capabilities and limitations.
II.	Show Slide/Tape Presentation	'The Chemical Cartridge Respirator at Chocolate Bayou'.
III.	Actual Use Of Respirator	This allows the user a familiarity period with the respirator before it is used in the field. Do all of the fit tests. The user must have his/her respirator with them.
IV.	Question/Answer Period	

III. RESPIRATORY PROTECTION TRAINING OUTLINE

"CARTRIDGE RESPIRATORS"

I. Why Respiratory Protective Equipment Needed

Whenever there is a possibility of atmospheric contamination with dusts, mists, fumes or vapors, every reasonable effort is made to eliminate the sources of contamination. This is done wherever possible by using engineering, i.e. design/mechanical controls. However, where such controls are not feasible or while they are being planned, built or installed, respiratory protection against air contaminants may be required.

A. Nature of the Hazard

1. Acute Effects - Immediate, rapid; recovery usually complete with proper treatment. Result from infrequent high exposure.

a. AN (NOTE: Use this information only if applicable to your unit.)

Eye irritation, nausea, vomiting, headache, sneezing, weakness and lightheadedness. At extremely high concentrations--loss of consciousness or even death. Causes severe burns and blisters if in contact with skin for prolonged periods.

b. Benzene (NOTE: Use this information only if applicable to your unit.)

Eye, nose and respiratory tract irritant; dizziness, nausea, vomiting, feelings of euphoria or giddiness may be experienced. At extremely high levels--muscle paralysis and even death. Benzene has a drying effect on the skin and can cause irritation.

2. Chronic Effects

Result of either (a) long term, low exposure or (b) frequent high exposure. Effects take a long time to develop and are not easy to recognize; recovery may take much longer.

a. AN (NOTE: Use this information only if applicable to your unit.)

Chronic effects related to effects on the central nervous system, gastro-intestinal and respiratory systems. AN has been shown to cause cancer in laboratory animals and has been associated with higher incidence of cancer in humans.

b. Benzene (NOTE: Use this information only if applicable to your unit.)

Chronic effects of benzene are seen primarily in changes in the blood; these changes range from aplastic anemia to leukemia.

B. Ways to Control Exposures

1. Engineering Controls

Here discuss engineering controls planned and/or instituted in your individual areas pertinent to controlling exposures.

2. Work Practice Controls

Discuss job-related work practice controls, i.e. standing/crosswind/upwind when performing certain jobs.

3. Respiratory Protective Controls

Discuss regulated areas in your unit; jobs where respiratory protection is required.

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II. Respiratory Protective Equipment Available

A. Atmosphere-Supplying

1. Supply total atmosphere necessary to sustain life.
2. Use primarily limited to emergency situations, however, certain jobs require their use, i.e. sampling HCN.
3. Limited by amount of air specified, i.e. 5-minute bottles, 15' air cubs if self-contained. If bottled air or compressor with lines and masks used, then limited by air line length.
4. Types
   a. Self Contained Breathing Air (SCBA)
      - all at CB are pressure demand type
      - 5' escape capsule
      - 15' MSA air cub
      - 30' MSA air masks
      - 6' Scott air bottles (AN, NTA)
   b. Supplied Air
      - compressor system (SAB, Maintenance)
      - bottled air (AN, NTA)

B. Air-Purifying Respirator - Chemical Cartridge Type

1. Act to remove hazardous substances through either physical or chemical reaction of contaminants with cartridge material.
2. Used when low concentrations of vapors or dusts are expected.
3. Maximum use limit with ½-face is 10 x TLV or 1000 ppm whichever is less. Maximum use limit with full-face is 50 x TLV or 1000 ppm whichever is less.

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4. Cannot be used in 0_2 deficient atmosphere or in high concentrations of vapors.

III. Cartridge Respirator

a. Basic Parts

1. Respiratory Body Selection

Depends upon type of contaminant and level of contaminant expected, i.e. full-face is used with compounds that are irritating to eyes. Example: crotonaldehyde.

a. 1/2 Facepiece

b. Full Facepiece

2. Cartridge Selection Guidelines (NOTE: Here discuss the "Respirator Cartridge Guidelines".)

a. Organic Vapors

b. Acid Gases

c. Acid Gases & Organic Vapors

d. Dust

e. Dust and (a), (b) or (c) above

3. Types of Cartridge Respirators (determined by the cartridges used)

a. Gas/Vapor (organic vapor, acid gas, combination cartridge)

b. Dusts (dust cartridge or dust filter and cover)

c. Combination Gas, Vapor and Particulate

g the Respirator

t on Respirator - Stress low on nosebridge.

t Test - Tell whether seal is adequate.

Frequency - Each time respirator is worn.

How To -

a. Positive Pressure

(1) Cover exhalation valve

(2) Exhale into facepiece

(3) Adequate seal if no leakage felt

b. Negative Pressure

(1) Cover inhalation valve

(2) Inhale gently, facepiece should collapse slightly--hold 10 seconds

(3) Adequate seal if no inward leakage felt

c. Qualitative Fit Test - Irritant Smoke

(1) Put on respirator normally; stand with back to an exhaust source i.e. hood, exhaust fan etc.

NOTE: Use Type H Filters (Magenta Cartridges).

(2) Tell the wearer to close his eyes and keep them closed until test is over.

(3) Tester lightly puffs smoke over the respirator, holding the smoke tube at least two feet away. Pause between puffs of smoke.

(4) If the wearer detects no leakage, increase the smoke density and move the smoke tube progressively closer to the subject.

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(5) Bring the smoke tube no closer than 6 inches from the subject's face; at this point, direct the smoke at the potential sources of leakage,

around the sealing surface and exhalation valve, while the subject holds his head still.

(6) Leakage is evidenced by coughing. If leakage occurs, stop the smoke and readjust the facepiece.

NOTE: Use extreme caution in using the irritant smoke fit test. Obvious hazards include the broken ends of the glass tube and the irritant smoke itself. The smoke is normally harmless unless it contacts broken skin, when stinging of the skin may occur. Never go closer than within 6 inches of the wearer's face. Discard used tubes properly.

V. Maintenance and Care

A. Inspection for Defects

1. Frequency - Each time you wear it.

2. Who Repairs - Never attempt repairs. Turn into Stores for replacement if defective.

3. Inspect

a. Facepiece for cracks/tears

b. Exhalation/inhalation valves

c. Gaskets in place

d. Straps

B. Cleaning

1. How to -

a. Remove cartridges

b. Use soapy solution

c. Water rinse thoroughly

d. Air or towel dry

2. Frequency - Each time it is worn.

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[redacted]tored to protect from chemicals and elements.

VI. Record Keeping Requirements

A. Training and Fitting Sessions must be recorded. To do this, have the trainees sign the training and fitting record. (See Form C) Make a notation of the results of the fit test. The completed form must be kept on file in the Unit. If a person cannot be fitted, he/she should be referred to the Industrial Hygiene Department for further evaluation.

VII. Procurement

A. Use Stores Requisition for Respiratory Protective Equipment

1. Must know kind of air contaminant expected

2. Must have signature of one of Industrial Hygiene Group (Safety Department on off-hours)

VIII. Situations Peculiar to Departments

A. Include items such as:

1. Special limits for AN or Benzene service

2. Cover potential exposure areas (see I.B.3 above)

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IV. Forms

A. Stores Requisition For Respiratory Protective Equipment (Attachment A)

B. Respirator Cartridge Guidelines (Attachment B)

C. Respirator Training and Fitting Record

A. STORES REQUISITION

RESPIRATORY PROTECTIVE EQUIPMENT

DEPARTMENT _____

REQUESTING SUPERVISOR _____

INTENDED USE _____

_____

TYPE & IDENTIFICATION NUMBER OF RESPIRATOR	NUMBER REQUIRED

TYPE & IDENTIFICATION NUMBER OF CARTRIDGE	NUMBER REQUIRED

APPROVED BY _____

INDUSTRIAL HYGIENE DEPARTMENT

DATE _____

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GUIDE FOR CARTRIDGE TYPE RESPIRATORS

FOR THIS RESPIRATOR	FOR PROTECTION AGAINST THIS CONTAMINANT	USE THIS CARTRIDGE	LIMITS	AREAS OF USE
MSA COMFO II (½ Face) SMALL - #465825 MEDIUM - #460968 LARGE - #466486 -OR- MSA FULL FACE MSA #460560	ACRYLONITRILE	GMA #464031	Up to 20 ppm	AN Areas
	BENZENE	GMA #464031	Up to 10 ppm	Benzene Areas
	OTHER ORGANIC VAPORS	GMA #464031	Up to 0.1%	
	DUSTS AND/OR MISTS	Type H #464035		
	AMMONIA	GMD #464033	300 ppm NH3	
	CHLORINE	GMB #464032	10 ppm CL	
	SULPHURIC ACID	GMB #464032		
	ASBESTOS	Type S #464034		
	MERCURY	Mersorb #464024		
	ACID GASES & ORGANIC VAPORS	GMC #464046	0.1% Organic 50 ppm HCL 10 ppm CL	Sorbic Areas
	PAINT SPRAY	GMA #464031		

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Attachment B

RESPIRATOR CARTRIDGE GUIDELINES

FOR THE MSA HALF AND FULL FACE CARTRIDGE RESPIRATOR, USE THE FOLLOWING CARTRIDGES:

FOR THIS CONTAMINANT	USE THIS CARTRIDGE	LIMITS	AREAS OF USE
ONITRILE	GMA #464031 (BLACK)	UP TO 20 PPM	AN AREAS
NE	GMA #464031 (BLACK)	UP TO 10 PPM	BENZENE AREA
ORGANIC VAPORS	GMA #464031 (BLACK)	UP TO 0.1%	ALL
	FILTER #459595 WITH #459027 -OR- TYPE H #464035		ANY DUST AREA
IA	GMD #464033 (GREEN)	300 PPM	
INE	GMB #464032 (WHITE)	10 PPM CL	
JRIC ACID	GMB #464032 (WHITE)		
TOS	TYPE S #464034		
GASES & IC VAPORS	GMC #464046 (YELLOW)	0.1% ORGANIC VAPORS 50 PPM HCL 10 PPM CL	SORBIC DEPT

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C. RESPIRATOR TRAINING & FITTING RECORD

DATE	NAME	FIT TEST RESULT Y = Yes N = No Fit

(Signature of Trainer)

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