

NIOSH Conformity Assessment Interpretation Notice

**NIOSH CA 2018-1005
Revised November 2018**

**NIOSH Respirator Approval Program's updated position regarding facial hair
and the selection and use of respiratory protective devices**

**Revised. Supersedes the August 2018 version and the October 2, 2006
Letter to All Respirator Manufacturers**



**Centers for Disease Control
and Prevention**
National Institute for Occupational
Safety and Health

Subject: NIOSH Respirator Approval Program's updated position regarding facial hair and the selection and use of respiratory protective devices

1 SUMMARY

NIOSH published this notice to clarify the October 2, 2006 NIOSH *“Letter to all Manufacturers”* titled: *NIOSH Policy for Respirator Sealing Surfaces and Facial Hair*. This revised notice clarifies the NIOSH definition of respirator sealing surfaces, including the primary seal, and facial stubble. This revised notice supersedes the October 2, 2006 letter and the August 2018 version of NIOSH CA 2018-1005.

Specific to the evaluations completed as part of the NIOSH Respirator Approval Program, and testing to assess the fit characteristics of all respirator designs, NIOSH test subjects are required to be clean-shaven in order to participate on the test panel selected.

The Occupational Safety and Health Administration (OSHA) Respiratory Protection Standard 29 Code of Federal Regulations (CFR) 1910.134 paragraph (g)(1)(i) states, *“The employer shall not permit respirators with tight-fitting facepieces to be worn by employees who have: (A) Facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function; or (B) Any condition that interferes with the face-to-facepiece seal or valve function.”*

The OSHA requirement is [interpreted](#) as: When a respirator is required, an employer is prohibited from allowing respirators with tight-fitting facepieces to be worn by employees who have “facial hair that comes between the sealing surface of the facepiece and the face, or that interferes with valve function. Facial hair is allowed, as long as it does not protrude under the respirator seal, or extend far enough to interfere with the device's valve function.”

Specific to the required individual workplace fit test, NIOSH continues to support the OSHA regulations. In this case, regarding the employee's facial hair, 29 Code of Federal Regulations (CFR) Part 1910 [Appendix A](#), Part I, (A)(9) states, *“The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, mustache or*

sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.”

2 AUTHORITY

[42 C.F.R. Part 84, Respiratory Protective Devices](#)

Subpart H, Self-contained breathing apparatus (SCBA)

Subpart G, Gas masks

Subpart J, Supplied-air respirators (SAR)

Subpart K, Non-powered air-purifying particulate respirators (APR)

Subpart L, Chemical cartridge respirators (APR)

Subpart KK, Powered air-purifying particulate respirators (PAPR)

3 BACKGROUND and SUPPLEMENTAL INFORMATION

OSHA and ANSI Z88.10-2010 prohibit fit testing when facial hair is at the sealing surface of the respirator. OSHA’s Fit Testing Procedures, 29 CFR 1910.134 Appendix A, Part I, (A)(9), states *“The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, mustache or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.”*

Facial hair that lies along the sealing area of the respirator, such as beards, sideburns, moustaches, or even a few days growth of stubble¹, should not be permitted on employees who are required to wear respirators that rely on tight facepiece fit to achieve maximum protection. Facial hair between the wearer’s skin and the sealing surfaces of the respirator will prevent a good seal. A respirator that permits negative air pressure inside the facepiece during inhalation may allow leakage and, in the case of positive pressure devices, will either reduce service time or waste breathing air. A worker should not enter a contaminated work area when conditions prevent a good seal of the respirator facepiece to the face. [NIOSH, 1987, “NIOSH Guide to Industrial Respiratory Protection”]

An up-to-date clarification of this NIOSH position is as follows:

Facial hair that lies along the sealing area of the respirator, such as beards, sideburns, moustaches, or even **more than one day or 24 hours of** growth of stubble, should not be permitted on employees who are required to wear respirators that rely on tight facepiece fit. Facial hair either growing in or

¹ A few days growth of stubble is **any facial hair growth that is older than 24 hours** [[ANSI 2010](#), [OSHA 2012](#)].

protruding into the area of the primary sealing surfaces² of the respirator will prevent a good seal. Any degradation to the respirator seal has the potential to decrease respiratory protection to the wearer. Respirators that normally support a negative pressure in the facepiece will have an increased potential to allow leakage of contaminated air into the facepiece. Respirators designed to maintain a positive facepiece pressure will suffer from reduced service time along with wasting breathing air during use. A worker should not enter a contaminated work area when conditions prevent a good seal of the respirator facepiece to the face.

This interpretation applies to all primary seals of tight-fitting full and half-facepiece respirators, as well as tight-fitting respirator designs that rely on a neck dam seal.

Nose cups present in tight-fitting full facepieces that do not perform primary sealing functions are not considered part of the primary seal. Facial hair in this area should not interfere with respiratory protection of the facepiece. In these cases, facial hair is permitted. However, wearers must be trained to ensure facial hair does not grow in size or length and subsequently protrude under the primary sealing surface of the respirator.

If a respirator covering includes a hood design and is the primary seal around the neck of the wearer, facial hair, such as a full beard, cannot be present in the area of the seal. Additionally, if a hood design includes a primary seal within the hood, by including a component covering the mouth, nose and chin of the wearer (similar to a typical half-mask), facial hair cannot be present in the area of the seal of this component. In the event that the respirator design incorporates any one of these sealing mechanisms, facial hair must be prevented from interfering with the sealing surface and the function of the respirator during use.

This interpretation does not apply to loose-fitting hood or helmet respirator designs such as those used on Powered Air-Purifying Respirators, Supplied-Air Respirators and Constant-Flow Escape type Self-Contained Breathing Apparatus that utilize only capes or shrouds for primary seals. With these type respirators, careful consideration must be given in using these loose-fitting face coverings to assure that they do not have a neck dam, a face seal or an integrated, tight-fitting half-mask. These respirators, utilizing only capes or shrouds as primary seals, may then be selected and used by workers with facial hair.

Escape-only types of air-purifying respirators are not required by OSHA to be fit tested, but special care must be exercised when they are being carried for potential use. For all tight-fitting, escape-only respirators, precautions must be taken to assure that the seal needed for effective use will not be

² The **primary seal** and **primary sealing surface** are that part of the respirator that touch the wearer's facial areas (near the nose and mouth for half-mask respirators and including around the eyes for full-facepiece respirators) that provide a gas or dust-tight seal in order to protect the user from the outside contaminant(s).

affected by facial hair or body hair in the event the respirator is needed for escape from a toxic atmosphere.

Mouth-bit type escape-only respirators are inherently unaffected by facial hair, face size, or neck size and their use and fitting characteristics are not dependent on these features.

4 REFERENCES

[Approval of Respiratory Protective Devices, 42 C.F.R, Part 84](#)

[NIOSH Policy for Respirator Sealing Surfaces and Facial Hair, October 2, 2006](#)

[OSHA Respiratory Protection Standard 29 CFR 1910.134](#)

[OSHA Standard Interpretations, Facial Hair Under Seal of Tight-fitting Respirator, September 14, 2012](#)

[OSHA 1910.134 Appendix A, Fit Testing Procedures \(Mandatory\)](#)

[OSHA Instruction, effective June 26, 2014](#)

[ANSI/AIHA/ASSE-Z88.10 Respirator Fit Testing Methods 2010 Edition](#)

[NIOSH Guide to Industrial Respiratory Protection, p119](#)

[NIOSH Science Blog, To Beard or not to Beard?](#)

Revision (R)	Date	Reason for Revision
1.0	20 November 2018	NIOSH revised this notice to clarify the definitions of primary seal and stubble growth of facial hair.