

Georgia Gulf Chemicals & Polymers, LLC
Aberdeen Plant
Safety & Health Manual

Subject: Respiratory Protection

Code: ASHP 5 Revision: 7 Effective: February 1, 2003

APPROVED BY: CMM Signature on File Safety & Health Manager

APPROVED BY: BSN Signature on File Plant Manager

I. PURPOSE AND SCOPE

This procedure defines the minimum standards for the selection, maintenance, training, inspection, and use of all respiratory protective equipment at the Georgia Gulf Aberdeen Plant.

II. GENERAL POLICIES

- A. As a matter of facility policy, employee exposure to potentially harmful airborne contaminants will be controlled by feasible engineering controls and good work practices. When these controls are not feasible or effective, appropriate respiratory equipment must be used.
- B. Georgia Gulf will provide respiratory protective equipment necessary for the protection of employees.

III. DEFINITIONS

Respirator Wearer means a person, who because of his/her job duties must use a respirator to prevent harmful effects from airborne chemicals to which he/she may be exposed.

Air-Purifying Respirator is one that reduces the level of contaminants in the immediate environment to a safe level with filtration.

Supplied-Air Respirator is one that is connected to a source of breathable air that comes from some location other than the immediate environment.

III. DEFINITIONS - Continued

A *Self-Contained Breathing Apparatus (SCBA)* is a supplied-air respirator which includes a portable, air supply tank.

Immediately Dangerous to Life and Health (IDLH) refers to an environment which, because of its physical or chemical makeup, can cause immediate death or the onset of a chronic illness.

IV. RESPIRATOR SELECTION

A. Questions for Selection:

1. What work is to be performed?
2. What length of time will be required?
3. What air contaminant(s) will be present?
4. What is the concentration of the air contaminant(s)?
5. What oxygen level will be present?
6. Under what conditions will the work be performed?

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IV. RESPIRATOR SELECTION - Continued**B. General Considerations**

1. Each respirator wearer is responsible for selecting the correct type from those available for use. When uncertainty arises, the employee must contact his/her supervisor or the Safety Department.
2. Each respirator wearer must be familiar with the various types of respirators and their limitations.
3. The chemical and physical properties, toxicity, and concentration of hazardous materials present or in use must be considered before respirators are selected for use.
4. When selecting respirators, any deviation from established procedure in their selection must be toward a greater degree of protection. Questions about unusual circumstances should be referred to the Safety Department.

C. Common Types of Hazardous Environments

Conditions in the plant can range from simple nuisance odors and dusts to those which are immediately dangerous to life and health (IDLH).

1. Atmospheres Immediately Dangerous to Life and Health (IDLH)

Entry into atmospheres which are immediately hazardous to life and health, including those which are oxygen-deficient (less than 19.5 % oxygen) will not be routinely permitted. Instead, the environment will be decontaminated, if feasible. Failing that, entry into such environments will be allowed only after a detailed, written plan, approved by the Plant Manager, has been prepared and the plan reviewed with the entrants.

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IV. RESPIRATOR SELECTION - Continued

The plant's emergency response team (ERT) will be notified if an entry to an IDLH occurs and means for rescue will be prepared.

The written plan for an IDLH entry shall include the following requirements:

- 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 rescue.
- The notification of an emergency is made before the employee(s) located outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue.
- The ERT, once notified, provides necessary assistance appropriate to the situation.
- Employee(s) located outside the IDLH atmosphere are equipped with:
 - Pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA.
 - Appropriate retrieval equipment for removing the employee(s) who enter(s) 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.

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IV. RESPIRATOR SELECTION - ContinuedProcedures for interior structural firefighting:

In addition to the requirements set forth above, the following shall apply to interior structural firefighting:

- At least two employees enter the IDLH atmosphere and remain in visual or voice contact with one another at all times.
- At least two employees are located outside the IDLH atmosphere.
- All employees engaged in interior structural firefighting use SCBAs.

Areas Not Immediately Hazardous to Life and Health

- a. Respirators must be selected based on the contaminant present and the concentration at which it exists.
- b. Only air-line respirators, self-contained breathing apparatus (SCBA), or canister-type "gas masks" designed for protection against the contaminant will be used for protection from gases.
- c. Mechanical filter respirators must be worn as protection against particulate matter.

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V. RESPIRATOR WEARER RESPONSIBILITIES

Respirator wearers must:

- A. Use the respiratory equipment provided to them in accordance with instructions and training provided.
- B. Protect respiratory equipment issued to or used by them against damage by using proper storage methods.
- C. Inspect respirators before each use and report any malfunctions or defects to their supervisor.
- D. Test the respirator seal in the prescribed manner each time it is put on
- E. Make no modification to the respirator, including straps.
- F. Advise their supervisors or the Safety Department of any question concerning the proper use or limitation of any respirator.
- G. Participate in the respirator certification portion of the routine medical surveillance program.

VI. FACIAL HAIR AND OTHER RESPIRATOR WEARER RESTRICTIONS

- A. Respirators may not be used when any condition, such as facial hair, the absence of dentures, or temple pieces on glasses prevents a good face-to-mask seal.
- B. Employees, contractors, service company employees, and visitors that use respirators and/or perform confined space entries, must have no facial or other hair that interferes with the respirator-face seal.

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VII. RESPIRATOR CLEANING, MAINTENANCE, AND STORAGE**A. Personal Respirators**

Respirator wearers who have been issued respirators for their individual use must attempt no maintenance or repair of the respirators beyond cleaning, including the replacement of straps. Anyone whose respirator is in need of maintenance or repair should report this to his/her immediate supervisor.

Respirator wearers are expected to clean their individual respirators after each use, using respirator-cleaning pads and to then store the respirators in the plastic bags provided for that purpose. The bagged respirators must be stored in locations that preclude physical damage and the effects of weather and chemicals.

B. Emergency Respirators

Respirators intended for purely emergency use (Air-Paks) are to be cleaned, disinfected, and otherwise maintained only by trained personnel. Anyone who uses such a respirator must immediately advise a member of the Safety Department, so that the equipment can be put back into service without delay. Full cylinders can be found in the gray storage container outside of the safety storage building. Empty cylinders should be placed in the storage container when full cylinders are removed. Any problem detected with this equipment shall be reported to the Safety Department.

In returning an emergency respirator to service, the person involved, after having cleaned and sanitized the facepiece and any necessary air-recharging, will inspect the respirator carefully to ensure that all of its components are functional. Having done this, he/she will then place the respirator in its protective case.

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VII. RESPIRATOR CLEANING, MAINTENANCE, AND STORAGE – Continued**C. Breathing Air Compressors and Alarms**

Repair of any part of the breathing air system, including breathing air compressors will be done only by the Maintenance Department or under its direct supervision.

Operations personnel who discover any functional defects in the breathing air system must immediately submit a Maintenance Notification, which requests repair.

VIII. FIT TESTING

- A. Potential respirator wearers will receive annual, respirator quantitative fit tests. The testing will be done with the "Portacount" fit-testing equipment made by TSI, Inc.
- B. New employees will be given respirator quantitative fit tests prior to their use of respirators.
- C. Fit-testing will be conducted whenever a new respirator is to be used in the plant.
- D. An employee may need refitting for his/her respirator if physical conditions such as facial scarring, dental changes, cosmetic surgery, or obvious changes in body weight affect the respirator's fit.

IX. MEDICAL CERTIFICATION

Respirator wearers must be medically certified to do so. This will be accomplished through the routine medical surveillance program, in which potential respirator wearers will be required to participate. Certification records will be kept by Corporate Medical.

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X. TRAINING

Potential respirator wearers will receive annual training in the selection, limitations, use, maintenance, and inspection of respiratory equipment. The training will be performed in accordance with 29CFR1910.134 (k).

XI. INSPECTIONS**A. Respirator Wearer Inspections**

Prior to each use of a respiratory device, the user must inspect it for cleanliness, completeness, and proper function.

B. Safety Department Inspections

Documented, monthly inspections of Scott Air-Paks, shall be performed monthly. This shall include a check of the tightness of connections and the condition and function of facepieces, headbands, valves, connecting tubes, hoses, and regulators.

C. Maintenance Department Inspections

Utility Technicians will check the breathing air compressors each day for proper operation. Any malfunction discovered must be corrected immediately.

D. Other Inspections

In addition to the inspections noted above, all facepieces issued to employees shall be inspected quarterly by the area supervisor. These inspections shall verify respirator number, condition, and storage. Records of these inspections shall be maintained by the plant Industrial Hygienist / Safety Coordinator.

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XII. PROGRAM EFFECTIVENESS

Each member of the Safety Department is responsible for continually observing the effectiveness of the respiratory protection program for any defects and taking action to correct any serious deficiencies. Appropriate surveillance shall be maintained of work area conditions and degree of employee exposure or stress. The plant's respiratory protection program will be evaluated annually and updated if necessary.

XIII. MARKING AND LABELING

Breathing air cylinders and containers must be labeled as such, using supplier-furnished labelings and markings. Use of breathing air from unlabeled cylinders and containers is strictly forbidden, regardless of any color-coding schemes involved.

XIV. BREATHING AIR QUALITY

- A. Breathing air supplied from cylinders or breathing air compressors must be grade "D" (or better) per the Compressed Gas Association Commodity Specification G-7, 1973, as follows:

Oxygen Content	19.5 -- 23.5 % by volume
Hydrocarbons (condensed)	5 mg./M ³ max.
Carbon Monoxide	10 ppm, max.
Carbon Dioxide	1,000 ppm, max.

- B. Pure oxygen will not be used as breathing air.
- C. Scott Air-Pak and Sling Pak bottles may be charged only under the direction of the Safety Department.
- D. Breathing Air Compressors

1. The compressors will be breathing air types.
2. The compressor failure alarm will be maintained functional.

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XIV. BREATHING AIR QUALITY - Continued

3. All air-line couplings and connections will be kept incompatible with couplings and connections for all other piping.
- 4 Air-line hookup stations will be identified with appropriate signs.

XV. REFERENCES

Additional information may be found in the Aberdeen Plant's Emergency Response Plan, Personal Protective Equipment Procedure, and Permit Required Confined Space Entry Procedure.

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APPENDIX A

Approved Respiratory Equipment

Respirator	Description	Use
SCOTT AIR-PAK Fifty	A demand/pressure-demand, self-contained breathing apparatus.	For Situations requiring self-contained breathing apparatus, including fire-fighting and VCM atmospheres above 1,000 ppm or unknown.
Scott Pressure-Pak Iia Commonly (referred to as "Scott Air Pak")		Same as SCOTT AIR-PAK Fifty.
Scott Pressure-Pak 2.2	Same as Scott Pressure-Pak Iia, except unit is pressure-demand only	Same as SCOTT AIR-PAK Fifty.
Mine Safety Appliance Co. Constant Flow Airline Respirator , "Ultravue" Facepiece (Commonly referred to as "Air Line Respirator")	A constant flow, supplied-air respirator.	For VCM atmospheres of up to 1,000 ppm VCM.
3M 9970 Series High Efficiency Respirator	A high efficiency, air-purifying device for protection against dusts, fumes, mists, radionuclides up to 10 times the permissible exposure limit.	1. Intended for protection against man-made fibers, including fiberglass insulation. 2. Not for use in atmosphere containing less than 19.5 % oxygen. 3. Not for use in atmospheres immediately dangerous to life or health.
3M 6000 Series Respirator	An air-purifying device for protection against specific dusts, mists, gases and vapors for which it is NIOSH/MSHA certified, including lead.	1. Intended for protection against lead dusts up to 10 times the Permissible Exposure Limit. 2. Not for use in atmosphere containing less than 19.5 % oxygen. 3. Not for use in atmospheres immediately dangerous to life or health. 4. Not for use in atmospheres containing toxic gases or vapors.

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Respirator	Description	Use
3M 9900 Dust/Mist Respirator	An air-purifying device for non-hazardous dusts and mists.	1. For situations of convenience; e.g.: cold air, elective over-protection against minor dusting, etc. 2. Not for use in atmosphere containing less than 19.5 % oxygen. 3. Not for use in atmospheres immediately dangerous to life or health. 4. Not for use in atmospheres containing toxic gases or vapors.
Scott Scottoramic Canister Gas Mask and Canister for Chlorine	A full-face, air-purifying device for protection against low concentrations of Chlorine.	1. For protection against low concentrations of chlorine. 2. Not for use in atmosphere containing less than 19.5 % oxygen. 3. Not for use in atmospheres immediately dangerous to life or health. 4. Not for use in atmospheres containing toxic gases or vapors. 5. Maximum use concentration of 10 ppm.

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