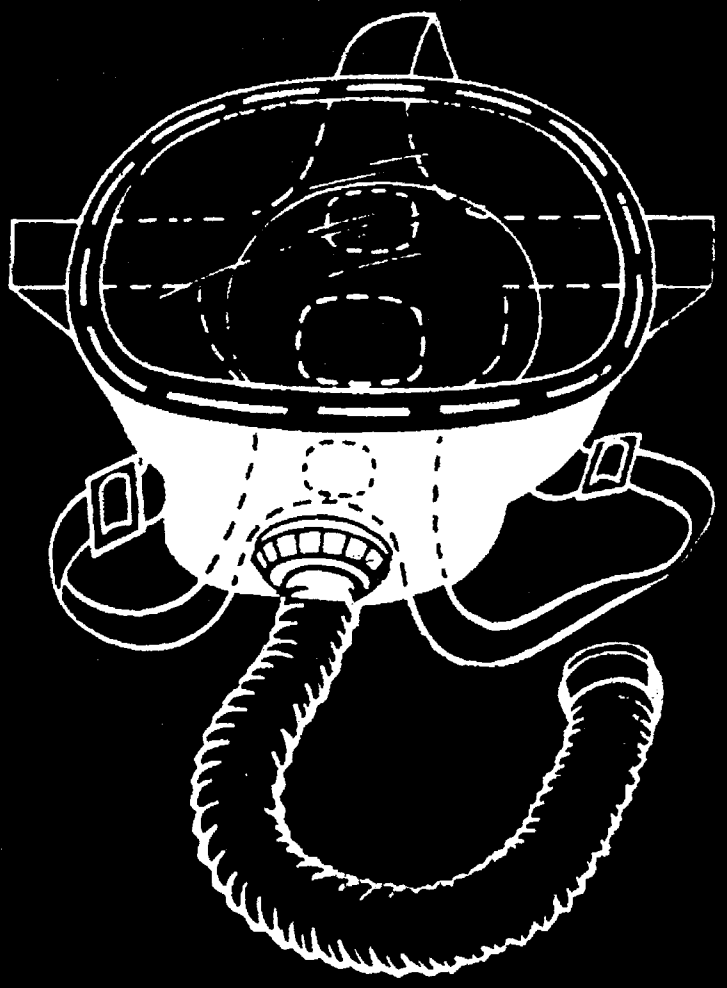
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SOUTH CHARLESTON PLANT

UNION CARBIDE



RESPIRATORY PROTECTION PROGRAM & EQUIPMENT MANUAL

PLAINTIFF'S EXHIBIT
UC-4080

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APPENDIX 4

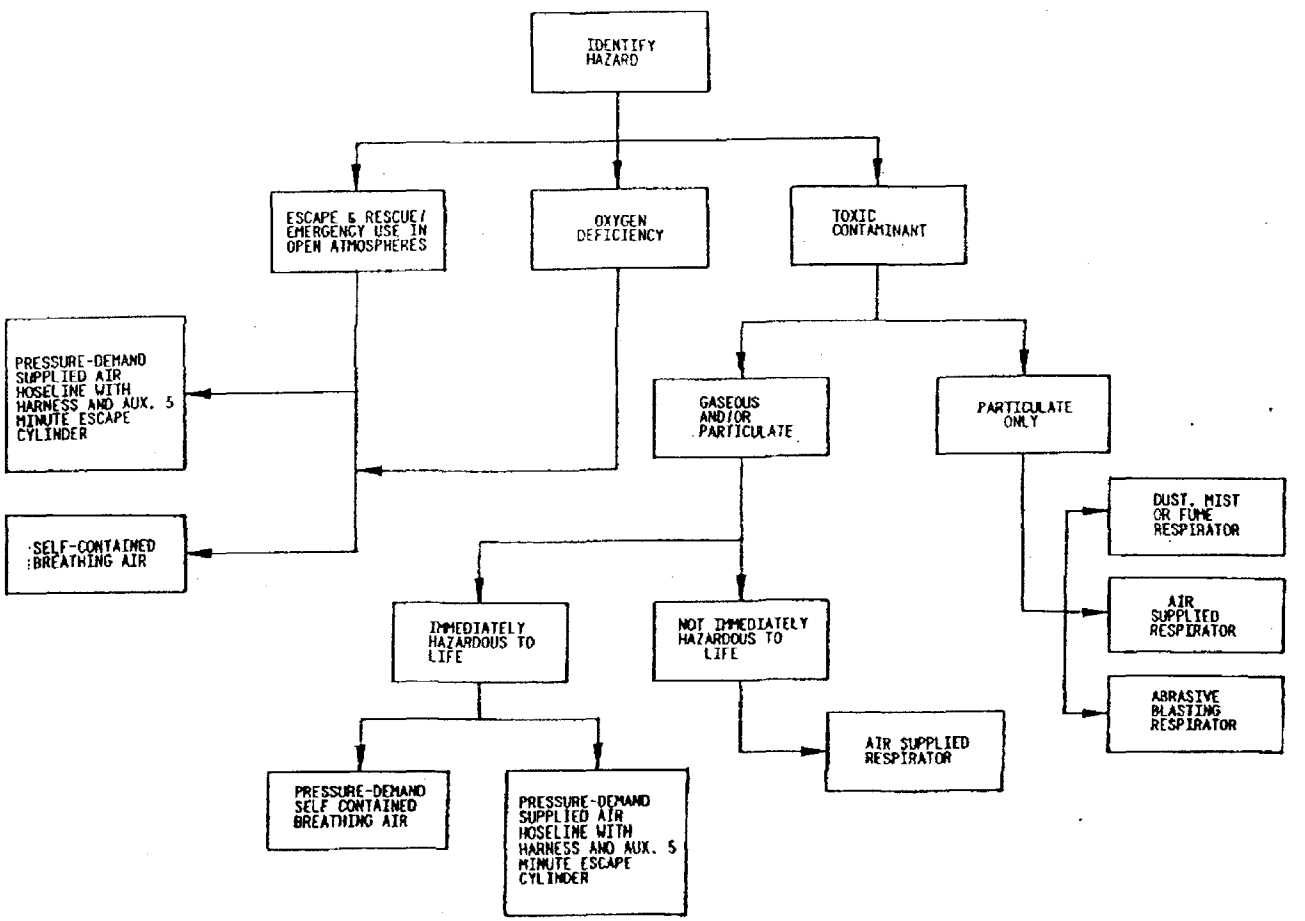
Revised: 2/12/87

SOUTH CHARLESTON PLANT
RESPIRATORY PROTECTION PROGRAM & EQUIPMENT MANUAL

SUBJECT: SELECTION OF RESPIRATORS

I. Selection - General

Respirators are to be selected according to the hazard(s) to which a worker is exposed. Only NIOSH/MSHA approved equipment shall be used in the plant. The following table shows an outline for selecting respiratory protective devices. It is a guide that will direct you to the type of respirator after you identify the hazard. The Industrial Hygiene group will assist in identifying and evaluating hazardous atmospheric contaminants. The Fire Protection group help you get the proper respiratory equipment.



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II. SUMMARY OF APPROVED RESPIRATORY PROTECTIVE EQUIPMENT EQUIPMENT AT THE SOUTH CHARLESTON PLANT

Respirator Type	Respirator Manufacturer/Model	Applications
Self-Contained Apparatus (SCBA)	• North Model 845 5-Minute Escape Capsule (TC-13F-172)	-Escape only
	• Robertshaw 5-Minute Escape Capsule (TC-13F-28)	-Escape only (No new purchases permitted)
	• Scott 15-minute Pressure-Demand sling Pak IIa (TC-13F-42)	-Escape only
	• Scott 30-minute Pressure-Demand (TC-13F-40)	-All hazardous atmospheres and emergencies
Air Supply Respirators	• Scott 801548-00: Scottoramic Facepiece and P/N 30010 Low Pressure Supply Hose with Hansen fitting (TC-19C-74)	-IDLH Atmospheres with easy egress (*)
	• Scott 900055-13 Ska-Pak: Scottoramic Facepiece and 30010 Low Pressure Supply Hose with Hansen Fittings and Egress Bottle (TC-13F-68)	-Control room emergency respirators for essential personnel only -IDLH Atmospheres with limited egress -All hazardous atmospheres where breathing air is supplied by compressors (excepting sandblasting) (*)
	• Scott 900007 Series Hi-Press. with Egress Bottle: Hi-Press. Reinforced Hose P/N 15319-00 with Threaded Coupling 15487-00 and 15498-00 (TC-13F-49)	-Confined space Class I atmosphere -Non life supporting atmospheres where hose kinking is a problem.
	• Clemco Abrasive-Blasting Hood and Respirator (TC-19C-85)	-Sandblasting in field and shop
Air Purifying Respirators	• North 7190 disposable dust respirator - neg. pressure (TC-21C-388)	-Most welders fumes -Dust with PEL 0.05 Mg/M3 See manual for specifics
	• North 7700-30 with HEPA filter (Part #N7500-8) 1/2 mask neg. pressure (TC-21C-152)	-Asbestos up to 10x PEL Atm. -Dust
	• Survivair® 2000 series with Hepa Filter (Part #1090-00) 1/2-mask: Neg. Pressure (TC-21C-244)	-Asbestos up to 10x PEL Atm. -Dust
	• Racal 'Powerflow' Papr (024-00-02) full facepiece with HEPA filter (09-00-20 filter): positive pressure (TC-21C-353)	-Asbestos up to 100x PEL Atm. -Dust

(*) Not to be used in confined space, Class I atmospheres

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III. Special Selection Applications

1.0 Asbestos — When working with asbestos insulation repair, patching, removal or clean-up or working within an affected area, the following is to be used in the selection of Respiratory Protection:

NOTE - Contact the Safety/Health Department before initially starting asbestos work in suspected regulated areas. Give sufficient lead time to avoid job start delays.

1.1 Airborne Concentration of Less Than 0.2 Fibers/cc (< PEL)

Respiratory Protective Equipment is not required for non-regulated areas.

1.2* Airborne Concentration of 0.2 or Greater and Less Than 2.0 Fibers/cc (from PEL to Less Than 10X PEL.)

Half mask air-purifying respirator with high efficiency filters. Cartridge #1090-00 (Survivair R - approval #TC-21C-244) and cartridge #7500-8 (North Safety Equipment - approval #TC-21C-152) are approved for this application. Mask bodies are the Survivair R series 2000 and the North Model 7700-30M respectively.

1.3* Airborne Concentration of 2.0 or Greater and Less Than 20 Fibers/cc (from 10X PEL to less than 100 X PEL).

Only full-face powered air purifying respirators (PAPR) approved by the Safety/Health Department are to be used. Only the Racal "Powerflow" with a HEPA filter (TC-21C-353) is approved for South Charleston Personnel. Contractors and other non-plant personnel are not limited to this model, but may use other NIOSH approved PAPRs for Asbestos applications.

1.4* Airborne Concentrations Greater Than 20 and less Than 200 Fibers/cc (from 100 X PEL to less than 1000 X PEL).

Use the appropriate SCBA or Air Supplied respirator with positive pressure-demand; specifically the 30 minute Scott Air-Pac or Supplied Air Model 801548 (Sect. 8, page 1).

*Regulated areas requiring respiratory protective equipment.

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III. Special Selectionl Application (Cont'd.)

1.0 Asbestos - continued

1.5* Airborne Concentrations Greater than 200 Fibers/cc (> 1000 X PEL)

Use the Low-Pressure Air Supplied Respirator with 5-minute egress bottle; specifically model 900055-13 (Sect. 8, page 8).

2.0 Welding Fumes and Other Particulates

2.1 The North 7190 (TC-21C-388) disposable dust, fume and mist respirator is approved for use in contaminated atmospheres containing

2.1.1 Particulate contaminants having a PEL greater than 0.05 mg/m3.
2.1.2 Zinc
2.1.3 Chrome 3
2.1.4 Nickel
2.1.5 Copper
2.1.6 Iron
2.1.7 Aluminum
2.1.8 Magnesium
2.1.9 Tin
2.1.10 Titanium

NOTE The 7190 is not to be used in oxygen deficient atmospheres (< 19.5% O_2), Asbestos, Chrome 6, Silver, Lead, Paint Spraying, Vapor or Gaseous Chemicals type applications.

2.2 The Survivair^R 2000 and the North Model 7700-30M with HEPA Filters are approved for all welders fumes. However, these do not fit very well under a welders's mask.

*Regulated areas requiring respiratory protective equipment.

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