

**RESPIRATORY PROTECTION PROGRAM – APPENDIX E****FIT TEST GUIDELINES**

Employees who have facial hair or any condition that interferes with the face-to-facepiece seal or valve function may not wear a tight-fitting respirator.

Additional personal protective equipment (e.g., safety glasses, bump cap) must not interfere with the seal of the facepiece to the user's face.

OSHA standards that require a specific protection factor (e.g., asbestos regulations) necessitate a quantitative fit test² to reach a calculated fit factor.

A qualitative fit test¹ may be used only for negative pressure air-purifying respirators that do not require a fit factor³ over 100.

Tight-fitting atmosphere-supplying or powered-air purifying respirators must be fit-tested in negative pressure mode. Such respirators can be temporarily converted using appropriate filters, or by using a surrogate negative pressure air-purifying respirator facepiece of the same design.

¹ Qualitative fit test (QLFT): a pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's response to the test agent.

² Quantitative fit test (QNFT): an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

³ Fit factor: for quantitative fit testing, a ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn. To pass, half-facepieces must achieve a fit factor ≥ 100 ; full-facepieces, ≥ 500 .

Fit tests must be conducted in accordance with 8CCR5144 Appendix A, Fit Testing Procedures

The following "Rainbow Passage" is one of several choices for the respirator user as the verbal component of the fit test.

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.