

# **Respiratory Protection Program**

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## **11.1 PURPOSE**

This program is designed to help reduce employee exposure to occupational contaminants such as dust, fumes, mists, gases, vapors, microorganisms, and radionuclides. When feasible, exposure to contaminants will be eliminated by either engineering controls or administrative controls. When effective engineering controls or substitution are not feasible, use of personal protective respiratory equipment may be required. The purpose of this program is to determine the following:

- Which respiratory protection is needed
- Which respirators are needed
- Which employees are required to wear respiratory protection
- How respirators are to be used in a correct and safe manner

## **11.2 GENERAL**

In the Respiratory Protection Program, hazard assessment and selection of proper respiratory PPE (personal protective equipment) is conducted in the same manner as for other types of PPE. 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 will be to prevent atmospheric contamination. This will 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 and/or administrative controls are not feasible, or while they are being instituted, appropriate respirators will be used. References: OSHA Standards Respiratory Protection (29CFR 1910.134)

## **11.3 RESPONSIBILITIES**

All employees will follow the requirements of the Respiratory Protection Program.

### **11.3.1 Management will:**

- Implement the requirements of this program
- Provide a selection of respirators as required
- Enforce all provisions of this program
- Appoint a designated individual to conduct the Respiratory Protection Program

### **11.3.2 Program Administrator will:**

- Review sanitation/storage procedures
- Ensure respirators are properly stored, inspected and maintained.
- Monitor compliance for this program
- Provide training for affected employees
- Review compliance and ensure monthly inspection of all respirators.
- Provide respirator fit testing

### **11.3.3 Designated Occupational Health Provider will:**

- Conduct the medical aspects of the program

### **11.3.4 Supervisors will:**

- Ensure employees have knowledge of the respiratory protection requirements of work areas and work tasks
- Monitor the proper use and care of respirators
- Implement a cleaning and inspection program
- Enforce and monitor employee compliance

### **11.3.5 Employees have the responsibility to:**

- Be aware of respiratory protection requirements for their work area and tasks

- Follow aspects of the plan

#### **11.4 PROGRAM ADMINISTRATOR**

T.A. Woods Company will designate a program administrator, who is qualified by appropriate training or experience that is commensurate with the complexity of the program, to administer or oversee the Respiratory Protection Program and conduct the required evaluations of program effectiveness.

#### **11.5 VOLUNTARY USE OF RESPIRATORS**

OSHA requires that voluntary use of respirators, when not required by T.A. Woods Company must be controlled as strictly as under required circumstances. To prevent violations of the respiratory protection standard, employees are not allowed to voluntarily use their own or company-supplied respirators. Exception: employees whose only use of respirators involves the use of filtering (non-sealing) face pieces such as dusk masks. See 29 CFR 1910.134, Appendix D. Exhibit 11E

#### **11.6 PROGRAM EVALUATION**

11.6.1 Evaluations of the workplace are necessary to ensure that the written Respiratory Protection Program is being properly implemented. This includes consulting with employees to ensure that they are using the respirators properly. Evaluations will be conducted as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.

11.6.2 Program evaluation will include discussions with employees required to use respirators to assess the employees' views on program effectiveness and to identify any problems. Problems identified during this assessment will be corrected immediately. Factors to assess include, but are not limited to:

- Respirator fit (including the ability to use the respirator without interfering with effective workplace performance)
- Appropriate respirator selection for the hazards to which the employee is exposed.
- Proper respirator use and maintenance

#### **11.7 RECORD KEEPING**

T.A. Woods Company will maintain all information regarding medical evaluations, fit testing, and the respirator program. This information will assist in auditing the adequacy of the program and will provide a record for compliance inspections.

## **11.8 TRAINING AND INFORMATION**

Employees must receive thorough, pertinent and easily understandable training annually if subject to wearing respirators (more frequently if necessary). Training must be provided prior to use of the respirator. Trained employees must successfully demonstrate their knowledge of the following:

- 1) Why respirators are needed and how poor fits, maintenance or incorrect usage compromise the effectiveness.
- 2) The limitations and capabilities of the respirator.
- 3) Effective use in emergency situations, including respirator malfunctions.
- 4) How to inspect the respirator and seals.
- 5) How to put the respirator on correctly and check its fit.
- 6) Procedures for proper maintenance and storage of the respirator.
- 7) How to recognize medical signs and symptoms that would preclude the effective use of respirators.
- 8) General requirements of this program

Training will consist of classroom instruction, fit testing, and hands-on respirator training.

## **11.9 RETRAINING**

Retraining will be conducted annually, or

- When the workplace or the hazards change substantially
- If and when an employee seems to lack the understanding and skill
- When any other situation arises in which retraining appears necessary to ensure safe respirator use

## **11.10 SAFETY PROCEDURES FOR BASIC RESPIRATORY PROTECTION**

- 11.10.1 Only authorized and trained employees may use respirators. An employee may only use the respirator he/she has been trained on and properly fit tested for.
- 11.10.2 Per 29CFR 1910.134, only physically qualified employees may be trained and authorized to use respirators. Certification by a qualified medical provider will be required and maintained.
- 11.10.3 All changes to an employee's health or physical characteristics must be reported to the pertinent medical authority providing certification.

- 11.10.4 Only the proper prescribed respirator or SCBA (self contained breathing apparatus) may be used for the job or work environment. Air-purifying respirators may be worn in the work environments where oxygen levels are 19.5 percent to 23.5 percent and when the appropriate filter/cartridge for the known hazardous substance is used. SCBAs will be worn in deficient and oxygen rich environments at levels below 19.5 percent and above 23.5 percent.
- 11.10.5 Employees working in environments where a sudden release of a hazardous substance is likely will wear an appropriate respirator for that hazardous substance.
- 11.10.6 Only SCBAs will be used in oxygen-deficient environments, environments with unknown hazardous substances or unknown quantities of known hazardous substances of environments determined to be Immediately Dangerous to Life and Health (IDLH).
- 11.10.7 Employees with respirators assigned will be responsible for their sanitation, proper storage and security. Respirators damaged by normal wear will be repaired or replaced by the company when returned.
- 11.10.8 Respirators used in routine situations will be inspected before each use and during cleaning.
- 11.10.9 All respirators will be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture and damaging chemicals. If packed, they will be protected against deformation of the face piece and exhalation valve.
- 11.10.10 All SCBA entries must be performed using the “buddy system” with someone in constant voice, visual or signal line communication. Confined Space Entry and Emergency Response Procedures, where applicable, must be followed.
- 11.10.11 Management and supervisors will oversee jobs and workplace conditions as well as employee exposures to ensure proper procedures and provide the necessary protective equipment.

## **11.11 SELECTION OF RESPIRATORY EQUIPMENT**

Each subject work area and associated work tasks will be evaluated the specific respiratory hazards to which their workers are exposed, and base their respirator selection on these factors. Considerations will include estimates of the employee’s exposure to the respiratory hazard, and identification of the contaminant’s chemical state and physical form. Respirators chosen must be NIOSH-certified and must be used in compliance with that certification.

### 11.1.1 Evaluation of Potential Hazards

- Operations and processes will be monitored for potential respiratory hazards
- Sampling equipment such as gas monitors may be used to sample air quality. Decisions regarding the use of respiratory protection may be based upon these results, by reasonable and conservative estimate or the hazards, or historical data.
- Respiratory protection is mandatory in any work area that has the potential to create an environment where atmospheric contamination levels exceed OSHA permissible exposure limits (PEL) for the specific contaminant.

Respiratory protection is always required to be worn in accordance with 29CFR 1926.1101 in any area where workers' tasks may disturb known or potential asbestos-containing material.

### 11.1.2 Types of Respirators

- Air-purifying respirators clean the contaminated atmosphere through the use of filters, absorbents, or chemicals. Air purifying respirators can only be used when there is sufficient oxygen to sustain life and the air contaminant level is within specified limitations of the respiratory.
- Mechanical-filter, air-purifying respirators provide protection against airborne particulate matter including dusts, mists, metal fumes, smokes, and microorganisms, but do not provide protection against gases, vapors, or oxygen deficiencies.
- Chemical-cartridge air-purifying respirators provide protection against certain gases and vapors by using various chemical filters to purify inhaled air.
- Atmosphere or air-supplying respirators provide breathable air from a source of air which is independent from the ambient atmosphere. There are three classes of atmosphere-supplying respirators:
  - Supplied-air respirators
  - Self contained breathing apparatuses (SCBA)
  - Combination SCBA and supplied air respirators

### 11.1.3 Respirators for non-IDLH atmospheres:

Respirators selected for non-IDLH atmospheres will be adequate to protect the health of the employee and ensure compliance with all other OSHA statutory and regulatory requirements, under routine and reasonably foreseeable emergency situations. Respirators selected should be appropriate for the chemical state and physical form of the contaminant.

## 11.12 IDENTIFICATION OF FILTERS AND CARTRIDGES

- ### 11.12.1
- All filters and cartridges will be labeled and color-coded with the NIOSH-approved labels. A change out schedule will be developed to ensure these elements of the respirators remain effective.

- 11.12.2 Each filter and canister will be equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant.
- 11.12.3 If there is no ESLI appropriate for conditions, a change out schedule will be developed based on objective data to ensure that the canisters and cartridges are changed before the end of their service life.
- 11.12.4 A stock of spare filters and cartridges will be maintained to allow for an immediate change when required or desired by an employee.
- 11.12.5 Cartridges will be changed based on the most limiting factor below:
- Prior to expiration date.
  - Manufacturer's recommendations for use and environment.
  - After each use.
  - When requested by employee.
  - When contaminate odor is detected.
  - When restriction to air flow has occurred as evidenced by increased effort to breathe normally.
- 11.12.6 Cartridges will remain in their original sealed packages until needed for immediate use.
- 11.12.7 Filters will be changed based on the most limiting factor below:
- Prior to expiration date.
  - Manufacturer's recommendations for the specific use and environment.
  - When requested by employee.
  - When contaminant odor is detected.
  - When restriction to air flow has occurred as evidenced by increased effort to breathe normally.
  - When discoloring of the filter media is evident.
- 11.12.8 Filters will remain in their original sealed package until needed for immediate use.
- 11.12.9 Filter classification will be marked on the filter or filter package:
- N-Series: No Oil Resistant  
Approved for non-oil particulate contaminants  
Examples: dust, fumes, mists not containing oil
  - R-Series: Oil Resistant  
Approved for all particulate contaminants, including oil  
Examples: dusts, mists, fumes  
Time restriction of 8 hours when oil is present
  - P-Series: Oil Proof  
Approved for all particulate contaminants including oil

Examples: dusts, fumes, mists  
See Manufacturer's time use restrictions on packaging

Colors and usage:

- Purple (magenta) -particulates such as dusts, mists, fumes, asbestos
- White – acid gas
- Black – organic vapor
- White with green strip – HCl
- Yellow – acid gases and organic vapor
- Green – ammonia
- Blue – carbon monoxide

### 11.13 MEDICAL EVALUATION

- 11.13.1 T.A. Woods Company will provide a medical evaluation to determine the employee's ability to use a respirator, before the employee is fit tested or required to use a respirator in the workplace. T.A. Woods Company may discontinue an employee's medical evaluation when the employee is no longer required to use a respirator.
- 11.13.2 Medical Evaluation Procedures. The company's corporate medical provider or other licensed health care professional will be identified to perform medical evaluations using a medical questionnaire or an initial medical examination that obtains the same information as the medical questionnaire.
- 11.13.3 Follow-Up Medical Evaluations. T.A. Woods Company will ensure that a follow-up medical examination is provided for an employee who gives a positive response to any question showing potential health concerns or whose initial medical examination demonstrates the need for a follow-up medical examination. The follow-up medical examination will include any medical tests, consultations, or diagnostic procedures that the physician deems necessary to make a final determination.
- 11.13.4 Administration of the Medical Questionnaire and Examinations. The questionnaire will be administered in a manner that ensures that the employee understands its content. T.A. Woods Company will provide the employee with an opportunity to discuss the questionnaire and examination results with the medical provider
- 11.13.5 Supplemental Information for the Medical Provider
- The type and weight of the respirator to be used by the employee
  - The duration and frequency of respirator use (including use for rescue and escape)
  - The expected physical work effort



- Additional protective clothing and equipment worn
- Temperature and humidity extremes that may be encountered
- Any supplemental information provided previously to the medical provider regarding an employee need not be provided for a subsequent medical evaluation if the information and the medical provider remain the same.
- A copy of this Respiratory Protection Program and a copy of 29CFR1910.134.

11.13.6 Medical Determination. In determining the employee's ability to use a respirator, T.A. Woods Company will obtain from the medical provider a written recommendation regarding the employee's ability to use the respirator. The recommendation will provide only the following information:

- Any limitations on respirator use related to the medical condition of the employee or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator.
- The need, if any, for follow-up medical evaluations.
- A statement that the medical provider has provided the employee with a copy of written recommendation.
- If the respirator is a negative pressure respirator and the medical provider finds a medical condition that may place the employee's health at increased risk if the respirator is used, T.A. Woods Company will provide an APR if the physician's medical evaluation finds that the employee can use such a respirator. If a subsequent medical evaluation finds that the employee is medically able to use a negative pressure respirator then T. A. Woods Company is no longer required to provide an APR.

11.13.7 Additional Medical Evaluations. At a minimum, T.A. Woods Company will provide additional medical evaluations that comply with the requirements of this section if;

- An employee reports medical signs or symptoms that are related to ability to use a respirator.
- A medical provider, supervisor, or the respirator program administrator informs the company personnel that an employee needs to be re-evaluated.
- A change occurs in workplace conditions (physical work effort, protective clothing, temperature, etc.) that may result in a substantial increase in the physiological burden placed on an employee.

## 11.14 RESPIRATOR FIT TESTING

11.14.1 Before an employee is required to use any respirator with a negative or positive tight-fitting face piece, the employee must be fit tested with the same make, model and size of respirator that will be used. T.A. Woods Company

will ensure that an employee using a tight-fitting face piece respirator is fit tested prior to initial use of the respirator, whenever a different respirator face piece is used, and at least annually thereafter.

- 11.14.2 T.A. Woods Company will establish a record of the qualitative and quantitative fit tests administered to employees, including:
- The name or identification of the employee tested.
  - The type of fit test performed.
  - Specific make, model, style and size of respirator tested.
  - Date of test.
  - Pass/fail results for qualitative fit tests (QLFTs) or the fit factor and strip chart recording or other recording of the test results for quantitative fit tests (QNFTs).
- 11.14.3 Additional fit tests will be performed whenever the employee reports, or the company, medical provider, supervisor, or program administrator makes visual observations of, changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.
- 11.14.4 If after passing a QLFT or QNFT, the employee notifies the company, program administrator, supervisor, medical provider that the fit of the respirator is unacceptable, the employee will be given a reasonable opportunity to select a different respirator face piece and to be retested.

## **11.15 TYPES OF FIT TESTS**

The fit test will be administered using an OSHA-accepted QLFT or QNFT protocol. The OSHA-accepted protocols and procedures are contained in Appendix A of 29CFR1910.134. Fit test records will be retained for respirator users until the next fit test is administered. Written records required to be retained will be made available upon request to affected employees.

## **11.16 USE OF RESPIRATORS**

- 11.16.1 Respirators with tight-fitting face pieces shall not be worn by employees who have:
- Facial hair that comes between the sealing surface of the face piece and the face or that interferes with valve function, or
  - Any condition that interferes with the face-to-face piece seal or valve function.
- a) If an employee wears corrective glasses or goggles or other personal equipment, the employer will ensure that such equipment is worn in a manner that does not interfere with the seal of the face piece to the face of the user.

- b) For all tight-fitting respirators, T.A. Woods Company will ensure that employees perform a user seal check each time they put on the respirator using the procedures 29CFR21910.134 or procedures recommended by the respirator manufacturer that the employer demonstrates are as effective as those of 29CFR1910.134.

11.16.2 The Operations and Use manual for each type of respirator will be maintained on site and by the Program Administrator and made available to all qualified users.

Surveillance by the direct supervisor will be maintained of the work area conditions and degree of employee exposure or stress. When there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, reevaluation of the respirator will be made.

**For continued protection of respirator users, the following general rules:**

- Users shall not remove respirators while in hazardous environment
- Respirators are to be stored in sealed containers out of harmful atmospheres
- Store respirators away from heat and moisture
- Store respirators such that the sealing area does not become distorted or warped
- Store respirators so that face piece is protected

11.16.2 T.A. Woods Company will ensure that employees leave the respirator use area:

- To wash their faces and respirator face pieces as necessary to prevent eye or skin irritation associated with respirator use.
- If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the face piece.
- To replace the respirator, filter, cartridge, or canister elements.

If the employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the face piece, the company will replace or repair the respirator before allowing the employee to return to the work area.

## 11.17 PROCEDURES FOR IDLH ATMOSPHERES

11.17.1 For all IDLH atmospheres, the T.A. Woods Company will ensure that:

- One employee, or when needed, more than one employee is located outside the IDLH atmosphere.

- Visual, voice or signal line communication is maintained between the employee(s) in the IDLH atmosphere and the employee(s) located outside the IDLH atmosphere.
- The employee(s) located outside the IDLH atmosphere are trained and equipped to provide effective emergency procedures.
- The company or designee authorized to do so by the company, once notified, provides necessary assistance appropriate to the situation.

- 11.17.2 Employee(s) located outside the IDLH atmosphere will be equipped with:
- Pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA, and either
  - Appropriate retrieval gear for removing the employee(s) who enter these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry, or
  - Equivalent means for rescue where retrieval equipment is not required.

## **11.18 MAINTENANCE AND CARE OF RESPIRATORS**

T.A. Woods Company will provide each respirator user with a respirator that is clean, sanitary and in good working order. T.A. Woods Company will further ensure that respirators are cleaned and disinfected.

- 11.18.1 Respirators will be cleaned and disinfected when:
- Respirators issued to one employee exclusively will be cleaned and disinfected to be maintained in a sanitary condition
  - Respirators issued to more than one employee will be cleaned and disinfected before being work by different individuals
  - Respirators maintained for emergency use will be cleaned and disinfected after each use
  - Respirators used for training will be cleaned and disinfected after each use
- 11.18.2 Respiratory equipment should be washed thoroughly in warm water with a detergent, using a soft brush. Detergents with a bactericide are preferable. If detergent with a bactericide is not used, the detergent should be followed with a disinfecting rinse. Components shall be hand dried with a clean, lint-free cloth or air dried before assembly.

## **11.19 RESPIRATOR INSPECTION**

- 11.19.1 T.A. Woods Company will ensure that respirators are inspected as follows:

All respirators/SCBAs, both available for 'general use' and those specifically assigned to employees will be inspected before and after each use and at least monthly.

- 11.19.2 Respirator inspection procedures.
  - All respirators used in routine situations will be inspected before each use and during cleaning/disinfecting.
  - All respirators maintained for use in emergency situations will be inspected at least monthly and in accordance with the manufacturer's recommendations, and will be checked for proper function before and after each use.
  - Emergency-escape-only respirators will be inspected before being carried into the workplace for use.
  
- 11.19.3 Respirator component inspection:
  - Check the respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the face piece, head straps, valves, connecting tube, and cartridges, canisters or filters.
  - Check all of the elastomeric parts for pliability and signs of deterioration.
  - Self-contained breathing apparatus should be inspected monthly. Air and oxygen cylinders should be maintained in a fully-charged state and should be recharged when the pressure falls to 90% of the manufacturer's recommended pressure level.
  
- 11.19.4 Emergency use respirators:
  - Certify the respirator by documenting the date the inspection was performed, the name (or signature) of the person who made the inspection, the findings, required remedial action, and a serial number or other means of identifying the inspected respirator.
  - Provide this information on a tag or label that is attached to the storage compartment for the respirator, is kept with the respirator or is included in inspection reports stored as paper or electronic files. This information will be maintained until replaced as the result of a following and subsequent certification.
  
- 11.19.5 Rubber Face Piece
  - Cracked or broken air-purifying element holders, badly worn threads, missing gasket
  - Excessive dirt
  - Cracks, tears, holes
  - Distortion
  - Cracked, scratched, or loose-fitting lens (full face)
  - Incorrectly mounted full face piece lens or broken/missing mounting clips
  
- Head Strap
  - Breaks or tears
  - Loss of elasticity
  - Broken or malfunctioning buckles/attachments

- Excessively worn serrations on headpiece
- Harness which might allow the face piece to slip

#### Inhalation/Exhalation Valves

- Detergent residue, dust particles, dirt or hair on valve or valve seat
- Cracks, tears, distortion in valve material or valve seat
- Improper insertion of the valve body in the face piece
- Cracks, breaks, or ships in the valve body particularly in the sealing surface
- Improper installation of the valve in the valve body

#### Filter Elements

- Incorrect cartridge, canister, or filter for the hazard
- Missing or worn gaskets
- Worn threads
- Cracks or dents in filter housing
- Incorrect installation, loose connections, or cross threading in holder
- Evidence of prior use of sorbent, cartridge, or canister indicated by absence of sealing materials, tape foil, etc, over inlet

### **11.20 RESPIRATOR STORAGE**

Respirators are to be stored as follows:

- 1) All respirators will be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals. They should be packed or stored in clean plastic bags out of direct sunlight to prevent deformation of the face piece and exhalation valve.
- 2) Emergency respirators will be kept accessible to the work area, stored in compartments or in covers that are clearly marked as containing emergency respirators and stored in accordance with any applicable manufacturer's instructions.

### **11.21 RESPIRATOR REPAIR**

Respirators that fail an inspection or are otherwise found to be defective will be removed from service to be discarded, repaired or adjusted in accordance with the following procedures:

- 1) Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations and they shall use only the respirator manufacturer's NIOSH-approved parts designed for the respirator.

- 2) Repairs will be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed, and
- 3) Reducing and admission valves, regulators, and alarms will be adjusted or repaired only by the manufacturer or a technician trained by the manufacturer.

## **11.22 BREATHING AIR QUALITY AND USE**

T.A. Woods Company will ensure that compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration accords with the following specifications:

- Compressed and liquid oxygen will meet the United States Pharmacopoeia requirements for medical or breathing oxygen.
- Compressed breathing air will meet at least the requirements for Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989, to include
  - a. oxygen content (v/v) of 19.5 – 23.5%,
  - b. hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less,
  - c. carbon monoxide (CO) content of 10 ppm or less,
  - d. carbon dioxide content of 1,000 ppm or less, and
  - e. lack of noticeable odor.
- Compressed oxygen will not be used in atmosphere-supplying respirators that have previously used compressed air.
- T.A. Woods Company will ensure that oxygen concentrations greater than 23.5% are used only in equipment designed for oxygen service or distribution.
- Cylinders used to supply breathing air to respirators must meet the following requirements:
  - a. Cylinders will be tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR Part 173 and Part 178).
  - b. Cylinders of purchased breathing air must have a certificate of analysis from the supplier that the breathing air meets the requirements for Grade D breathing air, and
  - c. the moisture content in the cylinder does not exceed a dew point of –50deg.F (-45.6deg.C) at 1 atmosphere pressure.
- T.A. Woods Company will ensure that compressors used to supply breathing air to respirators are constructed and situated so as to:
  - a. Prevent entry of contaminated air into the air-supply system.
  - b. Minimize moisture content so that the dew point at 1 atmosphere is 10 degrees F (5.56 deg.C) below the ambient temperature.

- c. Have suitable in-line air purifying Sorbent beds and filters to further ensure breathing air quality. Sorbent beds and filters will be maintained and replaced or refurbished periodically following the manufacturer's instructions.
  - d. Have a tag containing the most recent change date and the signature of the person authorized by the employer to perform the change. The tag will be maintained at the compressor.
  - e. For compressors that are not oil-lubricated, the employer will ensure that carbon monoxide levels in the breathing air do not exceed 10 ppm.
- T.A. Woods Company will ensure that breathing air couplings are incompatible with outlets for non-respirable worksite air or other gas systems. No asphyxiating substance will be introduced into breathing air lines.
  - T.A. Woods Company will use breathing gas containers marked in accordance with the NIOSH respirator certification standard, 42 CFR part 84.