



May 9, 2017

LETTER TO ALL INTERESTED PARTIES

Subject: Incorporation of National Fire Protection Association (NFPA) 1986, Standard on Respiratory Protection Equipment for Tactical and Technical Operations, 2017 edition into NIOSH Self-Contained Breathing Apparatus (SCBA) policy statement on “Acceptance of Applications for the Testing and Evaluation of Self-Contained Breathing Apparatus for Use against Chemical, Biological, Radiological and Nuclear Agents”

The National Institute for Occupational Safety and Health (NIOSH) is updating its policy statement on “[Acceptance of Applications for the Testing and Evaluation of Self-Contained Breathing Apparatus for Use Against Chemical, Biological, Radiological and Nuclear Agents.](#)”

This policy change is being made coincident with the addition of requirements related to the use and operation of these devices in the National Fire Protection Association (NFPA) 1986, 2017 edition, *Standard for SCBA used in Tactical and Technical Operations*. This letter serves as the policy change modifying the above referenced NIOSH policy statement to incorporate SCBAs meeting the requirements of NFPA 1986:2017, or subsequent editions as part of the current policy statement.

Consistent with the National Technology Transfer and Advancement Act of 1995 and OMB Circular A-119, NIOSH participated in the NFPA consensus standards development process for NFPA 1986. Adoption of this standard into the above referenced policy statement meets the intent of this act.

This letter informs applicants of additional requirements that a SCBA will be evaluated against prior to receiving NIOSH approval and provides the procedures for submitting applications. When first announced in 2001, the need to meet requirements for the CBRN protection level was voluntary in both the NFPA and the NIOSH approval processes, as specified in [Attachment A](#) to the 2001 CBRN policy statement. However, in the 2007 revision to NFPA 1981, the requirement for SCBA to obtain CBRN-level approval was made a mandatory part of NFPA 1981. This requirement also holds true for NFPA 1986:2017. As a result, all NFPA 1981 or 1986 approvals will require compliance with the additional CBRN requirements.

Background

In April 2000, NIOSH entered into a Memorandum of Understanding with the National Institute for Standards and Technology (NIST), the Occupational Safety and Health Administration (OSHA), and the National Fire Protection Association (NFPA) to jointly work on developing standards for all types of counterterrorism equipment. NIOSH and NIST initiated Interagency Agreements with the U.S. Army Edgewood Chemical Biological Center (ECBC) (which at that time was the U.S. Army Soldier and Biological Chemical Command (SBCCOM)) for development of respiratory protection standards, test procedures, and laboratory support. The new procedures for SCBA certification were consistent with the guidance of the Federal Emergency Management Agency (FEMA) and NFPA, which called for the use of SCBAs when hazards are unknown (i.e., within the first hours of an event).

NIOSH initiated its voluntary approval program pursuant to 42 CFR Parts 84.60(b) and 84.63(c). These sections provide NIOSH with the authority to issue approvals for respirators not specifically addressed in Part 84 and to develop additional requirements that the agency determines are "necessary to establish the quality, effectiveness, and safety of any respirator used as protection against hazardous atmospheres." NIOSH has continued to conduct that program issuing special approvals and approval labels identifying the SCBA as appropriate for use against CBRN agents.

Summary of the CBRN Requirements for Approval

The minimum requirements for CBRN-level protection determinations made by NIOSH are as follows:

- **Requirements for approval of an SCBA under 42 CFR Part 84.** Approval under 42 CFR Part 84, Subpart H, demonstrates that the SCBA is approved for industrial usage and requires the applicant to maintain a quality control program and documentation for the SCBA in accordance with Part 84.
- **Requirements for compliance of an SCBA with the National Fire Protection Association (NFPA) 1981 or NFPA 1986.** In the 2001 announcement notifying all interested parties of NIOSH's intent to accept applications for the testing and evaluation of SCBA for use against CBRN agents, it was stated that certification by the NFPA demonstrates that the SCBA can meet the flame, heat, and other requirements of NFPA 1981 that are important for protection against hazards that may be present for first responders to a terrorist incident. In the time that has passed since the first CBRN certification program for SCBA was announced, the NFPA 1981 *Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services* was modified to require CBRN protection to be present in all NFPA 1981 compliant SCBA. As a result, what started as a three-stage process of approval has, through the cooperation of NIOSH and the Safety Equipment Institute (SEI), become a two-stage process. The two-stage process developed for NFPA 1981 will be used to issue NFPA 1986 approvals. While the technical requirements of NFPA 1986 do not demand the same level of fire "hardening" that NFPA 1981 requires, NFPA 1986 still addresses and assures other critical SCBA performance aspects. NIOSH expects that terrorist incident first

responders who will rely upon NFPA 1986 approved apparatus will be acting within the same capacities that they normally do and will therefore benefit from the differences in protective capability that have been called for and developed as the basis for NFPA 1986. The more modest fire hardening required in NFPA 1986 has been incorporated to assure protection against the kind of brief, but possibly intense, flame and heat hazards that could occur in a chaotic, uncontrolled environment of a terrorist incident. It is not intended to protect users engaged in active fire suppression; that requirement is achieved through the thermal protection offered by SCBA approved to NFPA 1981. In spite of the fact that the protection from thermal hazards is different, both NFPA 1981 and NFPA 1986 approved SCBA will provide the same high levels of respiratory protection from all threats, including the same level of protection against CBRN respiratory threats.

- **Additional standards for special tests associated with resistance of chemical penetration and permeation and quantitative laboratory protection levels.**

Additional standards for special tests associated with resistance of chemical penetration and permeation and quantitative laboratory protection levels are required. NIOSH has determined that the vulnerabilities of SCBAs to CBRN agents necessitate two additional special tests. Test criteria have been developed to assess the extent to which the components and materials of the SCBA can be penetrated and permeated if the wearer is in a hazardous chemical environment for an extended period. The penetration/permeation test procedures and protocol are provided on the NPPTL web site, Procedure Number [RCT-CBRN-STP-0200, 0201](#). The laboratory respirator protection level test assesses the respirator's ability to fit a wide range of facial dimensions. The test procedure is provided on the NPPTL web site, Procedure Number [TEB-CBRN-APR-STP-0352](#).

General Application Information:

Application procedures for CBRN respirators are included in the “[Standard Application Procedure for the Approval of Respirators Under 42 CFR 84](#).”

All approval application(s) shall: 1) be submitted concurrently to NIOSH (Records Room) and the Safety Equipment Institute (SEI) and 2) include a completed application package for each SCBA respirator model for which approval is requested. NIOSH submittals must conform to the requirements outlined in the Standard Application Procedures. Standard SCBA approval fees are applicable to each new approval sought. Consultations with NIOSH are available and encouraged prior to submitting an application to enable an accurate determination of required test hardware to be made. Your effort in following these procedures will assist NIOSH and SEI in ensuring an orderly approval process. Applications will be processed in the order in which they are received by NIOSH. NIOSH will process CBRN SCBA applications as a priority.

Reference Notification to Users and Regulatory Agencies

NIOSH will continue to maintain and disseminate an approval list for the SCBAs approved under this program. This list will be a prominent part of the Certified Equipment List (CEL), and will contain the name of the approval holder, model, component parts, accessories, and rated durations.

Respirator Identification/Labeling

NIOSH will authorize the use of an additional approval label on apparatus that demonstrate compliance to the CBRN criteria. This label is to be placed in a visible location on the SCBA backplate, e.g., on the upper corner or in the area of the cylinder neck. The addition of this label will provide visible and easy identification of equipment for its appropriate use. A sample label is shown below.



[Cautions and Limitations for the CBRN SCBA must be incorporated into the applicants' instructions for use.](#)

We hope this information is helpful to you. Please feel free to contact Robert Stein at 412-386-6889 or by email at rstein@cdc.gov if you have any questions.

Sincerely yours,

David Chirdon

David Chirdon
Chief, Conformity Verification and
Standards Development Branch
National Personal Protective Technology Laboratory

Cc: Mr. Steve Sanders, SEI

Attachment:

Initial CBRN SCBA Statement of Standard