

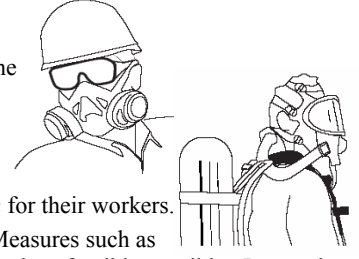


Company Name: \_\_\_\_\_ Job Site Location: \_\_\_\_\_

Date: \_\_\_\_\_ Start Time: \_\_\_\_\_ Finish Time: \_\_\_\_\_ Foreman/Supervisor: \_\_\_\_\_

## Topic 7: Respiratory Protection (Part A)

**Introduction:** When toxic airborne substances taint your workplace atmosphere, the proper respirator will prevent the entry of harmful substances into your lungs. Breathing hazards are not always easy to detect and identify. The most common perils are the lack of oxygen, and the presence of harmful dusts, smoke, gaseous fumes, vapors, and sprays. Failure to guard against these respiratory threats can cause long-term or permanent impairment and disability, lung diseases, or maybe even death. The government thought it was important enough to spend 16 years compiling the standards. The regulations require construction employers to establish or maintain a **Respiratory Protection Program** for their workers.



**Engineering Control Measures** should always be implemented before the general use of an appropriate respirator. Measures such as enclosure or confinement of the operation, general and local ventilation and exhausting should be accomplished as much as feasibly possible. Remember that during the implementation of the engineering controls in contaminated atmospheres, proper respiratory/breathing protection must be used.

**The primary elements of the Respiratory Protection Program requirements are:**

- |  |   |  |
|--|---|--|
| ■ Program administrator                          | ■ Site-specific procedures for respirator selection | ■ Employee training and information distribution |
| ■ Fit testing                                    | ■ Medical evaluation                                | ■ Use, maintenance, cleaning, and repair         |
| ■ Filter, cartridge, and canister identification | ■ Program evaluation                                | ■ Recordkeeping                                  |

**Selection of Respirators** must be based on an evaluation of the airborne hazards particular to the specific worksite. **NIOSH** (National Institute for Occupational Safety and Health) and **ANSI** (American National Standards Institute) certified respirators are required for the specific atmosphere type, being either an atmosphere providing or an air purifying design.

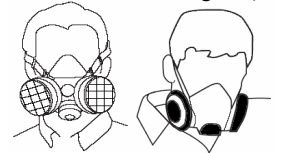
**NIOSH and ANSI recognize these acronyms for designated respirator references:**

- |   |  |
|---|--|
| ■ <b>IDLH</b> atmospheres Immediately Dangerous to Life or Health | ■ <b>HEPA</b> High Efficiency Particulate Air filter                                   |
| ■ <b>SAR</b> Supplied Air Respirator                              | ■ <b>MMAD</b> Mass Median Aerodynamic Diameters (particulates measured in micrometers) |
| ■ <b>SCBA</b> Self Contained Breathing Apparatus                  |  |

**Respirator certification designations PART – 11 and PART – 84** (taken from MSHA [30 CFR Part 11] and Public Health [42 CFR Part 84]) determine the filtration performance values of the respirator.

**PART – 11 Respirators** are typically marked such as TC – 21C or TC – 23C, are available in 3 efficiency **TYPES**, and can be identified as follows:

- **Dust, Mist (DM)** respirators are labeled as approved for protection against dust and mists.
- **Dust, Fume, and Mist (DFM)** respirators are labeled as approved for protection against dust, fumes and mists.
- **High Efficiency (HEPA)** respirators are labeled as approved for protection against dust, fumes, mists, and radionuclides (color-coded magenta)
- **Paint Spray** respirators are labeled as approved for protection against mists of paint, lacquers, and enamels.
- **Pesticide** respirators are labeled as approved for protection against pesticides.
- **Laboratory testing indicates** that some DM and some DFM respirators allow unexpectedly high penetration of particles that are 2 micrometers or smaller. In ANSI Z88.2 the regulation reads: "If the contaminant is an aerosol, with an unknown particle size or less than 2 microns (MMAD), a high-efficiency filter must be used.



**PART – 84 Particulate Respirators** are typically marked such as TC – 84A, are available in 3 efficiency **TYPES**, and can be identified as follows:

- **Respirators marked N100, N99, and N95** (99.9%, 99%, and 95% efficient filters) may be used for any solid or non-oil containing contaminant.
- **Respirators marked R100, R99, and R95** (99.97%, 99%, and 95% efficient filters) may be used for any particulate contaminant. If used for an oil-containing particulate, a one-shift use limit applies.
- **Respirators marked P100, P99, and P95** (99.97%, 99%, and 95% efficient filters) may be used for any particulate contaminant.



**Conclusion:** Respiratory protection in the workplace is an important health issue. It is up to you to make *good* choices and to work safe. Part (B) covers medical evaluation and fit testing. Part (C) covers the use, maintenance, care, and identification of filters, canisters, and cartridges.

### Work Site Review

Work-Site Hazards and Safety Suggestions: \_\_\_\_\_

Personnel Safety Violations: \_\_\_\_\_

**Employee Signatures:** \_\_\_\_\_ (My signature attests and verifies my understanding of and agreement to comply with, all company safety policies and regulations, and that I have not suffered, experienced, or sustained any recent job-related injury or illness.)

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**Foreman/Supervisor's Signature:** \_\_\_\_\_

*These guidelines do not supercede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.*