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THE ELEVEN COMMANDMENTS OF

29 CFR PART 1910.134



Written Standard Operating Procedures

Selection

1910.134(b)(1)

*** (1)** Written standard operating procedures governing the selection and use of respirators shall be established.

*** (2)** Respirators shall be selected on the basis of hazards to which the worker is exposed.

1910.134(c)

1910.134(e)(1)

(1) Standard procedures shall be developed for respirator use. These should include all information and guidance necessary for their proper selection, use, and care. Possible emergency and routine uses of respirators should be anticipated and planned for.

Proper selection of respirators shall be made according to the guidance of American National Standard Practices for Respirator Protection Z88.2-1969.

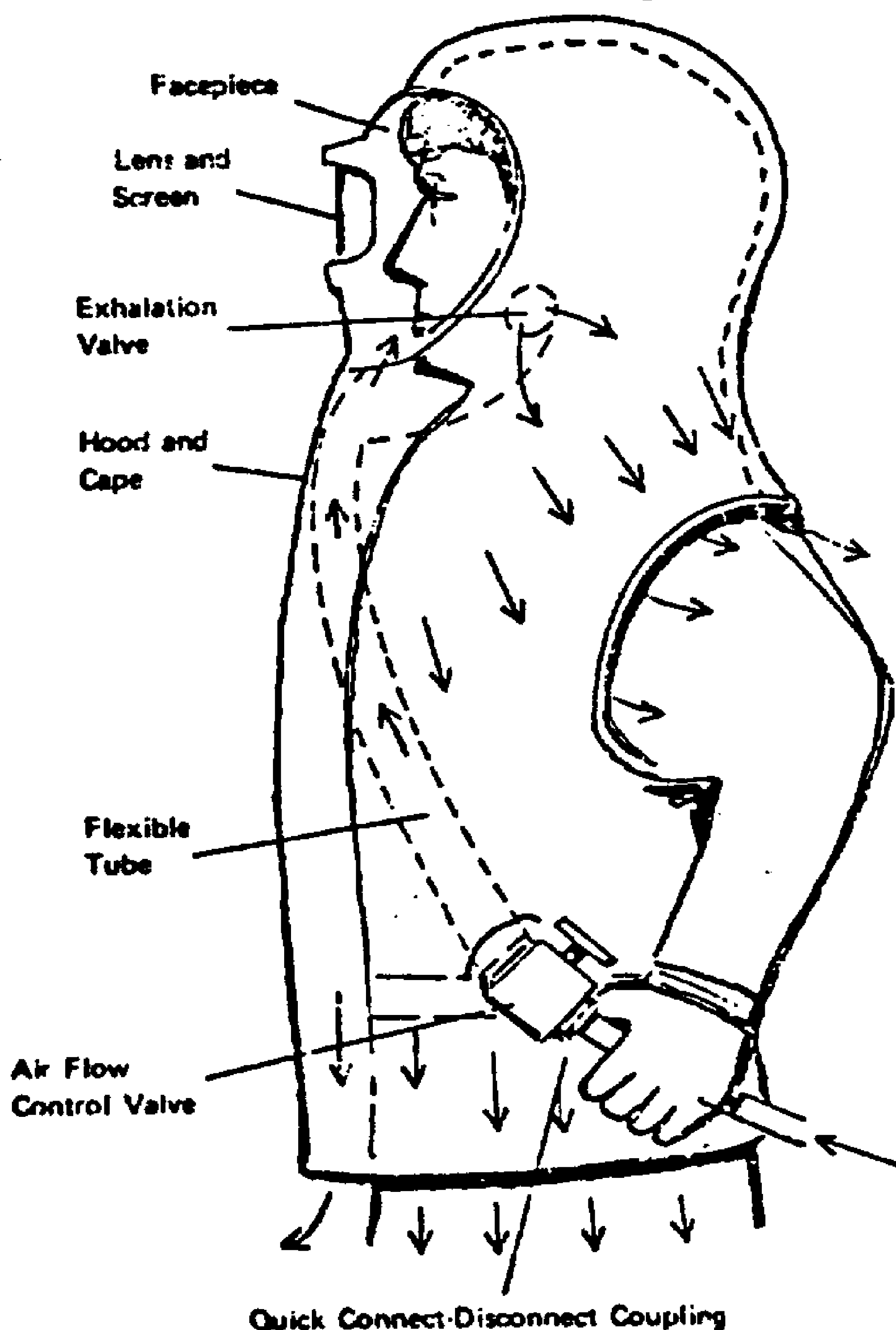
1910.134(e)(2)

1910.134(e)(3)

(3) Written procedures shall be prepared covering safe use of respirators in dangerous atmospheres that might be encountered in normal operations or in emergencies. Personnel shall be familiar with these procedures and the available respirators.

(2) The correct respirator shall be specified for each job. The respirator type is usually specified in the work procedures by a qualified individual supervising the respiratory protective program. The individual issuing them shall be adequately instructed to insure that the correct respirator is issued. Each respirator permanently assigned to an individual should be durably marked to indicate to whom it was assigned. This mark shall not affect the respirator performance in any way. The date of issuance should be recorded.

1910.134(b)(11)



*** (11)** Approved or accepted respirators shall be used when they are available. The respirator furnished shall provide adequate respiratory protection against the particular hazard for which it is designed in accordance with standards established by competent authorities. The U. S. Department of Interior, Bureau of Mines, and the U. S. Department of Agriculture are recognized as such authorities. Although respirators listed by the U. S. Department of Agriculture continue to be acceptable for protection against specified pesticides, the U. S. Department of the Interior, Bureau of Mines, is the agency now responsible for testing and approving pesticide respirators.

Training

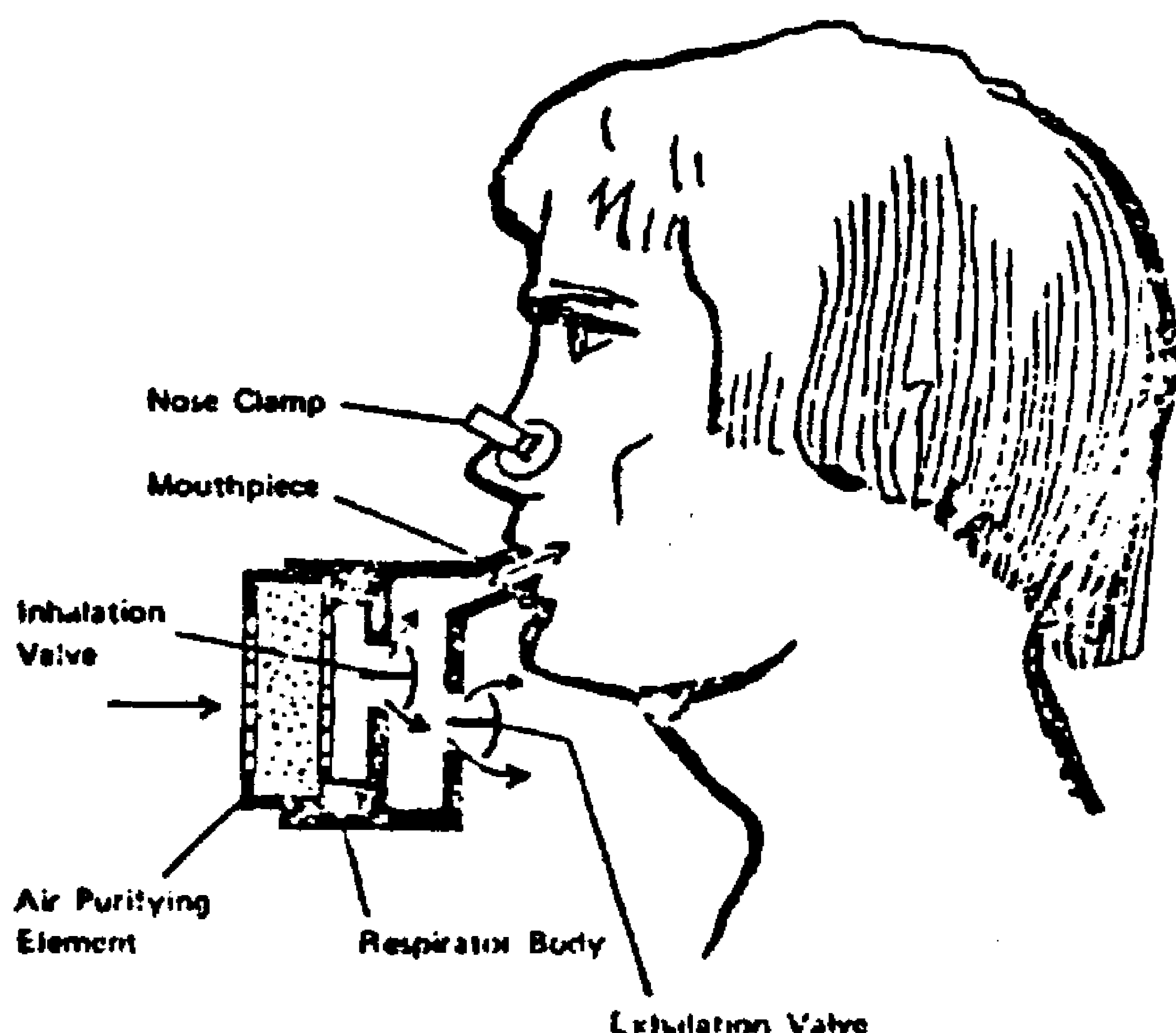
- * (3)** The user *shall* be instructed and trained in the proper use of respirators and their limitations.

1910.134(e)(5)

(5) 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. 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 test atmosphere. *a long familiarity period, and, finally, to wear it in a test atmosphere.*

1910.134(e)(5)(i)

(i) Every respirator wearer *shall* receive fitting instructions including demonstrations and practice in how the respirator should be worn, how to adjust it, and how to determine if it fits properly. Respirators *shall not* be worn when conditions prevent a good face seal. Such conditions may be a growth of beard, sideburns, a skull cap that projects under the face piece, or temple pieces on glasses. Also, the absence of one or both dentures can seriously affect the fit of a facepiece. The worker's diligence in observing these factors *shall* be evaluated by periodic check. To assure proper protection, the facepiece fit *shall* be checked by the wearer each time he puts on the respirator. This may be done by following the manufacturer's facepiece fitting instructions.



Individual Issue

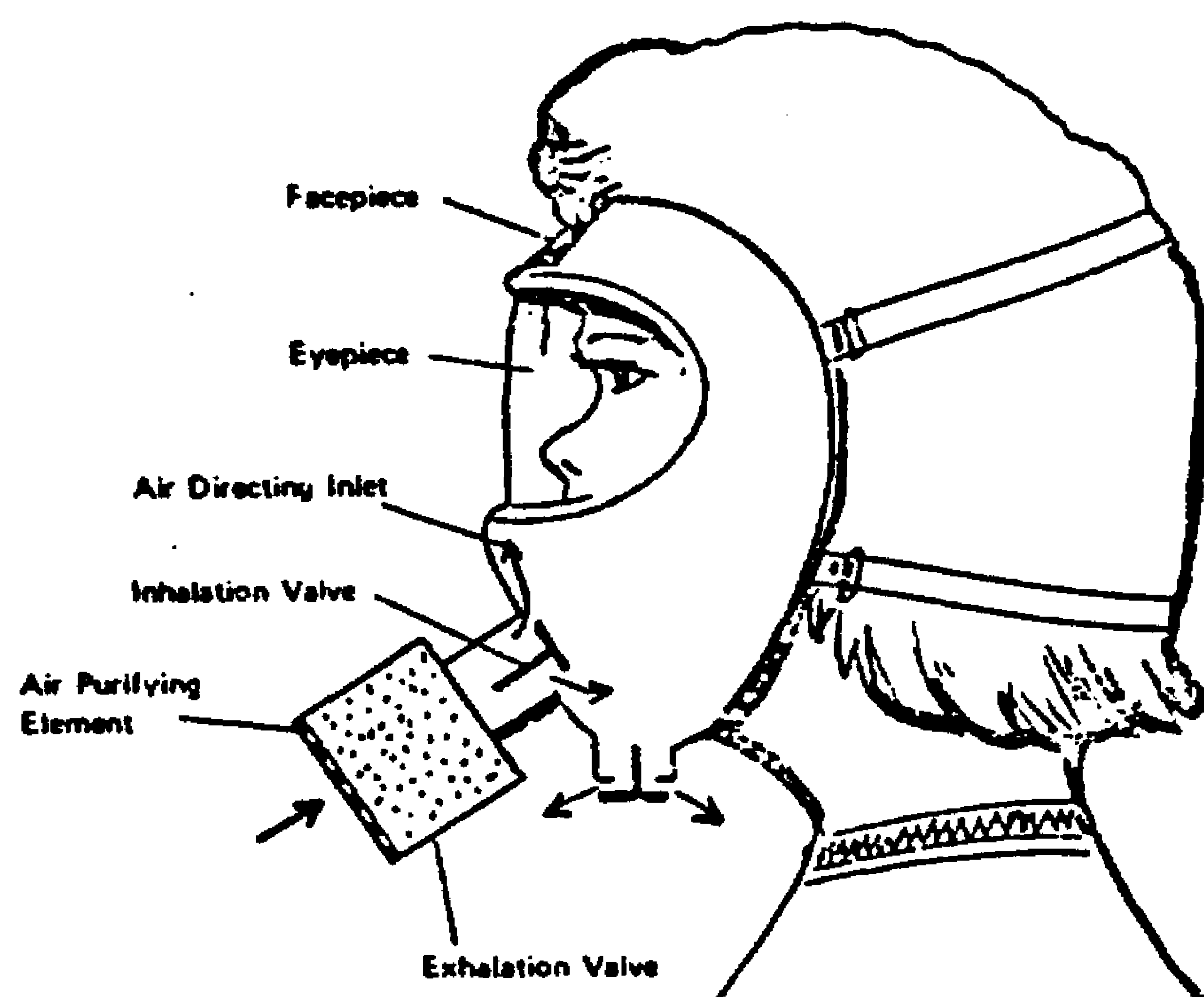
- * (4)** Where practicable, the respirators should be assigned to individual workers for their exclusive use.

1910.134(e)(2)

(2) The correct respirator shall be specified for each job. The respirator type is usually specified in the work procedures by a qualified individual supervising the respiratory protective program. The individual issuing them *shall* be adequately instructed to insure that the correct respirator is issued. Each respirator permanently assigned to an individual should be durably marked to indicate to whom it was assigned. This mark *shall not* affect the respirator performance in any way. The date of issuance should be recorded.

1910.134(f)(3)

(3) Routinely used respirators *shall* be collected, cleaned, and disinfected as frequently as necessary to insure that proper protection is provided for the wearer. Each worker should be briefed on the cleaning procedure and be assured that he will always receive a clean and disinfected respirator. Such assurances are of greatest significance when respirators are not individually assigned to workers. Respirators maintained for emergency use *shall* be cleaned and disinfected after each use.



- I** * (5) Respirators *shall* be regularly cleaned and disinfected. Those issued for the exclusive use of one worker should be cleaned after each day's use, or more often if necessary. Those used by more than one worker *shall* be thoroughly cleaned and disinfected after each use.

1910.134(f)(1-4)(1)

(1) A program for maintenance and care of respirators *shall* be adjusted to the type of plant, working conditions, and hazards involved, and *shall* include the following basic services:

- (i) Inspection for defects (including a leak check).
- (ii) Cleaning and disinfecting.
- (iii) Repair.
- (iv) Storage.

Equipment *shall* be properly maintained to retain its original effectiveness.

(2)(i) All respirators *shall* be inspected routinely before and after each use. A respirator that is not routinely used but is kept ready for emergency use *shall* be inspected after each use and at least monthly to assure that it is in satisfactory working condition.

(ii) Self-contained breathing apparatus *shall* be fully charged according to the manufacture's instructions. It *shall* be determined that the regulator and warning devices function properly.

(iii) Respirator inspection *shall* include a check of the tightness of connections and the condition of the facepiece, headbands, valves, connecting tube, and canisters. Rubber or elastomer parts *shall* be inspected for pliability and signs of deterioration. Stretching and manipulating rubber or elastomer parts with a massaging action will keep them pliable and flexible and prevent them from taking a set during storage.

(iv) A record *shall* be kept of inspection dates and findings for respirators maintained for emergency use.

(3) Routinely used respirators *shall* be collected, cleaned, and disinfected as frequently as necessary to insure that proper protection is provided for the wearer. Each worker should be briefed on the cleaning procedure and be assured that he will always receive a clean and disinfected respirator. Such assurances are of greatest significance when respirators are not individually assigned to workers. Respirators maintained for emergency use *shall* be cleaned and disinfected after each use.

(4) Replacement or repairs *shall* be done only by experienced persons with parts designed for the respirator. No attempt *shall* be made to replace components or to make adjustment or repairs beyond the manufacturer's recommendations. Reducing or admission valves or regulators *shall* be returned to the manufacturer or to a trained technician for adjustment or repair.

Storage

- II** * (6) Respirators *shall* be stored in a convenient, clean, and sanitary location.

1910.134(f)(5)

(5)(i) After inspection, cleaning, and necessary repair, respirators *shall* be stored to protect against dust, sunlight, heat, extreme cold, excessive moisture, or damaging chemicals. Respirators placed at stations and work areas for emergency use should be quickly accessible at all times and should be stored in compartments built for the purpose. The compartments should be clearly marked. Routinely used respirators, such as dust respirators, may be placed in plastic bags. Respirators should not be stored in such places as lockers or tool boxes unless they are in carrying cases or cartons.

(ii) Respirators should be packed or stored so that the facepiece and exhalation valve will rest in a normal position and function will not be impaired by the elastomer setting in an abnormal position.

(iii) Instructions for proper storage of emergency respirators, such as gas masks and self-contained breathing apparatus, are found in "use and care" instructions usually mounted inside the carrying case lid.

VI Inspection

*** (7)** Respirators used routinely *shall* be inspected during cleaning. Worn or deteriorated parts *shall* be replaced. Respirators for emergency use such as self-contained devices *shall* be thoroughly inspected at least once a month and after each use.

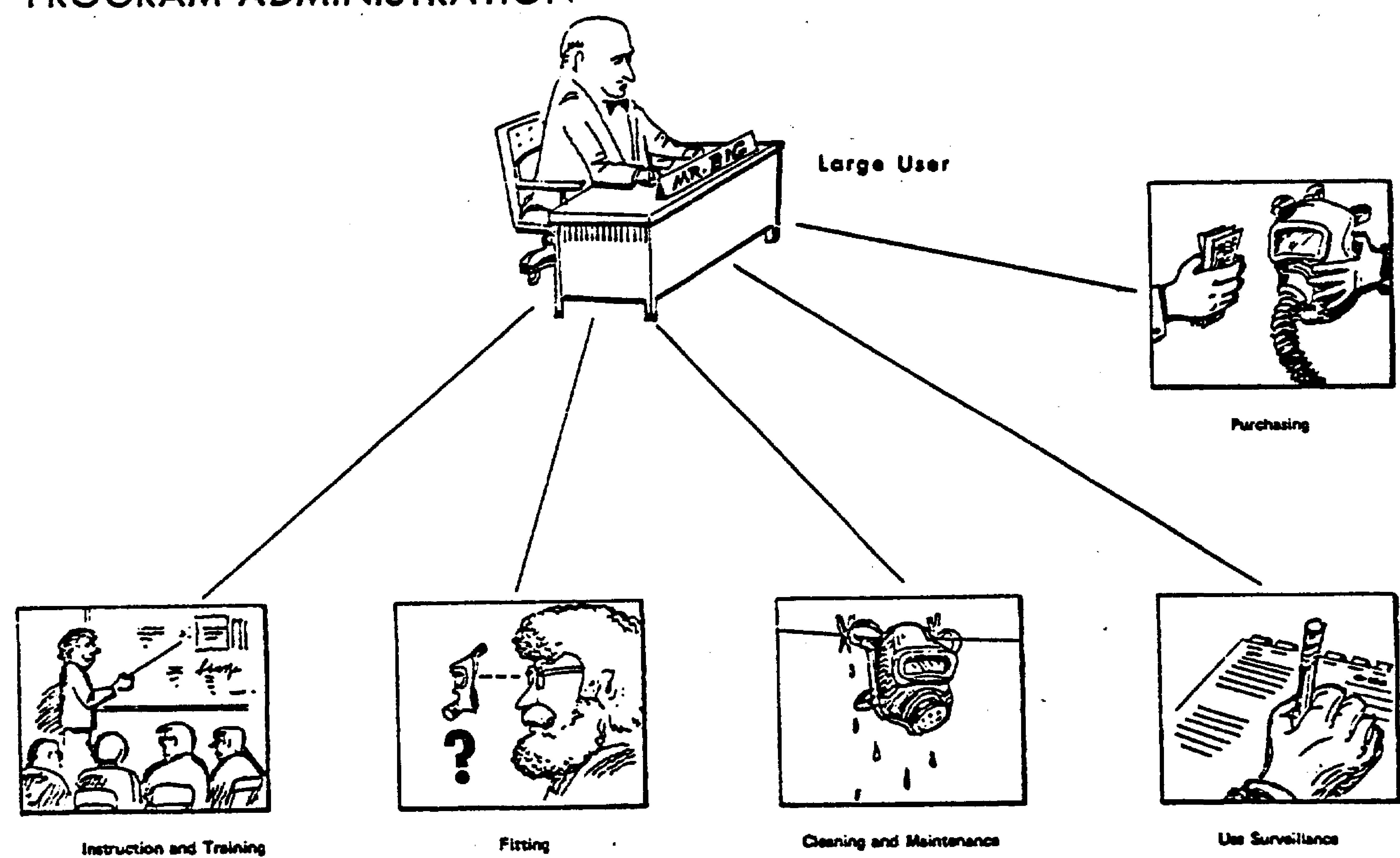
VII Medical Surveillance

*** (8)** Appropriate surveillance of work area conditions and degree of employee exposure or stress *shall* be maintained.

1910/134(b)(10)

*** (10)** Persons should not be assigned to tasks requiring use of respirators unless it has been determined that they are physically able to perform the work and use the equipment. The local physician *shall* determine what health and physical conditions are pertinent. The respirator user's medical status should be reviewed periodically (for instance, annually).

PROGRAM ADMINISTRATION



Program Evaluation

- * (9)** There *shall* be regular inspection and evaluation to determine the continued effectiveness of the program.

1910.134(e)(4)

(4) Respiratory protection is no better than the respirator in use, even though it is worn conscientiously. Frequent random inspections *shall* be conducted by a qualified individual to assure that respirators are properly selected, used, cleaned, and maintained.

1910.134(b)(10)

- * (10)** Persons should not be assigned to tasks requiring use of respirators unless it has been determined that they are physically able to perform the work and use the equipment. The local physician shall determine what health and physical conditions are pertinent. The respirator user's medical status should be reviewed periodically (for instance, annually).

1910.134(e)(5)(i)

(i) Every respirator wearer shall receive fitting instructions including demonstrations and practice in how the respirator should be worn, how to adjust it, and how to determine if it fits properly. Respirators *shall not* be worn when conditions prevent a good face seal. Such conditions may be a growth of beard, sideburns, a skull cap that projects under the facepiece, or temple pieces on glasses. Also, the absence of one or both dentures can seriously affect the fit of a facepiece. The worker's diligence in observing these factors *shall* be evaluated by periodic check. To assure proper protection, the facepiece fit *shall* be checked by the wearer each time he puts on the respirator. This may be done by following the manufacturer's facepiece fitting instructions.

Breathing Air Quality

1910.134(d)(1-4)

(d) *Air Quality.* (1) Compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration *shall* be of high purity. Oxygen *shall* meet the requirements of the United States Pharmacopoeia for medical or breathing oxygen. Breathing air *shall* meet at least the requirements of the specification for Grade D breathing air as described in Compressed Gas Association Commodity Specification G-7.1-1966. Compressed oxygen *shall not* be used in supplied-air respirators or in open circuit self-contained breathing apparatus that have previously used compressed air. Oxygen *must never* be used with air line respirators.

(2) Breathing air may be supplied to respirators from cylinders or air compressors.

(i) Cylinders *shall* be tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR Part 173).

(ii) The compressor for supplying air *shall* be equipped with necessary safety and standby devices. A breathing air-type compressor *shall* be used. Compressors *shall* be constructed and situated so as to avoid entry of contaminated air into the system and suitable in-line air purifying sorbent beds and filters installed to further assure breathing air quality. A receiver of sufficient capacity to enable the respirator wearer to escape from a contaminated atmosphere in event of compressor failure, and alarms to indicate compressor failure and overheating *shall* be installed in the system. If an oil-lubricated compressor is used, it *shall* have a high-temperature or carbon monoxide alarm or both. If only a high-temperature alarm is used, the air from the compressor *shall* be frequently tested for carbon monoxide to insure that it meets the specification in sub-paragraph (1) of this paragraph.

(3) Air line couplings *shall* be incompatible with outlets for other gas systems to prevent inadvertent servicing of air line respirators with nonrespirable gases or oxygen.

(4) Breathing gas container *shall* be marked in accordance with American National Standard Method of Marking Portable Compressed Gas Containers to Identify the Material Contained, Z48.1-1954; Federal Specification BB-A-1034A, June 21, 1968, Air, Compressed for Breathing Purposes; or Interim Federal Specification GG-B-00675b, April 27, 1965, Breathing Apparatus, Self-Contained.

Emergency Use

1910.134(e)

(3) Written procedures *shall* be prepared covering safe use of respirators in dangerous atmospheres that might be encountered in normal operations or in emergencies. Personnel *shall* be familiar with these procedures and the available respirators.

(i) In areas where the wearer, with failure of the respirator, could be overcome by a toxic or oxygen-deficient atmosphere, at least one additional man *shall* be present. Communications (visual, voice, or signal line) *shall* be maintained between both or all individuals present. Planning *shall* be such that one individual will be unaffected by any likely incident and have the proper rescue equipment to be able to assist the other(s) in case of emergency.

(ii) When self-contained breathing apparatus or hose masks with blowers are used in atmospheres immediately dangerous to life or health, standby men *must* be present with suitable rescue equipment.

(iii) Persons using air line respirators in atmospheres immediately hazardous to life or health *shall* be equipped with safety harnesses and safety lines for lifting or removing persons from hazardous atmospheres or other and equivalent provisions for the rescue of persons from hazardous atmospheres *shall* be used. A standby man or men with suitable self-contained breathing apparatus *shall* be at the nearest fresh air base for emergency rescue.

1910.134(f)(2)(i, ii)

(2)(i) All respirators *shall* be inspected routinely before and after each use. A respirator that is not routinely used but is kept ready for emergency use *shall* be inspected after each use and at least monthly to assure that it is in satisfactory working condition.

(ii) Self-contained breathing apparatus *shall* be inspected monthly. Air and oxygen cylinders *shall* be fully charged according to the manufacturer's instructions. It *shall* be determined that the regular and warning devices function properly.

1910.134(f)(2)(iv)

(iv) A record *shall* be kept of inspection dates and findings for respirators maintained for emergency use.

Special Problems

910.134(e)(5)(i-iii)

(i) Every respirator wearer *shall* receive fitting instructions including demonstrations and practice in how the respirator should be worn, how to adjust it, and how to determine if it fits properly. Respirators *shall not* be worn when conditions prevent a good face seal. Such conditions may be a growth of beard, sideburns, a skull cap that projects under the facepiece, or temple pieces on glasses. Also, the absence of one or both dentures can seriously affect the fit of a facepiece. The worker's diligence in observing these factors *shall* be evaluated by periodic check. To assure proper protection, the facepiece fit *shall* be checked by the wearer each time he puts on the respirators. This may be done by following the manufacturer's facepiece fitting instructions.

EMERGENCY ESCAPE & RESCUE

