

**VILLAGE OF BLOOMINGDALE  
RESPIRATORY PROTECTION PROGRAM**

**I. PURPOSE**

This program is to provide management guidance on the selection, use and maintenance of respirators, and employee medical/training requirements of the respiratory protection program in accordance with applicable regulations while providing a high degree of protection for employees exposed to potentially hazardous atmospheric conditions.

**II. SCOPE**

This program covers any employee using any type of respiratory protection, including but not limited to single use disposable, maintenance free respirators; air purifying respirators, and air supplying respirators on a mandatory or optional basis. This program does not pertain to maintenance-free disposable dust masks as these are not considered respirators.

The requirements of this program will therefore apply to the employees in the following job classifications who have potential of being assigned tasks requiring the use of a respirator.

Equipment Maintenance Supervisor	Street Maintenance Supervisor
Forester	Distribution Supervisor
Water Production Supervisor	Water Reclamation Supervisor
Crew Leaders	Engineering Technician
Equipment Maintenance Mechanic	Chemist
Water Systems Operator	Plant Mechanic II & I
Plant Operator II & I	Maintenance Worker II & I

This list is subject to change upon written approval by the Director of Public Works.

**III. APPLICABLE REGULATIONS**

The respiratory protection program shall be maintained to comply with all applicable state or federal regulations, including OSHA standard 29 CFR 1910.134 - Respiratory Protection.

**IV. RESPONSIBILITIES**

**A.** The Public Works Department (hereinafter referred to as 'the Department') is responsible for:

1. Administering the Department respiratory protection program, including evaluation of the work environment for potential hazards designation of appropriate respirator selection, and employee medical surveillance, training and

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fit-testing.

2. Insuring that any contractors, hired by the Department, using respiratory protection are complying with federal, state, and local regulations and policies.
3. Periodically auditing the use of respirators at each facility to insure compliance with established guidelines, procedures, and applicable regulations.

**B.** The Division Supervisors or Public Works Operations Coordinator (PWOC) are responsible for:

1. Insuring that respirator users under their supervision have been provided the proper medical surveillance, training, and fit-testing prior to using any type of respiratory protection, and that the appropriate respirator for the potential hazard is being properly worn. Initial fit testing may be completed by the manufacturer or by a qualified competent individual.
2. Being knowledgeable regarding which specific areas and tasks under their jurisdiction have been designated as requiring mandatory respiratory protection and the minimum number of qualified employees required to staff those requirements.
3. The enforcement of these mandatory requirements.

**C.** All personnel shall be responsible for:

1. Reporting to a Supervisor or PWOC any discrepancies or problems associated with the use of respirators and new conditions which may require investigation for the use of respiratory protection.
2. To use respiratory protection in accordance with prescribed procedures and training, guard against damage to respirators, and report any malfunction of the respirator to supervision.
3. Self fit-testing respirators each time a respirator is worn, using techniques demonstrated during the respirator training.
4. To remove facial hair, (Beard, sideburns, etc) as necessary to maintain a proper seal at all times.

**V. RESPIRATOR SELECTION**

**A.** Respirators selected for use shall be approved by the ANSI Z88.2-1980, National Institute of Occupational Safety and Health (NIOSH), or the Mine Safety and Health Administration (MSHA) and properly labeled or color coded per the requirements of OSHA 29 CFR 1910.134 (g).

**B.** Respirator selection shall be based on the potential hazard(s) to which the user may be exposed. The selection shall require consideration of:

1. Nature, extent-of, and adverse health effects of hazard or characteristics of

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hazardous operation

2. Air contaminant concentration in area which may be used to supply respirable air
  3. Time period for respirator use and activity level of user
  4. Physical characteristics and limitations of respirator types
  5. Respirator protection factors and respirator
- C.** Respirators selected for use shall be approved by the Supervisor or PWOC prior to purchase. Respirator purchase order requisitions shall be approved by Supervisor or PWOC.
- D.** The Department shall maintain a current list of all approved respirators being used in the facility. The listing shall include the manufacturers' make and model numbers of respirators.
- E.** Only manufacturer specified replacement parts shall be utilized for repair. Repair parts shall not be interchanged between various manufacturers' respirators.
- F.** Appendices I and II to this program may be used as guides for determining appropriate types of respiratory protection.

**VI. MEDICAL EVALUATION**

Prior to assignment to any position requiring respirator use, a medical evaluation of the employees ability to work while wearing a respirator will be necessary.

- A.** Employees shall not be provided or use respiratory protection without prior written certification stating the employee is capable of using respiratory protection.
- B.** Determination of medical certification for respirator use shall be made by a certified physician or other qualified medical personnel under the direction of a certified physician approved by the Village of Bloomingdale.
- C.** Parameters to be included in the medical evaluation shall be determined by the directing physician and include consideration of:
1. Make/model number of respirators under consideration for use
  2. Duration of respirator usage
  3. Activities which will be performed during respirator use
  4. Type of potential exposure hazard
- D.** Prior to the medical evaluation, the employee shall complete a "Medical Questionnaire - Respirator Use," Attachment AII, or equivalent facility Health Services Department designated form. Questionnaire responses shall be reviewed with the employee by qualified medical personnel at the time of respiratory medical evaluation.

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- E. Repeat medical evaluations or "Medical Questionnaire - Respirator Use" or equivalent shall be conducted for all respirator users on an annual basis or as determined by the direction of the Village of Bloomingdale's certified physician.
- F. Records of "Medical Questionnaire - Respirator Use," physician or qualified medical personnel comments, and other information pertaining to the respirator medical evaluation shall be maintained in the employee's medical file.

**VII. RESPIRATOR TRAINING**

- A. Prior to use of any respirator training in the use and limitations of respirators will be provided to all respirator users. Training shall be given on each type of respirator that the employee will use.
- B. The direct Supervisor of an employee wearing respiratory protection shall be knowledgeable in the proper use of the respirator and have received at least the amount of training as received by the employee.
- C. Respirator training shall be performed by a competent individual who is knowledgeable about the Village's respiratory protection program, requirements of applicable state and federal regulations, and shall include at least the following information:
  - 1. Instruction in nature, extent and effects of respiratory hazards.
  - 2. Discussion as to why a particular respirator is used.
  - 3. Discussion of respirator capabilities and limitations.
  - 4. Classroom and shop instruction (actual conditions) in recognizing and coping with emergencies.
  - 5. Training as may be required for special use
  - 6. Instruction in how to inspect, wear and remove the specific respirator
  - 7. Instruction in testing for leaks
  - 8. Instruction in how to recognize any potential problems with the respirator
  - 9. Explanation of the procedures for maintenance and storage of the respirator
  - 10. General provisions of OSHA 29 CFR 1910.134 and Respiratory Protection Program
- D. In addition to the initial training, refresher training shall be given to respirator wearers on an annual basis. Refresher training shall be a review of the elements presented in the initial training.

**VIII. FIT-TESTING**

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- A. Initial fit-testing shall be performed during employee respirator training for all types of respirators.
- B. Fit-testing shall include instruction on negative and positive pressure tests as appropriate for the specific respirator.
- C. Fit-test evaluation shall be made using recognized quantitative fit-testing procedures.
- D. An acceptable fit is achieved if the respirator wearer is unable to detect penetration of the test agent into the respirator.
- E. Self fit-testing shall be performed by the employee each time the respirator is worn, using the techniques demonstrated during the respirator training.
- F. Fit-testing shall include a series of exercises such as normal breathing, deep breathing, turning head from side to side, nodding head up and down, talking, or other activities that may simulate actual working conditions, to insure a proper seal at all times.
- G. Employees shall not use, or be fit-tested for, tight-fitting respirators that require a seal for effective performance when facial hair or other conditions prevent the seal. In addition to a beard, other conditions which may prevent a seal include absence of normally worn dentures, facial configuration, facial scars or eyewear that projects under the facepiece seal.
- H. Determination of the degree of facial hair and assessment of an adequate seal shall be made using Attachment AV as a guideline at the time of initial training/fit-testing and reviewed by departmental supervision on a continuing basis for compliance.
- I. Respirator users may be issued prescription spectacle kits if they are required to wear a full face respirator and use prescription glasses. The determining factor for the purchase of spectacle kits will be based on how often he/she must wear the respirator, what functions will he/she most likely have to perform with the respirator, and can the individual see to perform these tasks without spectacles. Judgement will be used in determining the purchase of spectacle kits. Wearing contact lenses in a contaminated atmosphere is not permitted with a respirator.
- J. A "Respirator Training and Fit-testing Verification Form", Attachment D., or equivalent designated form shall be completed following training and acceptable fit-testing of each respirator make/model.
- K. Records of respirator training shall be maintained by the Department. Retention of these records shall be in accordance with OSHA Standard 29 CFR 1910-20.

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- L. The Department is responsible for maintaining a current "Employee Respirator Eligibility Roster: Which shall be issued annually to Supervisor and respirator users. Notification to applicable departmental management of new respirator eligible employees shall be given immediately after the medical evaluation, training and fit-testing have been completed. The roster shall include the dates of the last medical evaluation, training, and fit-testing for each type of respirator.

**IX. ISSUANCE OF RESPIRATORS**

- A. Employees shall only be issued or have readily available respiratory protection which is known to provide adequate protection from the type and concentration of potential exposure.
- B. Issuance of respirators shall be controlled with verification, using the latest edition of the "Employee Respirator Eligibility Roster" Attachment DII to insure that the employee being issued a respirator has had an updated respiratory medical evaluation, training, and fit-testing for the specific respirator desired.
- C. The Village issues respirators for specific individual use only and also provides respirators used by more than one qualified person. Respirators only to be used by specific individuals are to be labeled with the individual name on them

**X. INSPECTION OF RESPIRATORS**

- A. The Village issues respirators to specific individuals and issues respirators used by more than one person. Individuals who are assigned their own respirator to use are responsible for cleaning, sanitizing, and inspecting their respirator. Respirators, used by more than one person shall be cleaned, sanitized, and inspected by designated individuals on a monthly basis. These respirators are also to be inspected by the user immediately before each use. This is to ensure that the respirator is in proper working condition. The following are guidelines for inspection of respirators.
- B. Single use, disposable, maintenance-free respirators are to be inspected by the respirator user prior to and after each use, for the following:
  - 1. Holes in the filter (obtain new disposable respirator)
  - 2. Straps for elasticity and deterioration (replace straps, contact manufacturer, or obtain new respirator)
  - 3. Metal nose clip for deterioration, if applicable (obtain new disposable respirator)
- C. Single use, disposable, maintenance-free respirators shall be properly discarded when damaged or unusable for any reason or when efficiency has been lost.
- D. Air purifying respirators (including quarter-mask, half-mask, full facepiece, and gas mask) used by more than one person are to be inspected monthly by a designated

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employee/s, before and after each use and/or as needed, and should be checked for:

1. Facepiece
  - a. Excessive dirt (clean all dirt from facepiece)
  - b. Cracks, tears, or holes (obtain new facepiece)
  - c. Distortion (allow facepiece to sit free from any constraints and see if distortion disappears--if not, obtain new facepiece)
  - d. Cracked, scratched, or loose-fitting lenses (contact respirator manufacturer to see if replacement is possible--otherwise, obtain new facepiece)
2. Headstraps
  - a. Breaks to tears (replace headstraps)
  - b. Loss of elasticity (replace headstraps)
  - c. broken or malfunctioning buckles or attachments (obtain new buckles)
  - d. Excessively worn serrations of the head harness that might allow the facepiece to slip (replace headstrap)
3. Inhalation and exhalation valves
  - a. Detergent residue, dust particles or dirt on valve or valve seat (clean residue with soap and water)
  - b. Creaks, tears, or distortion in the valve material or valve seat (contact manufacturer for instructions)
  - c. Missing or defective valve cover (obtain valve cover from manufacturer)
  - d. The filter elements
  - e. Proper filter for the hazard
  - f. Missing or worn gaskets (contact manufacturer for replacement)
  - g. Worn threads--both filter threads and facepiece threads (replace filter or facepiece whichever is applicable)
  - h. Deterioration of gas mask canister harness (replace harness)
  - i. Service life indicator, expiration date, or end-of-service date
4. Gas mask
  - a. Cracks or holes (replace tube)
  - b. Missing or loose hose clamps (obtain new connectors)
  - c. Service-life indicator on canister (or contact manufacturer to find out what indicates the end-of-service date for the canister)
  - d. Air supplying respirators are all to be inspected monthly by a designated employee/s and by the user before and after each use.
5. Air-supplying respirators
6. Hood, helmet, blouse, or full suit
  - a. Rips and torn seams (if unable to repair the tear adequately, replace)
  - b. Headgear suspensions (adjust properly for wearer)
  - c. Cracks or breaks in faceshield (replace faceshield)
  - d. Protective screen to see that it is intact and fits correctly over the faceshield, abrasive blasting hoods, and blouses (obtain new screen)
7. Air supply system

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- a. Breathing air quality
- b. Breaks or kinks in air supply hoses and end fitting attachment (replace hose and/or fitting)
- c. Tightness of connections
- d. Proper setting of regulators and valves (consult manufacturer's recommendations)
- e. Correct operation of air-purifying elements
- f. Proper operation of carbon monoxide alarms or high-temperature alarms
8. The facepiece, headstraps, valves, and breathing tube inspection check are the same as for the air-purifying respirators.
9. Replacement of worn or damaged respirators parts shall be made only with manufacturer-designated replacement parts.

**XI. CLEANING AND SANITIZING OF RESPIRATORS**

- A.** Each time an employee uses a respirator, it should be in a cleaned and sanitized position. Respirators to be used in a non-routine basis should be cleaned and sanitized after every use and as a part of the monthly inspection, as necessary. Cleaning procedures include:
1. Removing and dismantling of any facepiece replaceable parts
  2. Washing facepiece and associated parts (using a brush) in a warm soapy solution or commercially available respirator cleaning solution
  3. Rinsing facepiece and parts in a sanitizing solution
  4. Air drying
  5. Inspecting facepiece and parts prior to reassembly
  6. Covering respirator with a plastic bag or other clean storage container
- B.** If possible, detergents containing a bactericide should be used. Organic solvents should not be used, as they can deteriorate the elastomeric (rubber or silicone) facepiece. If these detergents are not available, a disinfectant may be necessary. Check with the manufacturer for disinfectants.
- C.** After cleaning and sanitizing, each respirator should be reassembled and inspected for proper working condition and repair or replacement of parts.

**XII. STORAGE OF RESPIRATORS**

- A.** Respirators should be stored to protect them from dust, sunlight, heat, extreme cold, excessive moisture, and damaging chemicals. Unprotected respirators can sustain damaged parts or facepiece distortion that make them ineffective.
- B.** Before being stored, a respirator should be carefully wiped with a damp cloth and dried. It should be stored without sharp folds or creases. It should never be hung by

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the elastic headband or put down in a position which will stretch the facepiece.

- C. Since heat, air, light, and oil cause rubber to deteriorate, respirators should be stored in a cool, dry place and protected from light and air as much as possible. Wood, fiber, or metal cases are provided with many respirators. Respirators should be sealed in clean plastic bags. Respirators should not be thrown into tool boxes or left on the benches where they may be exposed to dust and damaged by oil or other harmful materials.
- D. After cleaning and inspection, place respirators in individual, sealable plastic bags. Then store them in one layer with the facepiece and exhaustion valve in normal position. Respirators should not be stored in lockers unless they are protected from contamination, distortion and damage.

**XIII. RESPIRATORS FOR EMERGENCY USE**

- A. Possible emergency uses of respirators shall be anticipated and planned for; however, if potential hazard and concentration of contaminant cannot be determined prior to using a respirator in an emergency situation or in atmospheres suspected to be **immediately dangerous to life or health** (IDLH), qualified employees shall be issued self-contained breathing apparatus.
- B. Self-contained breathing apparatus are not to be used for escape purposes for employees who have not been medically evaluated or trained on its use. In addition, tight-fitting face pieces of self-contained breathing apparatus cannot be used at any time, including for escape, by individuals for facial hair which will not provide a tight seal.
- C. Entry to an IDLH atmosphere shall be subject to the Village Confined Space Program. At no time shall a single employee enter an IDLH atmosphere.
- D. Entry to a contaminated atmosphere shall be subject to the Village Confined Space Program.
- E. Respirators for emergency use shall be cleaned, inspected, and maintained so they are readily available and operational when needed.

**XIV. RECORDKEEPING**

- A. A listing of all manufacturer and respirator model numbers for respirators approved for use at each facility shall be maintained by the Public Works Department. (Utilities Distribution Supervisor/PWOC)

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- B.** Results of the completed "Medical Questionnaire-Respirator Use" shall be maintained in the employee's medical file and retained as required by OSHA 29 CFR 1910.120
  
- C.** A current copy of the "Employee Respirator Eligibility Roster" shall be maintained by the Public Works Department and published quarterly to Supervisors of respirator users. The roster shall include the date of the last respiratory medical evaluation, training, and fit-testing for each type of respirator.
  
- D.** Monthly inspection and/or repair records for self-contained breathing apparatus shall be maintained by the Public Works Department.
  
- E.** Copies of the written respiratory protection program, administrative guidelines, or other pertinent forms shall be retained on file in the Public Works Department.

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**ATTACHMENT A  
CLASSIFICATION OF RESPIRATORY HAZARDS**

**I. Particulate Contaminants**

- A. **Relatively Inert** - May cause discomfort and minor irritation (Examples: paper, cardboard, wood dust, gypsum, plaster board)
- B. **Pulmonary Fibrosis** Producing - cause modulation and fibrosis in lungs. (Examples: quartz, silica, asbestos, coal dust, diatomaceous earth)
- C. **Chemical Irritants** - produce irritation, inflammation and ulceration in upper respiratory tract, (Examples: caustics, lime, sodium hydroxide)
- D. **Systematic Poisons** - produce pathological reactions in - various systems of the body, (Examples: cadmium, lead).

**II. Gas and Vapor Contaminants**

- A. **Simple Asphyxiants** - physiologically inert substances that dilute oxygen in the air, (Examples: helium, methane, hydrogen, propane, carbon dioxide).
- B. **Chemical Asphyxiants**, - low concentrations interfere with oxygen supply in the blood, (Examples: carbon monoxide, cyanide)
- C. **Irritants** - corrosive in action, cause inflammation and irritation of parts of the respiratory system, (Examples: ammonia, hydrogen chloride, formaldehyde, chlorine).
- D. **Anesthetics** - cause loss of feeling and/or sensations; may injure body organs
- E. **Systematic Poisons** - damage organs in the body, (Examples: phosphine gas).

**III. Oxygen Deficiency**

Atmospheres of less than 19.5 percent oxygen, (Examples: confined or unventilated tanks and other enclosures).

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**ATTACHMENT B - RESPIRATOR SELECTION GUIDE**

**I. Air-Purifying, Particulate-Removing Filter Respirators**

These are generally called "dust", "mist", or "fume" respirators, and by a filtering action, remove particulate before they can be inhaled. High efficiency filters are available for dusts with a threshold limit value of less than 0.05 mg/m<sup>3</sup>.

- A. Maintenance-Free: Single-Use Respirators** are for individual use and are discarded after use, when damaged, or when breathing resistance becomes excessive. Generally, these respirators are approved for use against pneumoconiosis or fibrosis producing dusts.
- B. Replaceable Cartridge, Quarter and Half-mask:** Reusable air-purifying respirators are equipped with cartridges which are replaced when breathing becomes excessive. Quarter-mask covers the mouth and nose; the half-mask fits over the nose and under the chin. The half-mask usually provides a better facepiece-to-face seal.
- C. Replaceable Cartridge, Full Face:** Full facepiece respirators cover the face from the hairline to below the chin. This respirator provides additional protection to the face and gives better seal than half or quarter-masks. Type of protection provided is dependent on the type of filter used.
- D. Powered Air Purifying:** The powered air-purifying respirator (PAPR) uses a blower to pass contaminated air through an element that removes the contaminants and supplies the purified air to a respiratory inlet covering, which may be a facepiece, helmet or hood. A popular configuration consists of the air-purifying element(s) attached to a small blower worn on a belt. Limitations:
1. Air purifying respirators do not provide oxygen; cannot be worn in oxygen-deficient atmospheres
  2. Particulate-removing air-purifying respirators offer no protection against atmospheres containing contaminant gasses or vapors
  3. Performance of some filter materials is affected by open storage in very humid atmospheres
  4. Air flow resistance of a particulate-removing respirator filter increases as the quantity of particles it retains increases, thus increasing the breathing resistance
  5. Should not be used for abrasive blasting operations
  6. Power air-purifying respirators use constant flow through the air-purifying element reducing service life of elements compared to negative pressure respirator elements

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- E. Air-Purifying Chemical Cartridge/Canister Respirators for Gases/Vapors:** Vapor and gas-removing respirators use cartridges or canisters containing chemicals to trap or react with specific vapors and gases and remove them from the air breathed.
1. **Quarter, Half, and Full Facepiece:** Available for protection against single chemicals, such as ammonia or entire classes, such as organic vapors. Cartridge/canister label identifies that the cartridge/canister protects against, the maximum concentration in which the element can be used, and in some instances, the service life or expiration date of the element.
  2. **Powered Air Purifying:** Available for protection against a limited number of gases and vapors as specified by the air-purifying filter (see Appendix B, Section 1-D for further information). Limitations:
    - a. These respirators do not supply oxygen; cannot be used in oxygen deficient atmospheres
    - b. Cannot be used in atmospheres with contaminants with limited warning properties
    - c. Provide protection only from specific gases or vapors as per design; they are useless for other gases or vapors
    - d. Cannot be used in IDIE atmospheres, except for escape
- F. Atmosphere Supplying Respirators - Supplied Air:** Rather than removing the contaminant from the air, these respirators provide clean air from an independent source through an air supply line or hose. These respirators are grouped as either airline device, or hose masks with or without a blower.
1. **Airline Devices** use a stationary source of compressed air delivered through a high-pressure hose. They can be equipped with half or full-face masks, helmets, or hoods, or complete suit. They provide protection against particulate, gases, or vapors.
    - a. **Demand Airline Devices:** Air enters the facepiece only when the person inhales. During inhalation there is negative pressure in the mask, potentially causing the contaminant to enter the mask.
    - b. **Pressure Demand Airline Devices:** There is a continuous flow of air into the facepiece regardless of the demand of the user. The airflow into the mask creates a positive pressure, eliminating the potential of contaminant leakage into the mask.
    - c. **Continuous-Flow Airline Device:** A constant airflow is maintained at all times through an airflow control valve or orifice rather than a regulator. A positive pressure is maintained in the mask eliminating the potential of contaminant leakage into the mask. Limitations:
      - i. Cannot be used in IDIE atmospheres since user is dependent upon an

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air hose which if damaged leaves user with little or no protection

- ii. Trailing air supply hose restricts the user's mobility
- 2. Hose Masks supply air from an uncontaminated source through a large diameter hose and do not use compressed air or have a pressure regulating devices.
  - a. Hand or Motor Operated Air Blowers have a full facepiece and hose length can be up to 300 feet.
  - b. Without Blowers have a tight fitting full facepiece and hose length up to 75 feet.
  - c. Limitations:
    - i. Hose mask cannot be used in IDLH atmospheres
    - ii. Trailing air supply hose of user restricts mobility
    - iii. Without a blower are restricted to a maximum hose length of 75 feet
    - iv. Without a blower require the user to inhale against the resistance of air flow offered by the air hose

**G. Atmosphere Supplying Respirators - Self Contained Breathing Apparatus**

- 1. Closed Circuit SCBA: When using these respirators, air is rebreathed after exhaled carbon dioxide has been removed and the oxygen content restored by a compressed oxygen source or an oxygen-generated solid. As negative pressure is created in the facepiece, there is increased leakage potential.
- 2. Open Circuit SCBA: An open circuit SCBA exhausts the exhaled air to the atmosphere instead of recirculating it. A tank of compressed air carried on the back, supplies air via a regulator to the facepiece.
  - a. Demand SCBA: Air flows into the facepiece only when the person inhales; i.e., on "demand." This is due to the nature of the valves and pressure regulator. During inhalation, there is a negative pressure and potential of leakage.
  - b. Pressure Demand SCBA: This SCBA has a regulator and valve design which maintains a positive pressure in the facepiece at all times regardless of the "demand" of the user.
- 3. Combination Atmosphere Supplying Respirator: Supplied Air and SCBA: This respirator combines an airline respirator with an auxiliary air supply (usually compressed air) to protect against the possible failure of the primary air supply (the airline). These devices are used as extra escape protection from toxic atmospheres. Limitations:
  - i. air supply is limited to the amount in the cylinder and needs recharging or cylinder replacement
  - ii. respirators are bulky and heavy and often are unsuitable for strenuous activity
  - iii. short service life of the auxiliary air supply on the combination units permit only use for escape purposes

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ATTACHMENT C

**Alexian Brothers Corporate Health Services**

**Mandatory OSHA Respirator  
Medical Evaluation Questionnaire**

**Patient Name:** \_\_\_\_\_

Company Name: \_\_\_\_\_

Social Security Number: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

What type of respirator(s) will the employee be  
Wearing? \_\_\_\_\_

**In compliance with the revised OSHA Respiratory  
Protection Standard (1910.134)**

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OSHA RESPIRATOR MEDICAL EVALUATION QUESTIONNAIRE**

**To the employer:** Answers to questions in Section 1, and to question 9 in Section 2 of Part A, do not require a medical examination.

**To the employee:**

Can you read (circle one): Yes/No

Your employer must allow you to answer this questionnaire during normal working hours, or at a time and place that is convenient to you. To maintain your confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver or send this questionnaire to the health care professional who will review it.

**Part A. Section 1. (Mandatory)** The following information must be provided by every employee who has been selected to use any type of respirator (please print).

1. Today's date: \_\_\_\_\_

2. Your name: \_\_\_\_\_

3. Your age (to nearest year): \_\_\_\_\_

4. Sex (circle one): Male/Female

5. Your height: \_\_\_\_\_ ft. \_\_\_\_\_ in.

6. Your weight: \_\_\_\_\_ lbs.

7. Your job title: \_\_\_\_\_

8. A phone number where you can be reached by the health care professional who reviews this questionnaire (include the Area Code): \_\_\_\_\_

9. The best time to phone you at this number: \_\_\_\_\_

10. Has your employer told you how to contact the health care professional who will review this questionnaire (circle one): Yes/No

11. Check the type of respirator you will use (you can check more than one category):

a. \_\_\_\_\_ N, R, or P disposable respirator (filter-mask, non- cartridge type only).

b. \_\_\_\_\_ Other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus).

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12. Have you worn a respirator (circle one): Yes/No

If "yes," what type(s): \_\_\_\_\_  
\_\_\_\_\_

Part A. Section 2. (Mandatory) Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (please circle "yes" or "no").

1. Do you currently smoke tobacco, or have you smoked tobacco in the last month: Yes/No

2. Have you ever had any of the following conditions?

- Seizures (fits): Yes/No
- Diabetes (sugar disease): Yes/No
- Allergic reactions that interfere with your breathing: Yes/No
- Claustrophobia (fear of closed-in places): Yes/No
- Trouble smelling odors: Yes/No

3. Have you ever had any of the following pulmonary or lung problems?

- Asbestosis: Yes/No
- Asthma: Yes/No
- Chronic bronchitis: Yes/No
- Emphysema: Yes/No
- Pneumonia: Yes/No
- Tuberculosis: Yes/No
- Silicosis: Yes/No
- Pneumothorax (collapsed lung): Yes/No
- Lung cancer: Yes/No
- Broken ribs: Yes/No
- Any chest injuries or surgeries: Yes/No
- Any other lung problem that you've been told about: Yes/No

4. Do you currently have any of the following symptoms of pulmonary or lung illness?

- Shortness of breath: Yes/No
- Shortness of breath when walking fast on level ground or walking up a slight hill or incline: Yes/No
- Shortness of breath when walking with other people at an ordinary pace on level ground: Yes/No
- Have to stop for breath when walking at your own pace on level ground: Yes/No
- Shortness of breath when washing or dressing yourself: Yes/No
- Shortness of breath that interferes with your job: Yes/No
- Coughing that produces phlegm (thick sputum): Yes/No

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- Coughing that wakes you early in the morning: Yes/No
- Coughing that occurs mostly when you are lying down: Yes/No
- Coughing up blood in the last month: Yes/No
- Wheezing: Yes/No
- Wheezing that interferes with your job: Yes/No
- Chest pain when you breathe deeply: Yes/No
- Any other symptoms that you think may be related to lung problems: Yes/No

5. Have you ever had any of the following cardiovascular or heart problems?

- Heart attack: Yes/No
- Stroke: Yes/No
- Angina: Yes/No
- Heart failure: Yes/No
- Swelling in your legs or feet (not caused by walking): Yes/No
- Heart arrhythmia (heart beating irregularly): Yes/No
- High blood pressure: Yes/No
- Any other heart problem that you've been told about: Yes/No

6. Have you ever had any of the following cardiovascular or heart symptoms?

- Frequent pain or tightness in your chest: Yes/No
- Pain or tightness in your chest during physical activity: Yes/No
- Pain or tightness in your chest that interferes with your job: Yes/No
- In the past two years, have you noticed your heart skipping or missing a beat: Yes/No
- Heartburn or indigestion that is not related to eating: Yes/ No
- Any other symptoms that you think may be related to heart or circulation problems:  
Yes/No

7. Do you currently take medication for any of the following problems?

- Breathing or lung problems: Yes/No
- Heart trouble: Yes/No
- Blood pressure: Yes/No
- Seizures (fits): Yes/No

8. If you've used a respirator, have you ever had any of the following problems? (If you've never used a respirator, check the following space and go to question 9:)

- Eye irritation: Yes/No
- Skin allergies or rashes: Yes/No
- Anxiety: Yes/No
- General weakness or fatigue: Yes/No
- Any other problem that interferes with your use of a respirator: Yes/No

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9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire: Yes/No

Questions 10 to 15 below must be answered by every employee who has been selected to use either a full-facepiece respirator or a self-contained breathing apparatus (SCBA). For employees who have been selected to use other types of respirators, answering these questions is voluntary.

10. Have you ever lost vision in either eye (temporarily or permanently): Yes/No

11. Do you currently have any of the following vision problems?

- Wear contact lenses: Yes/No
- Wear glasses: Yes/No
- Color blind: Yes/No
- Any other eye or vision problem: Yes/No

12. Have you ever had an injury to your ears, including a broken ear drum: Yes/No

13. Do you currently have any of the following hearing problems?

- Difficulty hearing: Yes/No
- Wear a hearing aid: Yes/No
- Any other hearing or ear problem: Yes/No

14. Have you ever had a back injury: Yes/No

15. Do you currently have any of the following musculoskeletal problems?

- Weakness in any of your arms, hands, legs, or feet: Yes/No
- Back pain: Yes/No
- Difficulty fully moving your arms and legs: Yes/No
- Pain or stiffness when you lean forward or backward at the waist: Yes/No
- Difficulty fully moving your head up or down: Yes/No
- Difficulty fully moving your head side to side: Yes/No
- Difficulty bending at your knees: Yes/No
- Difficulty squatting to the ground: Yes/No
- Climbing a flight of stairs or a ladder carrying more than 25 lbs: Yes/No
- Any other muscle or skeletal problem that interferes with using a respirator: Yes/No

Part B Any of the following questions, and other questions not listed, may be added to the questionnaire at the discretion of the health care professional who will review the questionnaire.

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1. In your present job, are you working at high altitudes (over 5,000 feet) or in a place that has lower than normal amounts of oxygen: Yes/No

If "yes," do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you're working under these conditions: Yes/No

2. At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (e.g., gases, fumes, or dust), or have you come into skin contact with hazardous chemicals: Yes/No

If "yes," name the chemicals if you know them: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Have you ever worked with any of the materials, or under any of the conditions, listed below:

- Asbestos: Yes/No
- Silica (e.g., in sandblasting): Yes/No
- Tungsten/cobalt (e.g., grinding or welding this material): Yes/No
- Beryllium: Yes/No
- Aluminum: Yes/No
- Coal (for example, mining): Yes/No
- Iron: Yes/No
- Tin: Yes/No
- Dusty environments: Yes/No
- Any other hazardous exposures: Yes/No

If "yes," describe these exposures: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. List any second jobs or side businesses you have: \_\_\_\_\_  
\_\_\_\_\_

5. List your previous occupations: \_\_\_\_\_  
\_\_\_\_\_

6. List your current and previous hobbies: \_\_\_\_\_  
\_\_\_\_\_

7. Have you been in the military services? Yes/No

If "yes," were you exposed to biological or chemical agents (either in training or combat):

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Yes/No

8. Have you ever worked on a HAZMAT team? Yes/No

9. Other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire, are you taking any other medications for any reason (including over-the-counter medications): Yes/No

If "yes," name the medications if you know them: \_\_\_\_\_

10. Will you be using any of the following items with your respirator(s)?

- HEPA Filters: Yes/No
- Canisters (for example, gas masks): Yes/No
- Cartridges: Yes/No

11. How often are you expected to use the respirator(s) (circle "yes" or "no" for all answers that apply to you)?:

- Escape only (no rescue): Yes/No
- Emergency rescue only: Yes/No
- Less than 5 hours per week: Yes/No
- Less than 2 hours per day: Yes/No
- 2 to 4 hours per day: Yes/No
- Over 4 hours per day: Yes/No

12. During the period you are using the respirator(s), is your work effort:

a) Light (less than 200 kcal per hour): (Examples of a light work effort are sitting while writing, typing, drafting, or performing light assembly work; or standing while operating a drill press (1-3 lbs.) or controlling machines). Yes/No

- If "yes," how long does this period last during the average shift: \_\_\_\_\_ hrs. \_\_\_\_\_ mins.

b) Moderate (200 to 350 kcal per hour): (Examples of moderate work effort are sitting while nailing or filing; driving a truck or bus in urban traffic; standing while drilling, nailing, performing assembly work, or transferring a moderate load (about 35 lbs.) at trunk level; walking on a level surface about 2 mph or down a 5-degree grade about 3 mph; or pushing a wheelbarrow with a heavy load (about 100 lbs.) on a level surface.) Yes/No

- If "yes," how long does this period last during the average shift: \_\_\_\_\_ hrs. \_\_\_\_\_ mins.

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- c) Heavy (above 350 kcal per hour): (Examples of heavy work are lifting a heavy load (about 50 lbs.) from the floor to your waist or shoulder; working on a loading dock; shoveling; standing while bricklaying or chipping castings; walking up an 8-degree grade about 2 mph; climbing stairs with a heavy load (about 50 lbs.). Yes/No
- If "yes," how long does this period last during the average shift: \_\_\_\_\_ hrs. \_\_\_\_\_ mins.

13. Will you be wearing protective clothing and/or equipment (other than the respirator) when you're using your respirator: Yes/No

If "yes," describe this protective clothing and/or equipment: \_\_\_\_\_  
\_\_\_\_\_

14. Will you be working under hot conditions (temperature exceeding 77 deg. F): Yes/No

15. Will you be working under humid conditions: Yes/No

16. Describe the work you'll be doing while you're using your respirator(s):  
\_\_\_\_\_  
\_\_\_\_\_

17. Describe any special or hazardous conditions you might encounter when you're using your respirator(s) (for example, confined spaces, life-threatening gases):  
\_\_\_\_\_  
\_\_\_\_\_

18. Provide the following information, if you know it, for each toxic substance that you'll be exposed to when you're using your respirator(s):

- a) Name of the first toxic substance: \_\_\_\_\_
- Estimated maximum exposure level per shift \_\_\_\_\_
  - Duration of exposure per shift: \_\_\_\_\_
- b) Name of the second toxic substance: \_\_\_\_\_
- Estimated maximum exposure level per shift \_\_\_\_\_
  - Duration of exposure per shift: \_\_\_\_\_

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- c) Name of the third toxic substance: \_\_\_\_\_
- Estimated maximum exposure level per shift: \_\_\_\_\_
  - Duration of exposure per shift \_\_\_\_\_

- d) The name of any other toxic substances that you'll be exposed to while using your respirator: \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

19. Describe any special responsibilities you'll have while using your respirator(s) that may affect the safety and well-being of others (for example, rescue, security):

\_\_\_\_\_

\_\_\_\_\_

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**ATTACHMENT D  
RESPIRATOR TRAINING AND FIT-TESTING VERIFICATION FORM**

I, \_\_\_\_\_, (Employee Name - Printed), \_\_\_\_\_ (Social Security No.)  
have been instructed and trained in the (MBC ID No.) \_\_\_\_\_, proper way to:

1. Fit my \_\_\_\_\_, respirator.  
(Manufacturer's Name and Model Number)
  
2. Test for a proper initial seal, using:  
  
\_\_\_\_\_ Saccharin/nebulizer  
\_\_\_\_\_ Isoamyl Acetate  
\_\_\_\_\_ Irritant Smoke  
\_\_\_\_\_ Other:
  
3. Test for a proper seal before and during each use, using negative and/or positive pressure.

I understand that when the respirator becomes contaminated or has lost its efficiency, I will discard it and obtain a new one (if the respirator is a maintenance-free respirator), or properly clean, sanitize and replace filter cartridges as appropriate.

I understand that I am entitled to use this respirator only after a respiratory medical evaluation, training and fit-testing, and that I will not obtain or transfer respirators for individuals other than myself.

I also understand that facial hair interferes with the proper face seal of a respirator and that I will not wear a respirator if I am unable to obtain a proper fit.

Employee's Signature: \_\_\_\_\_

Date of Training and Fit-Testing: \_\_\_\_\_

Trainer's Signature: \_\_\_\_\_

Date of Medical Evaluation: \_\_\_\_\_

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**ATTACHMENT E – OSHA STANDARDS**

Wed Oct 18, 1995  
OSHA Regulations (Standards)

Part Number: 1910

Standard Number: 1910.134

Title: Respiratory protection

(a) Permissible practice.

(1) In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to the following requirements.

(2) Respirators shall be provided by the employer when such equipment is necessary to protect the health of the employee. The employer shall provide the respirators which are applicable and suitable for the purpose intended. The employer shall be responsible for the establishment and maintenance of a respiratory protective program which shall include the requirements outlined in paragraph (b) of this section.

(3) The employee shall use the provided respiratory protection in accordance with instructions and training received.

(b) Requirements for a minimal acceptable program.

(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.

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

(4) [Reserved]

(5) Respirators shall be regularly cleaned and disinfected. Those used by more than one

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worker shall be thoroughly cleaned and disinfected after each use.

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

(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.

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

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

(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).

(11) Respirators shall be selected from among those jointly approved by the Mine Safety and Health Administration and the National Institute for Occupational Safety and Health under the provisions of 30 CFR part 11.

(c) Selection of respirators. Proper selection of respirators shall be made according to the guidance of American National Standard Practices for Respiratory Protection Z88.2-1969.

(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 178).

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(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 specifications in paragraph (d) (1) of this section.

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

(4) Breathing gas containers 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 Purpose; or Interim Federal Specification GG-B00675b, April 27, 1965, Breathing Apparatus, Self-Contained.

(e) Use of respirators.

(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.

(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.

(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.

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(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.

(4) Respiratory protection is no better than the respirator in use, even though it is worn conscientiously. Frequent random inspections shall be properly selected, used, cleaned, and maintained.

(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 face-piece-to-face seal, wear it in normal air for a long familiarity period, and, finally, to wear it in a test atmosphere.

(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 of 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.

(ii) Providing respiratory protection for individuals wearing corrective glasses is a serious problem. A proper seal cannot be established if the temple bars of eye glasses extend through the sealing edge of the full facepiece. As a temporary measure, glasses with short temple bars or without temple bars may be taped to the wearers head. Wearing of contact lenses in contaminated atmosphere with a respirator shall not be allowed. Systems have been developed for mounting corrective lenses inside full facepieces. When a workman must wear corrective lenses as part of the facepiece, the facepiece and lenses shall be fitted by qualified individuals to provide good vision, comfort, and a gas-tight seal.

(iii) If corrective spectacles or goggles are required, they shall be worn so as not to affect the fit of the facepiece. Proper selection of equipment will minimize or avoid

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this problem.

(f) Maintenance and care of respirators.

(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.

(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 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. 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 manufacturer's recommendations. Reducing or admission valves or regulators shall be returned to the manufacturer or to a trained technician for adjustment or repair.

(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.

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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.

(g) Identifications of gas masks canisters.

(1) The primary means of identifying a gas mask canister shall be by means of properly worded labels. The secondary means of identifying a gas mask canister shall be by a color code.

(2) All who issue or use gas masks falling within the scope of this section shall see that all gas masks canisters purchased or used by them are properly labeled and colored in accordance with these requirements before they are placed in service and that the labels and colors are properly maintained at all times thereafter until the canisters have completely served their purpose.

(3) On each canister shall appear in bold letters the following:

(i) -  
  
Canister for  
(Name for atmospheric contaminant)

or

Type N Gas Mask Canister

1910.134 (g) (3) (ii)

(ii) In addition, essentially the following working shall appear beneath the appropriate phrase on the canister label: "For respiratory protection in atmospheres containing not more than \_\_\_\_\_ percent by volume of \_\_\_\_\_".

(Name of atmospheric contaminant)

(4) Canisters having a special high-efficiency filter for protection against radionuclides and

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other highly toxic particulates shall be labeled with a statement of the type and degree of protection afforded by the filter. The label shall be affixed to the neck end of, or to the gray stripe which is around and near the top of, the canister. The degree of protection shall be marked as the percent of penetration of the canister by a 03.-micron-diameter dioctyl phthalate (DOP) smoke at a flow rate of 85 liters per minute.

(5) Each canister shall have a label warning that gas masks should be used only in atmospheres containing sufficient oxygen to support life (at least 16 percent by volume), since gas mask canisters are only designed to neutralize or remove contaminants from the air.

(6) Each gas mask canister shall be painted a distinctive color or combination of colors indicated in Table I-1. All colors used shall be such that they are clearly identifiable by the user and clearly distinguishable from one another. The color coating used shall offer a high degree of resistance to chipping, scaling, peeling, blistering, fading, and the effects of the ordinary atmospheres to which they may be exposed under normal conditions of storage and use. Appropriately colored pressure sensitive tape may be used for the stripes.

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TABLE I-1**

Atmospheric contaminants to be protected against	Colors assigned (1)
Acid gases.....	White
Hydrocyanic acid gas.....	White with 1/2 - inch green stripe completely around the canister near the bottom
Chlorine gas.....	White with 1/2 - inch yellow stripe completely around the canister near the bottom Black
Organic vapors.....	Green
Ammonia gas.....	Green with 1/2 - inch white stripe completely around the canister near the bottom
Acid gases and ammonia gases..	Blue
Carbon Monoxide.....	Yellow
Acid gases and organic vapors.	Yellow with 1/2 - inch blue stripe completely around the canister near the bottom
Hydrocyanic acid gas and chloropicrin vapor.....	Brown
Acid gases, organic vapors, and ammonia gases.....	Purple (Magenta)
Radioactive materials, excepting tritium and noble gases.....	Canister color for contaminant, as designated above, with 1/2 - inch gray stripe completely around the canister near the top.
Particulates (dusts, fumes, mists, fogs, or smokes) in combination with any of the above gases or vapors.	Red with 1/2 - inch gray stripe completely around the canister near the top.
All of the above atmospheric contaminants.....	

Foot note (1) Gray shall not be assigned as a main color for a canister designed to remove acids or vapors

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ATTACHMENT F**

<b>RESPIRATOR TYPE</b>	<b>MANUFACTURER MAKE</b>	<b>MODEL #</b>	<b>STORAGE LOCATION</b>	<b>DATE PURCHASED</b>	<b>PERSON RESPONSIBLE FOR MAINTENANCE AND CLEANING</b>	<b>DIVISION</b>
SCBA/30 min.	MSA	SCBA 30	Winston Pump Station	1991	Pat Maranto	Water Production
Ultralite II	MSA	401	Station #8	?	Pat Maranto	Water Production
SCBA/30 min.	MSA	SCBA 30	Eastside Pump Station	1992	Pat Maranto	Water Production
SCBA 15 min. Full Face	Luxfer	Scott SKA-PAK	WRF - Maint. Bldg.	1982	Shirley Burger	Water Reclamation Facility I.D. #00235
SCBA Full Face	MSA	SCBA A729/Fiberglass/ Tank Model #5- 447-1	WRF - Maint. Bldg.	1994	Shirley Burger	Water Reclamation Facility I.D. #00233
SCBA Full Face	MSA	SCBA Metal/Tank Model #7-448-1	WRF - Maint. Bldg.	1993	Shirley Burger	Water Reclamation Facility

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SCBA Full Face Medium Mask	MSA	Ultralite Tank Model #7-448-1/#7-212-4	WRF - Maint. Bldg.	1993	Shirley Burger	Water Reclamation Facility
SCBA	Luxfer	Scott WA-39491	WRF - Maint. Bldg.	1992	Shirley Burger	Water Reclamation Facility
(2E) SCBA 15 Min.	Scott	SKA-Pak	Storage Garage, Tool Room, Ready Room		Rob Blum	Distribution
(1E) SCBA 30 Min.	MSA	#401	Storage Garage, Tool Room, Ready Room		Rob Blum	Distribution
(2E) Tank/Regulation 90 Min.			Truck #392/492	1992	Rob Blum	Distribution