

## **Appendix B**

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### **TYPES OF RESPIRATORY PROTECTION**



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## Appendix B Types of Respiratory Protection

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Type of Respirator	Advantages	Disadvantages
<p><b>Air Purifying</b> <i>Air-Purifying Respirator</i> (including powered sea level [PAPRs])</p>	<p>Enhanced mobility</p> <p>Lighter in weight than an SCBA; generally weighs 2 pounds or less (except for PAPRs)</p>	<p>Cannot be used in IDLH or oxygen-deficient atmospheres (less than 19.5 percent oxygen at air-purifying respirators)</p> <p>Limited duration of protection; may be hard to gauge safe operating time in field conditions</p> <p>Only protects against specific chemicals, and up to specific concentrations</p> <p>Use requires monitoring of contaminant and oxygen levels</p> <p>Can only be used: (1) against gas and vapor contaminants with adequate warning properties; or (2) for specific gases or vapors provided that the service is known and a safety factor is applied, or if the unit has an ESLI (end-of-service-life-indicator)</p>
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<p><b>Atmosphere-Supplying</b> <i>Self-Contained Breathing Apparatus (SCBA)</i></p>	<p>Provides the highest available level of protection against airborne contaminants and oxygen deficiency</p> <p>Provides the highest available level of protection under strenuous work conditions</p>	<p>Bulky, heavy (up to 35 pounds)</p> <p>Finite air supply limits work duration</p> <p>May impair movement in confined spaces</p>

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## Appendix B (continued)

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Type of Respirator	Advantages	Disadvantages
<p><i>Positive Pressure Supplied-Air Respirator (SAR)</i></p> <p>(also called air line respirator)</p>	<p>Enables longer work periods than an SCBA</p> <p>Less bulky and heavy than an SCBA; SAR equipment weigh less than 5 pounds (or around 15 pounds, if escape SCBA protection is included)</p> <p>Protects against most airborne contaminants</p>	<p>Not approved for use in IDLH or oxygen-deficient atmospheres (less 19.5 percent oxygen at sea level) unless equipped with an emergency egress unit, such as an escape-only SCBA, that can provide immediate emergency respiratory protection in case of air line failure</p> <p>Impairs mobility</p> <p>Mine Safety and Health Administration/NIOSH certification limits hose length to 300 feet</p> <p>As the length of the hose is increased, the minimum approved airflow may not be delivered at the faceplate</p> <p>Air line is vulnerable to damage, chemical contamination, and degradation. Decontamination of hoses may be difficult</p> <p>Worker must retrace steps to leave work area</p> <p>Requires supervision/monitoring of the air supply line</p>

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