PLAINTIFF'S EXHIBIT

UC-1968

Appendix

Respirator Approval and Acceptance Listings

(This Appendix is not a part of American National Standard Practices for Respiratory Protection, Z88.2-1969, but is included for information purposes only.)

A1. Approved or Listed Respirators

The Department of the Interior, Bureau of Mines, and the Department of Agriculture publish frequently revised lists of respirators. Samples of these have been tested and found to provide satisfactory respiratory protection against specific hazards or contaminants.

A1.1 Respirators Approved by the Department of the Interior, Bureau of Mines. A list of respirators approved by the Department of the Interior, Bureau of Mines, may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

A1.2 Respirators on Lists Published by the Department of Agriculture. A list of respirators for respiratory protection against certain pesticides may be obtained from the Department of Agriculture, Pesticide Chemicals Research Branch, Beltsville, Maryland 20705.

A2. Requirements for and Tests of Respirators

Requirements and testing procedures for respirators have been established and published by the Department of the Interior, Bureau of Mines, and the Department of Agriculture.

A2.1 Department of the Interior, Bureau of Mines, Requirements and Tests. Requirements for approval of most types of respirators used have been established. These requirements are published as the Department of the Interior, Bureau of Mines, schedules. A current list of these schedules appears in Section 11, References. These schedules are frequently revised and each subsequent revision is assigned a succeeding terminal letter (for example, schedule 19B is a revision of schedule 19A).

Copies of the most recent schedules may be obtained from the Publications Distribution Section, Department of the Interior, Bureau of Mines, 4800 Forbes Avenue, Pittsburgh, Pennsylvania 15213.

The Department of the Interior, Bureau of Mines, approval on a respirator continues in effect even though the schedule under which the respirator was approved has been revised one or more times. If the user wishes to check the minimum performance he may expect from an approved respirator, he should consult the schedule which was in effect when the approval was granted. Certain respirators are upgraded by the manufacturer to meet the requirements of more recent schedules. In general, each schedule revision makes the requirements more severe. A complete list of schedules and their effective dates, and a list of schedules under which each respirator has been approved, will be found in the Bureau's list of approved respirators.

Responsibility for testing and approval of pesticide respirators has been transferred to the Department of the Interior, Bureau of Mines.

A2.2 Department of Agriculture Requirements and Tests. The Department of Agriculture previously established requirements and tests for respirators intended to provide respiratory protection during the application and handling of pesticides. The requirements and tests are described in a publication of tests and requirements for respirators designed to provide respiratory protection against pesticides. The publication may be obtained from the Department of Agriculture, Pesticide Chemicals Research Branch, Beltsville, Maryland 20705.

In the Department of Agriculture's tests, pesticides were dispersed as water sprays, oil sprays, or dry dusts to simulate formulations used in field applications. Chemical cartridges were tested for one hour and gas mask canisters for four hours. Insect bioassay methods were used to determine the efficiency of canisters and cartridges.

The Department of Agriculture did not evaluate facepiece fit of chemical-cartridge respirators or gas masks. It did not test respirators for protection against rodenticides, herbicides, and fungicides.

BRG 0315

Union Carbide trial exhibit UC-1968: Compilation on Respirator Standards and Regulations: ANSI Z88.2 Appendix... Published by AsbestosClaims.Law
ACL Doc 17000 · Page 1 of 17 asbestosclaims.law/library/17000/1

A3. Selection of Other Than Approved or Listed Respirators

For special purposes the user may need to select a respirator which has not been submitted to the Department of the Interior, Bureau of Mines, or to the Department of Agriculture for testing, or cannot be tested by these agencies because it is outside their approval or testing authority. Among these are special-purpose respirators for which user demand does not warrant submitting the devices for testing or approval.

The user should compare unapproved respirators with similar approved or listed devices to evaluate the facepiece and other parts to assure himself that the manufacturer, or other reliable organization, has tested the filters, cartridges, or canisters, that they are adequate for the required service, and that quality control during manufacture can be expected. He should make or have made suitable tests of the respirators' effectiveness which, as far as feasible, simulate tests made by the official testing agencies.

BRG 0316

Union Carbide trial exhibit UC-1968: Compilation on Respirator Standards and Regulations: ANSI Z88.2 Appendix… Published by AsbestosClaims.Law
ACL Doc 17000 · Page 2 of 17 asbestosclaims.law/library/17000/2

American National Standards

The standard in this booklet is one of nearly 4,000 standards approved to date by the American National Standards Institute, formerly the USA Standards Institute.

The Standards Institute provides the machinery for creating voluntary standards. It serves to eliminate duplication of standards activities and to weld conflicting standards into single, nationally accepted standards under the designation "American National Standards."

Each standard represents general agreement among maker, seller, and user groups as to the best current practice with regard to some specific problem. Thus the completed standards cut across the whole fabric of production, distribution, and consumption of goods and services. American National Standards, by reason of Institute procedures, reflect a national consensus of manufacturers, consumers, and scientific, technical, and professional organizations, and governmental agencies. The completed standards are used widely by industry and commerce and often by municipal, state, and federal governments.

The Standards Institute, under whose auspices this work is being done, is the United States clearinghouse and coordinating body for standards activity on the national level. It is a federation of trade associations, technical societies, professional groups, and consumer organizations. Some 1,000 companies are affiliated with the Institute as company members.

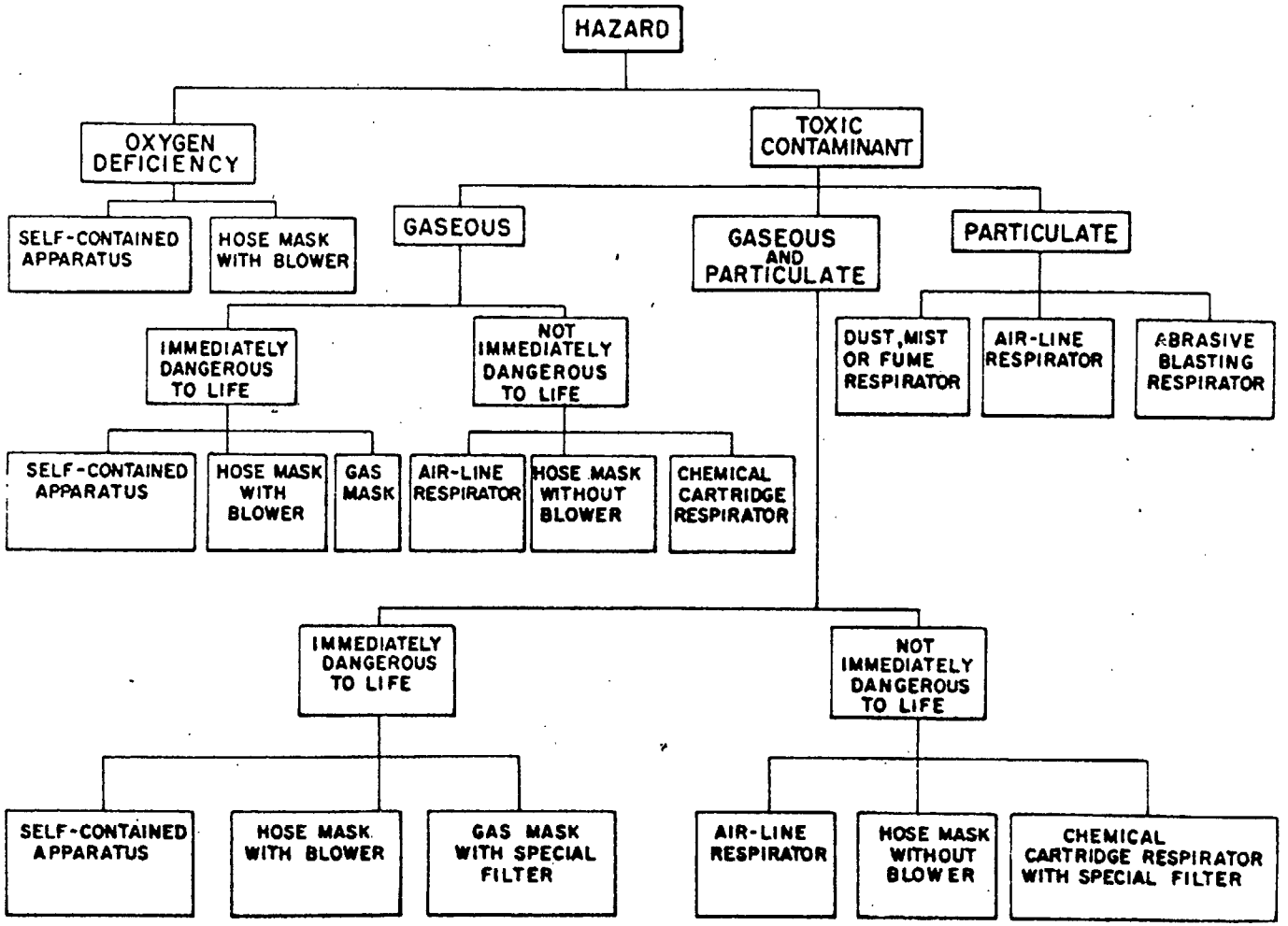
The American National Standards Institute is the United States member of the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC), and the Pan American Standards Commission (COPANT). Through these channels American industry makes its position felt on the international level. American National Standards are on file in the libraries of the national standards bodies of more than 50 countries.

For a free list of all American National Standards, write:

American National Standards Institute, Inc

1430 Broadway **New York, N. Y. 10018**

BRG 0317



Outline for selecting respiratory protective devices.

BRG 0318

Union Carbide trial exhibit UC-1968: Compilation on Respirator Standards and Regulations: ANSI Z88.2 Appendix...
ACL Doc 17000 · Page 4 of 17
Published by AsbestosClaims.Law
asbestosclaims.law/library/17000/4

II. WHAT THE LAW SAYS AND/OR PROPOSES TO SAY

A. OSHA STANDARD EXPLANATION

1. SUBPART I

PARAGRAPH 1910.134 "RESPIRATORY PROTECTION"

(d) "AIR QUALITY"

* (1) STDS. FOR COMPRESSED AIR, COMPRESSED O_2, LIQUID AIR, AND LIQUID O_2

(2) ACCEPTABLE SOURCES

* (i) CYLINDER TEST STANDARD

* (ii) COMPRESSOR STANDARDS

(3) COUPLING STANDARDS

(4) CONTAINER LABELING STANDARDS

BRG 0319

II. WHAT THE LAW SAYS AND/OR PROPOSES TO SAY

A. OSHA STANDARD EXPLANATION

1. SUBPART I

PARAGRAPH 1910.134 "RESPIRATORY PROTECTION"

(e) "USE OF RESPIRATORS"

* (1) STANDARD PROCEDURES
* (2) SPECIFICATIONS
* (3) PROCEDURES FOR DANGEROUS ATMOSPHERES
  - (i) TOXIC OR O_2-DEFICIENT ATMOSPHERES
  - (ii) ATMOSPHERES IMMEDIATELY DANGEROUS TO LIFE OR HEALTH
  - (iii) SAFETY HARNESS REQUIREMENTS
* (4) RESPIRATOR INSPECTIONS
* (5) TRAINING IN SELECTION, USE AND MAINTENANCE
  - (i) FITTING
  - (ii) CORRECTIVE GLASSES
  - (iii) CORRECTIVE GLASSES

Union Carbide trial exhibit UC-1968: Compilation on Respirator Standards and Regulations: ANSI Z88.2 Appendix... Published by AsbestosClaims.Law
ACL Doc 17000 · Page 6 of 17 asbestosclaims.law/library/17000/6

II. WHAT THE LAW SAYS AND/OR PROPOSES TO SAY

B. CHANGES IN TESTS UNDER 30 CFR TITLE 11

1. PARAGRAPH 11.85-12(d) (REVISION)

TO PERMIT AN INCREASE IN THE PERMISSIBLE CO_2 CONC. IN CERTAIN CLOSED-CIRCUIT S.C.B.A.

2. PARAGRAPH 11.90(a) (AMENDMENT)

TO DELETE RECOMMENDATIONS TO GAS MASK USERS OF THE MAX. CONC. OF GASES IN WHICH MASKS SHOULD BE USED.

3. PARAGRAPH 11.102.5(c)(1) (AMENDMENT)

TO REQUIRE THAT CANISTERS FOR GASES, AMMONIA, ORGANIC VAPORS, CO, AND PARTICULATE, SHALL HAVE AN INDICATOR TO WARN AGAINST INABILITY TO REMOVE CO FROM INHALED AIR.

4. PARAGRAPH 11.93 (REVISION)

COLOR AND MARKINGS OF ALL CANISTERS ETC. TO CONFORM WITH ANSI K 13.1-1973.

Union Carbide trial exhibit UC-1968: Compilation on Respirator Standards and Regulations: ANSI Z88.2 Appendix... Published by AsbestosClaims.Law
ACL Doc 17000 · Page 7 of 17 asbestosclaims.law/library/17000/7

Title 30—Mineral Resources

CHAPTER I—MINING ENFORCEMENT AND SAFETY ADMINISTRATION, DEPARTMENT OF THE INTERIOR

PART 11—RESPIRATORY PROTECTIVE DEVICES; TESTS FOR PERMISSIBILITY; FEES

Gas Masks and Self-Contained Breathing Apparatus

On June 4, 1974, the Department of Health, Education, and Welfare, and the Department of the Interior, jointly published a notice of proposed rulemaking in the FEDERAL REGISTER (40 FR 19783) to amend Title 30, Code of Federal Regulations, Part 11, to permit an increase in the permissible carbon dioxide concentration in certain closed-circuit self-contained escape breathing apparatus and to delete recommendations to gas mask users of the maximum concentrations of gases in which the masks should be used.

Interested persons were given an opportunity to submit comments on the proposed amendments and comments were received from the Industrial Safety Equipment Association, Inc. (ISEA); and the Atomic Energy Commission (AEC). The comments have been reviewed by the National Institute for Occupational Safety and Health (NIOSH) and the Mining Enforcement and Safety Administration (MESA). The comments and principal changes are discussed below by individual sections:

Section 11.90(a)(2). The ISEA requested deletion of references to "Type N" gas masks on the grounds that it is unnecessary to describe a mask with only one difference from other gas masks. MESA and NIOSH agree, yet the capability under § 11.90(b) for approving such a gas mask was retained by including "Other gas(es) and vapor(s)" as an additional category of front-mounted or back-mounted gas masks.

Section 11.90(b). The deletion of maximum use concentrations of gas or vapor in which a device could be used was questioned by ISEA which stated that until Government research results are published indicating that the vapor values are too high, the action of deletion could be interpreted as being arbitrary and without proper foundation. In this regard, investigations by the Lawrence Livermore Laboratory, performed under the auspices of the AEC, and investigations by NIOSH have shown that the service life of activated carbon varies considerably with both the specific sorbent and the type of solvent vapor adsorbed. Therefore, canister service life is not adequate for many gases and vapors if gas masks are used at the suggested maximum use concentrations. The joint American Industrial Hygiene Association/American Conference of Governmental Industrial Hygienists Respirator Committee has prepared a selection guide which recommends maximum use concentrations for many gases and vapors.

Because of these factors, in addition to such limiting factors as the heat of reaction between gas or vapor and solvent, warning properties of air contaminants, the air contaminant concentration immediately dangerous to life and health, and lower explosive limit; it was deemed advisable to eliminate the suggested maximum use concentrations. A joint OSHA/NIOSH standards completion project is underway to write a minimum regulatory standard for each substance listed in 29 CFR 1910.93. These standards will provide respiratory protection requirements for compliance with the permissible exposure limit. Until such standards are published, information on respirator selection and use can be obtained from the sources designated in this amendment. Because of the uncertainty of respiratory protection against some toxic gases and vapors when activated carbon is employed as the sorbent, and to assure that the user is provided with a comfortable and efficiently fitting facepiece, NIOSH is undertaking a research program to develop improved approval test methods and equipment to assure that adequate protection will be provided the users of gas masks. Results of the investigations will be available from NIOSH.

The ISEA also commented that the proposed amendment would immediately place many current users of gas masks in a position of noncompliance and administratively cause the equipment to be considered obsolete. MESA and NIOSH do not agree. The users of gas masks will not be in a position of noncompliance with regulatory standards since such standards will specify the maximum use concentration for a gas mask which, in most instances, will be much less than the recommended maximum use concentration in § 11.90(b). To protect the user, such limiting factors as the facepiece fit of the gas mask, expected service life of the sorbent, warning properties of the air contaminant, the lower explosive limit, and the concentration of the air contaminant immediately dangerous to life and health are considered in establishing the maximum use concentration of a gas mask in a regulatory standard. The deletion of the maximum use concentration will not administratively cause the equipment to be considered obsolete since the maximum use concentration for a gas mask is established by a regulatory standard and not by the suggested maximum use concentration in § 11.90(b).

Changes were made in the categories under the three types of gas masks in the form of additions of gas masks for "Other gas(es) and vapor(s)" and for combinations of gases or vapors. This change was made primarily to include, for purposes of clarification, types of gas masks previously listed in the footnotes.

The AEC recommended that the specific offices to be consulted for selection, use, and maintenance of gas masks, and for information on safe use concentrations, be named along with their addresses and telephone numbers. MESA and NIOSH have adopted part of this proposal and clarified the sources where the information may be obtained.

It was suggested by the AEC that instead of the proposed procedures, there should be testing and certifying of various sorbent canisters and cartridges for use against specific contaminants and concentrations, particularly to include provisions for specific testing of the various gas mask canisters for certification for use against specific contaminants of interest. In view of the extensive number of specific gases and vapors, MESA and NIOSH consider this suggestion impracticable at this time.

Section 11.102-5(c)(1). MESA and NIOSH agree with the suggestion of ISEA that the section be revised to require an indicator only for carbon monoxide because it is undetectable by odor or taste.

A change in the concentration of nitrogen dioxide in Tables 6 and 7 was suggested by ISEA. MESA and NIOSH agree with the suggestion and the nitrogen dioxide requirements were removed for all gas masks because the SO_2, Cl_2 tests are considered adequate for evaluating the performance of acid gas canisters. A requirement was inserted in footnote 5 of § 11.90(b) that the applicant advise users, through means of instruction on labels, of the probability of certain gases and vapors not being removed by sorbents in the canister to that degree indicated by performance requirements in Part 11.

The ISEA also recommended a performance requirement to be added to Tables 6 and 7 which would be consistent with subpart L for chemical cartridge respirator approvals. The change would allow a reduction of service life requirements for all gas masks designed to provide respiratory protection against two or more types (classes) of gases and vapors. MESA and NIOSH are of the view that such a reduction is not in the best interest of the user's safety. The inconsistency with Subpart L is believed warranted because gas masks are for use against more hazardous atmospheres.

Therefore, Part 11 is amended as set forth below, effective April 14, 1976.

Dated: March 5, 1976.

THOMAS S. KLEPPE,
Secretary of the Interior

Dated: January 23, 1976.

MARJORIE LYNCH,
Acting Secretary of Health, Education, and Welfare.

1. In § 11.85-12, paragraph (d) is revised to read as follows:

§ 11.85-12 Test for carbon dioxide in inspired gas; open- and closed-circuit apparatus; maximum allowable limits.

* * * * *

(d) In addition to the test requirements for closed-circuit apparatus set forth in paragraph (b) of this section, gas samples will be taken during the course of the man tests described in Tables 1, 2, 3, and 4. These gas samples will be taken from the closed-circuit apparatus at a point downstream of the carbon dioxide sorbent, and they shall not contain more than 0.5 percent carbon dioxide at any time, except on apparatus for escape only, using a mouthpiece only, the sample shall not contain more than 1.5 percent carbon dioxide at any time.

BRG 0322

Union Carbide trial exhibit UC-1968: Compilation on Respirator Standards and Regulations: ANSI Z88.2 Appendix... Published by AsbestosClaims.Law
ACL Doc 17000 · Page 8 of 17 asbestosclaims.law/library/17000/8

§ 11.90 [Amended]

2. In § 11.90, paragraph (a) is revised to read as follows:

(a) Gas masks including all completely assembled air purifying masks designed for use as respiratory protection during entry into atmospheres not immediately dangerous to life or health or escape only from hazardous atmospheres containing adequate oxygen to support life are described as follows:

3. In § 11.90, paragraph (a)(2) is deleted and paragraphs (a)(3) and (a)(4) are redesignated as paragraphs (a)(2) and (a)(3) respectively and the word "half-mask" is deleted from paragraph (a)(3).

4. In § 11.90, paragraph (b) is revised to read as follows:

(b) Gas masks shall be further described according to the types of gases or vapors against which they are designed to provide respiratory protection, as follows:

Type of front-mounted or back-mounted gas mask

Acid gas [2] [4] [6]
Ammonia
Carbon monoxide
Organic Vapor [2] [4] [5]
Other gas(es) and vapor(s) [2] [4]
Combination of two or more of the above gases and vapors. [2] [4] [6]
Combination of acid gas, ammonia, carbon monoxide, and organic vaports. [2] [4] [6]

Type of chin-style gas mask

Acid gas [2] [4] [6]
Ammonia
Carbon monoxide
Organic vapor [2] [4] [6]
Other gas(es) and vapor(s) [2] [4] [6]
Combination of two or more of the above gases and vapors. [2] [4] [6]

Type of escape gas mask

Acid gas [2] [4] [5] [6]
Ammonia [6]
Carbon monoxide
Organic vapor [2] [4] [5] [6]
Other gas(es) and vapor(es) [2] [4] [6]
Combination of two or more of the above gases and vapors. [2] [4] [5] [6]

NOTE: For information on safe use concentrations and for information governing the selection, use, and maintenance of gas masks, the gas mask user should refer to regulations issued by the Mining Enforcement and Safety Administration or by the Occupational Safety and Health Administration, and to other applicable regulations concerning gas masks. Recommendations based on such regulations may also be obtained from the National Institute for Occupational Safety and Health, 944 Chestnut Ridge Road, Morgantown, W. Va. 26505, Attention: Director, TCL; or from the NIOSH Regional Consultants for Occupational Safety and Health in the DHEW Regional Offices throughout the country.

§ 11.102–5 [Amended]

5. In § 11.102–5, paragraph (c)(1) is revised to read as follows:

(c)(1) Front-mounted, and back-mounted, and chin-style canisters designated as providing respiratory protection against gases, ammonia, organic vapors, carbon monoxide and particulate contaminants shall have a window or other indicator to warn the gas mask wearer when the canister will no longer satisfactorily remove carbon monoxide from the inhaled air.

6. In § 11.102–5, Tables 5, 6, and 7 have been revised consistent with the amendments to § 11.90 to read as follows:

[2] Approval may be for acid gases or organic vapors as a class or for specific acid gases or organic vapors.

[4] Not for use against gases or vapors with poor warning properties or which generate high heats of reaction with sorbent materials in the canister.

[5] Use of the gas mask may be limited by factors such as lower explosive limit, toxicological effects, and facepiece fit. Limitations on gas mask service life and sorbent capacity limitations, shall be specified by the applicant in instructions for selection, use and maintenance of the gas mask.

[6] Eye protection may be required in certain concentrations of gases and vapors.

TABLE 5.—*Canister bench tests and requirements for front-mounted and back-mounted gas mask canisters*

[30 CFR pt. 11, subpt. I, sec. 11.102-5]

Canister type	Test condition	Test atmosphere: Gas or vapor	Test atmosphere: Concentration (parts per million)	Test atmosphere: Flow rate (liters per minute)	Number of tests	Maximum allowable penetration (parts per million)	Minimum service life (minutes)[1]
Acid gas	As received	SO_2	20,000	64	3	5	12
		Cl_2	20,000	64	3	5	12
	Equilibrated	SO_2	20,000	32	4	5	12
		Cl_2	20,000	32	4	5	12
Organic vapor	As received	CCl_4	20,000	64	3	5	12
	Equilibrated	CCl_4	20,000	32	4	5	12
Ammonia	As received	NH_3	30,000	64	3	50	12
	Equilibrated	NH_3	30,000	32	4	50	12
Carbon monoxide	As received	CO	20,000	[3] 64	2	(5)	60
		CO	5,000	[4] 32	3	(5)	60
		CO	3,000	[3] 32	3	(5)	60
Combination of 2 or 3 of above types.[6]							
Combination of all of above types.[6]							

[1] Minimum life will be determined at the indicated penetration.
[3] Relative humidity of test atmosphere will be 85±3 pct; temperature of test atmosphere will be 25±2.5° C.
[5] Maximum allowable CO penetration will be 385 cm³ during the minimum life. The penetration shall not exceed 500 p/m during this time.
[4] Relative humidity of test atmosphere will be 65±3 pct; temperature of test atmosphere entering the test fixture will be 0+2.5° C −0°.
[6] Test conditions and requirements will be applicable as shown above.
[6] Test conditions and requirements will be applicable as shown above, except the minimum service lives for acid as, organic vapor, and ammonia will be 6 min instead of 12 min.

BRG 0323

Union Carbide trial exhibit UC-1968: Compilation on Respirator Standards and Regulations: ANSI Z88.2 Appendix... Published by AsbestosClaims.Law
ACL Doc 17000 · Page 9 of 17 asbestosclaims.law/library/17000/9

II. WHAT THE LAW SAYS AND/OR PROPOSES TO SAY

C. NIOSH/OSHA RESPIRATORY DECISION LOGIC

1. OUTLINE

2. GOVERNMENT PRACTICE

3. UCC C&P POSITION

BRG 0324

II. WHAT THE LAW SAYS AND/OR PROPOSES TO SAY

C. NIOSH/OSHA RESPIRATORY DECISION LOGIC

1. OUTLINE

A. INTRODUCTION

B. GENERAL DECISION LOGIC FLOW CHART

1. GASES OR VAPORS

2. PARTICULATES

3. COMBINATION OF GAS/VAPOR AND PARTICULATES

C. SPECIFIC DECISION LOGIC CHART

D. DECISION LOGIC CRITERIA

1. SKIN ABSORPTION

2. POOR WARNING PROPERTIES

3. SORBERT EFFICIENCIES

4. EYE IRRITATION

5. IDLH CONCENTRATION

6. LFL AND FIREFIGHTING

7. PROTECTION FACTOR

8. VARIATIONS WITH 30 CFR 11

* 9. ESCAPE

10. TANK CLEANING AND ENTRY INTO CLOSED VESSELS

BRG 0325

D-9 ESCAPE

WHERE ESCAPE RESPIRATORS ARE PROVIDED THEY SHALL BE SELECTED FROM THE ESCAPE CATEGORY IN TABLE 2. THE EMPLOYER SHALL PROVIDE AND ENSURE EMPLOYEES CARRY AN ESCAPE RESPIRATORY WHERE EXPOSURE MAY OCCUR TO EXTREMELY TOXIC SUBSTANCES (AN EXTREMELY TOXIC SUBSTANCE IS DEFINED AS A GAS OR VAPOR HAVING A RAT EXPOSURE MORTALITY LC50 OF LESS THAN 10 PPM.)

THE FOLLOWING STATEMENT IS ADDED TO THE INTRODUCTION TO THE RESPIRATOR TABLE FOR THESE SUBSTANCES:

> EMPLOYERS SHALL PROVIDE EACH EMPLOYEE WORKING IN AREAS WHERE **NAME** MAY BE RELEASED INTO THE WORKPLACE AIR WITH AN APPROVED ESCAPE RESPIRATOR AS SPECIFIED IN TABLE 2. THE EMPLOYER SHALL ENSURE THAT EACH EMPLOYEE CARRY THE ESCAPE RESPIRATOR IN THE AREA WHERE **NAME** MAY BE RELEASED INTO THE WORKPLACE.

Union Carbide trial exhibit UC-1968: Compilation on Respirator Standards and Regulations: ANSI Z88.2 Appendix... Published by AsbestosClaims.Law
ACL Doc 17000 · Page 12 of 17 asbestosclaims.law/library/17000/12

II - WHAT THE LAW SAYS AND/OR PROPOSES TO SAY

C - NIOSH/OSHA RESPIRATOR DECISION LOGIC

2 - GOVERNMENT PRACTICE

AUTHOR	TYPE OF DOCUMENT	SUBSTANCE	ESCAPE RESPIRATOR PROVISIONS
NIOSH	CRITERIA DOCUMENT	BENZENE	REQUIRED
"	" "	INORGANIC FLUORIDE	"
"	" "	PHOSGENE	"
"	" "	SODIUM HYDROXIDE	"
"	" "	XYLENE	"
OSHA	DRAFT TECHNICAL STANDARD	TOXIC SUBSTANCES; ALKYL BENZENES, CYCLOHEXANE, KETONES, AND OZONE	REQUIRED
"	" "	TOXIC SUBSTANCES; KETONES	NOT REQUIRED
"	PROPOSED STANDARD	AMMONIA	" "
"	" "	BERYLLIUM	" "
"	" "	LEAD	" "
"	" "	SULFUR DIOXIDE	" "
"	" "	TOLUENE	REQUIRED
"	" "	TRICHLOROETHYLENE	NOT REQUIRED
"	EXISTING STANDARD	ASBESTOS	NOT REQUIRED
"	" "	CARCINOGENS	" "
"	" "	VINYL CHLORIDE	" "

BRG 0327

II. WHAT THE LAW SAYS AND/OR PROPOSES TO SAY

C. NIOSH/OSHA RESPIRATORY DECISION LOGIC

3. UCC C&P POSITION

A. LETTER TO NIOSH

B. EXTREMELY TOXIC VS LESS THAN EXTREMELY TOXIC SUBSTANCES

BRG 0328

EXTREMELY TOXIC SUBSTANCE

PERSONAL PROTECTION	NORMAL COMPLEMENT OF PEOPLE		OCCASIONAL SUPPORT PEOPLE	
	EMERGENCY SITUATIONS	ESCAPE SITUATIONS	EMERGENCY SITUATIONS	ESCAPE SITUATIONS
STANDARD RESPIRATORY EQUIPMENT - STRATEGICALLY POSITIONED	YES	YES	NO	YES & NO
SPECIAL ESCAPE-TYPE RESPIRATORY EQUIPMENT	YES	YES	NO	YES

LESS THAN EXTREMELY TOXIC SUBSTANCE

	NORMAL COMPLEMENT OF PEOPLE		OCCASIONAL SUPPORT PEOPLE	
	EMERGENCY SITUATIONS	ESCAPE SITUATIONS	EMERGENCY SITUATIONS	ESCAPE SITUATIONS
STANDARD RESPIRATORY EQUIPMENT - STRATEGICALLY POSITIONED	YES	YES	NO	NO
SPECIAL ESCAPE-TYPE RESPIRATORY EQUIPMENT	NO	NO	NO	NO

BRG 0329

III. VIOLATIONS

A. TEXAS CITY

1. VCL - NO WRITTEN RESPIRATORY PROTECTIVE EQUIPMENT PROGRAM

B. INSTITUTE

1. MIX MATCHING

2. ESCAPE RESPIRATORS

   USE

   IDENTIFICATION

   TRAINING

Union Carbide trial exhibit UC-1968: Compilation on Respirator Standards and Regulations: ANSI Z88.2 Appendix… Published by AsbestosClaims.Law
ACL Doc 17000 · Page 16 of 17 **asbestosclaims.law/library/17000/16**

IV. RECOMMENDED I. H. INVOLVEMENT

A. SPECIFICATIONS AND SELECTION

1. PERSONNEL EQUIPMENT
2. SUPPLY EQUIPMENT

B. TRAINING

1. LIMITATIONS
2. HAZARDS

C. TESTING AND/OR FITTING

1. TECHNIQUE
2. VERIFICATION

D. MONITORING

1. IDENTIFICATION
2. EVALUATION

Union Carbide trial exhibit UC-1968: Compilation on Respirator Standards and Regulations: ANSI Z88.2 Appendix... Published by AsbestosClaims.Law
ACL Doc 17000 · Page 17 of 17 **asbestosclaims.law/library/17000/17**