

ABERDEEN CHEMICAL PLANT SAFETY & HEALTH MANUAL
ABERDEEN, MS

SUBJECT: Respiratory Protection Program

EFFECTIVE DATE: June 10, 1986

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REFERENCES: 1. CRF 1910.134
2. OSHA Industrial Hygiene Manual - Chapter V, Dated 12/20/84

VISTA

I. PURPOSE

The purpose of this program is to ensure that personnel are provided with and correctly use respiratory equipment to protect themselves against respiratory hazards to which they may be exposed.

II. SELECTION AND APPROVAL

Personnel will be provided with respirators that are appropriate for the hazards to which they may be exposed, and according to American National Standards Institute, Practices for Respiratory Protection, Z 88.2-1980. In addition, the devices selected must be approved for the intended use by the appropriate authority (MESA, NIOSH, Bureau of Mines, and/or as prescribed by regulation).

A list of respirators approved for plant use appears in Table I (attached).

Employee selections of respirators are to be governed by the following:

A. Scott Air Paks or Sling Paks must be used when:

1. Working in VCM concentrations above 1000 ppm or unknown.
2. Working in a plant emergency that could involve vinyl chloride monomer (vapor or fires), chlorine, and other toxic chemicals in potentially high concentrations.

B. Air-line respirators may be used:

1. When working in VCM concentrations up to 1000 ppm and as otherwise specified in the Engineering Work Practice Control Plan.

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2. When working in potentially toxic concentrations of gases other than VCM that are not immediately hazardous to life or health; e.g: Methanol.
 3. As a substitute for 3M Airhats when they are not available.
- C. 3M Airhats are to be used:
1. When handling lead raw materials, including:
 - a. Charging compound line blenders.
 - b. Performing work in the Color Weigh Room.
 2. When charging Dry Blend master batches.
 3. When handling asbestos.
- D. Bullard System 999 Supplied Air Respirators are to be used during PVC dust collector entry work.
- E. Dust masks are allowed only for non-hazardous situations of convenience; e.g: cold air, overprotection against minor dusting, etc.

III. STORAGE AND CLEANING

A. Cleaning

Routine respirator cleaning is to be done by a Building Attendant or Compound employees who have 3M Airhats permanently assigned to them. Under this program, the job responsibilities of the Building Attendant are:

1. Daily retrieval of used respirators from the respirator collection points, which are:
 - a. Compound Supervisor's office area.
 - b. Maintenance Shop.
 - c. North of Old Vinyl Control Room.
 - d. Northwest corner of the New Reactor Area.
 - e. South of VCM Tank Farm unloading racks.
 - f. 1st Floor, V-11 Dryer Building.
2. Disassembly, cleaning, and disinfecting of all used respirators.
3. Routine inspection of respirators for obvious defects and replacement of damaged components per instructions by the Safety Inspector.
4. Placing clean respirators inside plastic bags for re-issue.

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5. Distribution of clean, packaged respirators to the distribution points, in the types and amounts specified by the Safety Inspector:
 - a. Compound Supervisor's office area.
 - b. Maintenance Shop.
 - c. North of the Old Vinyl Control Room.
 - d. Northwest corner of the New Reactor Area.
 - e. South of VCM Tank Farm unloading racks.
 - f. 1st Floor, V-11 Dryer Building.
6. Maintaining the respirator cleaning room in a clean, orderly condition.
7. Monthly inspection, maintenance, and cleaning of 3M Airhats.

B. User Care of Respirators

The normal use cycle for all fresh-air-type respirators is one shift. At the end of the shift of use, these respirators will be returned to the designated collection points. During their shift, employees are expected to take care of their respirators and to prevent unnecessary contamination of facepieces and air hoses with foreign materials, including oils and greases.

3M Airhats are assigned for use on an individual basis. Each person assigned an Airhat must perform daily airflow checks and limited maintenance and cleaning, including filter changes as needed. They must also place their Airhat inside their assigned Airhat storage cabinet when it is not in actual use and at the end of the work period. Each Airhat must also be turned in monthly for thorough inspection, maintenance, and cleaning by the Building Attendant.

IV. WEARING AND FITTING

Employees must use approved respiratory protection when there is potential for overexposure to respiratory hazards. When used, the devices must be worn as instructed and approved.

Employees must check facepiece fit each time they don a respirator. The respirator is not to be used unless a good seal is obtained. In addition:

- A. Plant employees will not be permitted any facial or scalp hair in the respirator seal area. Facial hair outside the respirator seal area is allowed.
- B. Any facial hair that interferes with respirator valve operation must be trimmed.

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- C. Plant employees who must wear glasses to be able to see when using a respirator must be fitted with respirator insert glasses.

The above three rules also apply to all persons who are not plant employees and who may be required to wear respirators while working in the plant or who are working on jobs that require an entry permit.

V. INSPECTION

A. Respirator Users

Users of respirators must inspect for cleanliness and obvious defects before each use. 3M Airhat users must also verify adequate airflow.

B. Scott Air Paks and Sling Paks

Scott Air Paks and Sling Paks must be checked after each use by a member of the Safety Department. The following items must be verified before any such respirator may be placed back into service:

1. Cylinder pressure.
2. Regulator valve positions.
3. Cleanliness of respirator and case.
4. Condition of breathing tube, facepiece, and straps.
5. Cylinder condition.
6. Regulator function.
7. Warning alarm function.

C. Safety Inspector

The Safety Inspector will conduct documented, monthly inspections of:

1. All Scott Air Paks and Sling Paks.
2. Air-line respirators.
3. Bullard System 999 Supplied Air Respirators.

The inspection will be for cleanliness, operation and repair needs, including the tightness and condition of all components.

VI. BREATHING AIR QUALITY

- A. Breathing air supplied from cylinders or breathing air compressors must be grade "D" (or better) per "Compressed Gas Association Commodity Specification G-7.1, 1973," as follows:

Oxygen content	19-23% by volume
Hydrocarbons (condensed)	5 mg. per cubic meter max.
Carbon monoxide	20 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 by or under the direction of the Safety Department.

D. Breathing Air Sampling

1. A bag sample from each lot of breathing air supplied in cylinders will be taken by the Safety Inspector and analyzed for oxygen content by the Lab.
2. A badge sample of breathing air from the plant breathing air compressors will be taken each week by the Safety Supervisor and analyzed for VCM content by the Lab.

E. Breathing Air Compressors

The plant breathing air system will be maintained such that the following criteria are met:

1. The compressors used will be breathing air types.
2. The inlet air charcoal filter will be changed out when air sampling results indicate the presence of VCM in excess of 0.4 ppm, VCM.
3. The alarm which indicates compressor failure will be maintained functional.
4. All air-line couplings and connections will be kept incompatible with couplings and connections for all other piping.

The compressors will be checked daily by the Utility Technicians for proper operation. Any malfunction that is found should be handled as follows:

1. Isolate the problem.
2. Take corrective action, including contact of others, turning in of work orders, or other actions as appropriate.

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VII. TRAINING

All employees whose job duties require the use of respirators will be instructed in the selection, use, and care of respiratory equipment. The Safety Department will conduct such training annually for all employees and during each new employee orientation.

VIII. PROGRAM INSPECTION AND EVALUATION

Employees at all levels must continuously observe and evaluate the respirator program as it applies to their area of plant responsibility. All discrepancies must be promptly corrected and program deficiencies reported to the Safety Department, which is charged with the administration of the entire program.

IX. MEDICAL EXAMINATION

Employees whose work requires them to use respirators must first be medically certified by a licensed physician. A periodic re-certification will be necessary thereafter.

The frequency of re-certification will be determined by the Vista Chemical Company Medical Director.

TABLE I

APPROVED RESPIRATORY EQUIPMENT

- | | |
|---|---|
| 1. Scott Presur-Pak IIa
Part No. 9001401
Referred to as "Scott Air Pak" | A pressure-demand, self-contained breathing apparatus. Used where self-contained air supply is mandatory. In VCM environments, it is to be used in concentrations above 1,000 ppm or unknown. |
| 2. Scott Presur-Pak 2.2 | Same as Scott Presur-Pak II except unit is pressure-demand only. |
| 3. Scott Sling Pak IIa | A lightweight, 15-minute duration version of Scott Presur-Pak IIa. |
| 4. Mine Safety Appliance Co.
Constant Flow Airline Respirator
Part No. 460865
Referred to as "Air Line Respirator" | A constant flow, supplied-air respirator. Used in VCM atmospheres of up to 1,000 ppm VCM. |
| 5. Scott Zephyrair Hoseline | A constant flow, supplied-air respirator. Used in VCM atmospheres of up to 1,000 ppm VCM. |
| 6. Bullard System 999 Supplied-Air Respirator | A constant flow, supplied-air hood-type respirator. For use during dust collector entry. |
| 7. 3M Airhat Part No. W-316 | A powered, air-purifying device using a high efficiency composite filter. For use during work involving lead dusts, asbestos, and all blender charging. |
| 8. Mine Safety Appliance Co.
Dustfoe 66 Respirator
Part No. 46183 (Complete)
No. 457486 & 457485 (Filters) | An air-purifying device using particulate filters. For non-hazardous situations of convenience; e.g: cold air, elective overprotection against minor dusting, etc. |

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