

National Personal Protective Technology Laboratory

Mission

To prevent work related illnesses and injuries by ensuring the development, certification, deployment and use of personal protective equipment and fully integrated, intelligent ensembles.



Long Term Field Evaluation Program

The Long Term Field Evaluation Program works closely with industry, manufacturers and stakeholders to determine the quality and safety of equipment deployed in the field. Research determines the efficiency of equipment as it ages, and how the equipment reacts to the mine environment over time during use. Field investigations are focused on SCSR (self-contained self-rescue) respirators and filter self-rescuers used by mine workers, and others whose lives depend on the equipment. Work in this area assists NPPTL's

Policy and Standards Development and Quality Assurance sections to develop new standards for equipment as technologies and information are learned. These standards are incorporated into certification standards to continually improve personal protective equipment available to

the worker. Scientists and technicians also provide technical assistance and consultation to other components of NIOSH and CDC, other federal agencies and other public and private sector organizations on SCSR reliability.



Policy and Standards Development Program

Policy and standards development is the cornerstone of NIOSH certification for preserving the safety and health of workers. Scientists identify where research is needed to support new standards, regulations, and policies relating to NIOSH certified respirators. They assess research findings and translate them into effective NIOSH policies, regulations, and auditing practices, especially for new respirator technology or special applications. They hold

public meetings to solicit information concerning user needs, and address the feasibility of specific technologies. They determine the public financial and legal impacts of revising federal regulations, as well as providing technical assistance on standards development criteria for respirator performance, quality and reliability.

To this end, the Policy and Standards Development Section of NPPTL is now focused on the development of standards for all classes of respirators for protection against chemical, biological, radiological, and nuclear agents (CBRN) in the event of a terrorist attack.

Quality Assurance Program

Service and oversight are essential aspects of certification, and quality assurance affirms that equipment will be produced to the specifications approved by NIOSH. NPPTL staff conduct site and product audits to ensure that manufacturers continue to comply with all aspects of the

approval requirements after the respirator is in production. Site audits of manufacturing facilities and production processes ensure that respirators are produced to NIOSH established standards. Product investigations help

resolve or correct problems associated with approved respirators employed in the field and may result in product recalls, field retrofits, requests to stop sale of a respirator as a NIOSH-approved device, or revocation of approval, in extreme cases. These activities ensure the best possible protection to workers.

Procedures

Measures

Processes

Audit

Investigation

Certification, Evaluation, and Testing Program

This program supports the Respirator Branch by developing standards, test procedures and evaluation criteria to determine whether products submitted for NIOSH approval meet established requirements. Technicians process respirator manufacturer applications for NIOSH approval by reviewing engineering specifications, drawings, quality assurance and other pertinent documentation,

and conduct standard laboratory tests on products to ensure that they meet or exceed regulatory requirements. They also conduct lab tests on NIOSH-approved respirators to support product audits and special investigations, develop guidelines for selecting and using NIOSH-approved respirators, respond to technical requests for infor-

mation, and assist federal, state, and local government agencies by providing information on respirator regulations, public health and technical issues, and resolve common worker protection issues.



Respirator Branch

Every day, in nearly every type of work setting in the United States—from crop fields, warehouses, health care facilities, and construction sites, to mines, plants, and emergency rescue operations—respiratory protection technologies are used to reduce workers' risk of job-related injury, illness, and death. These technologies include particulate filtration, gas and vapor filtration, compressed gas self-contained breathing systems, and chemical-based self-contained breathing systems. Respirators are a required component of many occupational safety and health programs, and may represent a worker's last line of defense against exposure to toxic fumes, vapors, or dust.

The Respirator Branch of NPPTL, established by the National Institute for Safety and Health (NIOSH), partners with stakeholders, academia, labor and professional organizations, government, and representatives from the public and private sectors to develop and implement federal regulations, standards of performance and testing, as well as certification protocols for manufacturers and users of respirators and other personal protective equipment to keep pace with employer and worker needs as their working conditions change.

Since 1972, NIOSH has certified more than 7,000 respirator models for 65 manufacturers located at 88 sites in 18 countries, including: USA, Denmark, England, Mexico, Germany, Thailand, China, Chile, Japan, Italy, New Zealand, Australia, Korea, Taiwan, and Sweden.



NPPTL Overview

The National Institute for Occupational Safety and Health (NIOSH) established the National Personal Protective Technology Laboratory (NPPTL) in 2001 to provide world leadership for the prevention and reduction of occupational disease, injury and death for workers who rely on personal protective technologies (PPT), including the nation's millions of miners, firefighters and emergency responders, health care, agriculture, and industrial workers.

NIOSH Vision... Delivering on the Nation's promise: safety and health at work for all people through research and prevention.

NPPTL brings together experts from many disciplines dedicated to reducing the risk of job-related injury, illness, and death. Through targeted partnerships, research, service, and communication, NPPTL focuses on new and enhanced personal protective equipment for workers, including first responders during terrorist attacks or other disasters. NPPTL builds on NIOSH's longstanding testing and certification programs to test and approve respirators for use in traditional work settings, and to test and approve respirators for use by first responders against chemical, biological, radiological, and nuclear agents.

NPPTL applies state-of-the-art science to meet the increasingly complex occupational safety and health challenges of the 21st century. Our strategic research programs will ensure that the development of new personal protective equipment technologies keep pace with the changing needs and requirements of employers and workers.

Please visit us at our website: <http://www.cdc.gov/niosh/npptl/default.html> for more information about the laboratory and current research on personal protective technologies. You can also call 1-800-356-4674, outside the U.S. 513-533-8328, or write us at: NPPTL, P.O. Box 18070, 626 Cochran's Mill Road, Pittsburgh, PA 15236.



Mission

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CBRN SCBA Respirator Certification

Website Links

NIOSH/NPPTL website:
www.cdc.gov/niosh/npptl/default.html

View complete certification testing requirements at:
www.cdc.gov/niosh/npptl/pdfs/scba-attach-a.pdf

Certification test procedures:
www.cdc.gov/niosh/npptl/pdfs/scba-attach-b.pdf and
www.cdc.gov/niosh/npptl/pdfs/scba-attach-c.pdf

Download the Standard Application from: www.cdc.gov/niosh/saf.html

Check the status of your application: www.cdc.gov/niosh/status.html

Check the CEL: www.cdc.gov/niosh/celintro.html

Changes to the CEL:
www.cdc.gov/niosh/celpamp.html

The National Institute for Occupational Safety and Health (NIOSH), the U.S. Army Research, Development and Engineering Command (RDECOM) (formerly SBCCOM), and the National Institute for Standards and Technology (NIST) are continuing their efforts to develop appropriate standards and test procedures for all classes of respirators that will provide respiratory protection from chemical, biological, radiological, and nuclear (CBRN) agent inhalation hazards.

The National Institute for Occupational Safety and Health (NIOSH), as part of the U.S. Centers for Disease Control and Prevention (CDC), has implemented a program to approve self-contained breathing apparatus (SCBA) for use by fire fighters and other first responders to terrorist attacks.

CBRN SCBA Certification

NIOSH approval under the program signifies that an SCBA is expected to provide necessary protection to first responders in situations where an act of terror has released harmful chemicals, pathogens, or radioactive materials into the air. Approvals are based on positive results from rigorous tests on sample units submitted to NIOSH by manufacturers, and from stringent evaluation of manufacturers' quality-control practices, technical specifications, and other documentation.

The SCBA equipment must meet the following minimum testing requirements:

- Approval under the following standards: (1) NIOSH 42 CFR Part 84, Subpart H, (2) Compliance with National Fire Protection Association (NFPA) Standard 1981 for Open-Circuit Self-Contained Breathing Apparatus for Fire Fighters.
- Completion of special tests under NIOSH 42 CFR 84.63(c): (1) chemical agent permeation and penetration resistance against distilled sulfur mustard and sarin, and (2) laboratory respirator protection level (LRPL).

Standard test procedures will be used to conduct the special tests to determine chemical agent permeation and penetration resistance, and the quantitative laboratory respirator protection levels.



Contacts

DHHS/CDC/NIOSH/NPPTL Respirator Branch

P.O. Box 18070
626 Cochrans Mill Road
Pittsburgh, PA 15236
(412) 386-4000
Fax (412) 386-4051

For a complete set of application procedures, contact NIOSH by e-mail at npptl@cdc.gov, or call 412-386-4000.

Technical Information and Assistance

(9:00 – 4:00 daily, EST)

1-800-35-NIOSH

(1-800-356-4674)

Applying for Certification

Applications are being accepted for review of CBRN SCBA respirators for use by first responders and emergency responders.

Where to Apply

Applications and associated correspondence should be mailed to:

Records Room/Respirator Branch
NIOSH/NPPTL
P.O. Box 18070
626 Cochrans Mill Road
Pittsburgh, PA 15236-18070

CBRN SCBA hardware should be mailed to:

Attn: Engineering Directorate/Mr. Ron Pojunas
U.S. Army
Research, Development and Engineering Command (RDECOM)
5183 Blackhawk Road
Aberdeen Proving Ground, MD 21010-5423

Application Fees

There is no fee for applications that do not require testing. When testing is required, appropriate fees must accompany each application in U.S. currency. Applications will not be processed until the application, check, and samples are received.

SCBA Open Circuit (OC) Full Testing Fee Schedule

Six LAT tests @ \$4,217.18 per LAT	\$25,303.08
One Laboratory Respirator Protection Level (LRPL) test	7,790.00
Subtotal	\$33,093.08
NIOSH Administrative	1,000.00
RDECOM/SBCCOM Administrative	3,807.05
Total	\$37,900.13

NOTE: All CBRN Respirator Protective Device (RPD) Fee Schedules are subject to change based upon annual cost adjustments by NIOSH and/or the supporting testing laboratory(s).

CBRN Standards Development Process

Website Links

NIOSH/NPPTL website:
www.cdc.gov/niosh/npptl/default.html

For updates on the CBRN Certification Program, visit:
www.cdc.gov/niosh/npptl/respsdpg.html

Check the CEL: www.cdc.gov/niosh/celintro.html

Changes to the CEL:
www.cdc.gov/niosh/celpamp.html

The National Institute for Occupational Safety and Health (NIOSH), the U.S. Army Research, Development and Engineering Command (RDECOM) (formerly SBCCOM), and the National Institute for Standards and Technology (NIST) are continuing their efforts to develop appropriate standards and test procedures for all classes of respirators that will provide respiratory protection from chemical, biological, radiological, and nuclear (CBRN) agent inhalation hazards.

A thorough process of analysis and testing is applied to develop the most comprehensive standards for personal protective equipment. The entire standards development and implementation process is conducted using an open forum approach. NIOSH personnel conduct internal reviews of concepts to determine their feasibility and technical validity before being released for public comment. Frequent meetings with stakeholders (agencies, user groups, manufacturers, and their organizations) keep everyone informed and involved throughout the development process.

Analysis

Analysis consists of three main factors: (1) anticipated hazard, (2) technology and expected protectability, and (3) the user and his/her environment.

- 1. Hazards.** In order to fully understand how to protect against a hazard, NPPTL scientists must first know what the hazards are, and how much may be present. For CBRN hazards, NPPTL typically uses computer modeling to identify likely agents, quantities, their means of dissemination, and subjected area (indoor/outdoor, large/small, and degree of ventilation). Computer modeling identifies toxic industrial chemicals, called TICS, as potential hazards. These TICS form the basis of hazard requirement development. In addition to TICS, scientists consider European standards, U.S. and NIOSH standards, and military threat lists. From these sources scientists produce a list of test agents, or test representative agents, called TRAs.
- 2. Technology and Expected Protectability.** Scientists must define the technology required to achieve the desired protection. This includes not just equipment, but the factors that interact with the equipment, such as the ways to process breathing air, and the ability of the technology itself to withstand the agent. Some chemical agents are so destructive that they actually degrade or break down the equipment itself, or permeate through the materials. Benchmark testing of current equipment identifies the best technologies available to serve as a basis and guidance to develop valid, feasible concepts for new technology.



Contacts

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Technical Information and
Assistance

(9:00 – 4:00 daily, EST)

1-800-35-NIOSH

(1-800-356-4674)

3. Human/Environmental Factors. Scientists must interface the hazards and the technology with the user and his environment to provide feasible protection. They consider such factors as: breathing resistance, flow characteristics, speech intelligibility, and visibility; what the equipment will be subjected to in its life-time such as hot and cold exposure, and heat and flame exposure. Current standards—NIOSH 42 CFR, NFPA 1981, military chemical and special agents experience—play an important role in providing a baseline for developing new technology standards.

Each of these factors influence the scientists' concept of what the respirator should be able to do. This is where performance requirements, user requirements, and to a lesser extent, design and materials requirements are defined.

Developing a Concept

NPPTL generates a concept of the standard based on thorough analysis of the given factors that identifies initial performance, engineering, and sometimes design requirements. Concept papers are based on a three-tiered standard: 42 CFR Part 84, NFPA 1981, and special tests (chemical warfare agents, respirator fit).

Once the concept is written, public meetings are held to discuss visibility and wearability ideas with stakeholders, manufacturers, intended users, and others to refine the requirements. Concept papers are posted on the NPPTL website, and are updated as requirements mature. NPPTL's open docket also provides a forum for public views and opinions of the concept throughout its development.

Testing

Testing is essential to the development of standards. Testing validates that the equipment can be designed and manufactured using these standards, and determines whether equipment will perform as required.

- 1. Test Validation.** Current products are selected for testing new concepts. Given that the concept is new, much of the current equipment will fail, or will not provide adequate protection. But this kind of testing provides a benchmark for test requirements.
- 2. QA Provisions.** QA provisions ensure that the respirator can be designed to meet performance and engineering requirements, and that the equipment can be reproduced on a continuing basis. This ensures that mass assembly/production always produces equipment that meets the requirements. In some cases, some material composition or design requirements are involved, such as with APRs, which usually include materials requirements to meet very specific needs.

Defining a Certification Program

Once a concept has undergone the rigors of the development and testing processes, and public meetings have concluded, NPPTL scientists define the new certification program. They generate the test requirements, test procedures, the application process, and associated fees. The certification program information is posted on the NPPTL website as a letter to all manufacturers, announcing the program and its requirements and procedures for obtaining certification.

CBRN Respirator Research & Development Test Program

Website Links

NIOSH/NPPTL website:
www.cdc.gov/niosh/npptl/default.html

Sample application letter:
www.cdc.gov/niosh/npptl/rndtestltr-A.html

CBRN SCBA Respirator
Certification Program letter:
www.cdc.gov/niosh/npptl/respltr.html

Check the status of your
application: www.cdc.gov/niosh/status.html

Check the CEL: www.cdc.gov/niosh/celintro.html

Changes to the CEL:
www.cdc.gov/niosh/celpamp.html

The National Institute for Occupational Safety and Health (NIOSH), the U.S. Army Research, Development and Engineering Command (RDECOM) (formerly SBCCOM), and the National Institute for Standards and Technology (NIST) are continuing their efforts to develop appropriate standards and test procedures for all classes of respirators that will provide respiratory protection from chemical, biological, radiological, and nuclear (CBRN) agent inhalation hazards.

The National Institute for Occupational Safety and Health (NIOSH), as part of the U.S. Centers for Disease Control and Prevention (CDC), has implemented a program for manufacturers to perform trial and error type research and development testing on respirator materials. This program provides the same access to chemical agent testing as the flexible CBRN SCBA Certification Program.

Test Program Description

Testing is applicable to CBRN SCBA (open circuit) testing CBRN APR (tight fitting, full face), and escape hood testing.

Up to three consecutive days of testing will be conducted in the chemical test laboratory at Research, Development and Engineering Command (RDECOM). A maximum of 4 Smartman Tests, 2 for sarin (GB) and 2 for distilled sulfur mustard (HD) vapor, and 10 material swatch tests per agent can be performed. Fewer tests are possible, as determined by the applicant.

Test Witnessing

Due to limited space, the applicant may have a maximum of three representatives present during testing. To witness testing, applicant representatives must be U.S. citizens, or if foreign nationals, obtain approved visit requests through their embassy under the procedures of the Department of Defense to visit RDECOM.

Results Data

Data obtained from testing is retained by the applicant and may be used as supporting data (pre-submission) in a certification application for CBRN approval. Test results from this program are not valid as certification tests.



Contacts

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Fax (412) 386-4051

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(9:00 – 4:00 daily, EST)
1-800-35-NIOSH
(1-800-356-4674)

Applying for CBRN R&D Testing

The CBRN Respirator R&D Test Program is limited to applicants with a quality control plan evaluated as acceptable by NIOSH. Download a standard application form for instructions on submitting a quality control plan for NIOSH approval. To apply for R&D testing, submit a letter of application to NIOSH containing a brief description of the respirator to be tested, and the desired tests to be conducted.

NIOSH will process letters of application, and will then authorize RDECOM to schedule and confirm the R&D tests with NIOSH and the applicant. Efforts will be made to process CBRN respirator R&D tests as quickly as possible, however, CBRN certification testing will be processed with a priority.

Multiple applications are possible, but only one active application per applicant per respirator class is permitted at any time.

Where to Apply

Applications and associated correspondence should be mailed to:

Records Room/Respirator Branch

NIOSH/NPPTL

P.O. Box 18070

626 Cochran's Mill Road

Pittsburgh, PA 15236-18070

CBRN SCBA hardware should be mailed to:

Attn: Engineering Directorate/Mr.
Ron Pojunas

U.S. Army

Research, Development and
Engineering Command
(RDECOM)

5183 Blackhawk Road

Aberdeen Proving Ground, MD
21010-5423

Testing Fees

The CBRN respirator research and development test schedule and fees are as follows. Each application must include a check for an amount to cover the selected tests. Applications will be processed according to the date and time received.

Test	Fee
NIOSH Smartman Test GB Test	\$4500
NIOSH Smartman Test HD Test	\$4500
Material Swatch Test, Fruit Fly, SBCCOM STP	\$50 per swatch /10 swatch/agent
Material Swatch Test, Indicator Paper SBCCOM STP	\$50 per swatch /10 swatch/agent

One 5" by 5" material sample is required per swatch test.

NOTE: All CBRN Respirator Protective Device (RPD) Fee Schedules are subject to change based upon annual cost adjustments by NIOSH and/or the supporting testing laboratory(s).

CBRN APR Respirator Certification

Website Links

NIOSH/NPPTL website:
www.cdc.gov/niosh/npptl/default.html

Statement of CBRN APR
Standard: www.cdc.gov/niosh/npptl/cbrnaprstd.html

Download the Standard
Application from: www.cdc.gov/niosh/saf.html

Check the status of your
application: www.cdc.gov/niosh/status.html

Check the Certified Equipment
List (CEL) at: www.cdc.gov/niosh/celintro.html

Complete CBRN APR test
procedures: www.cdc.gov/niosh/npptl/cbrnaprgbhd.html

Changes to the CEL:
www.cdc.gov/niosh/celpamp.htm

The National Institute for Occupational Safety and Health (NIOSH), the U.S. Army Research, Development and Engineering Command (RDECOM) (formerly SBCCOM), and the National Institute for Standards and Technology (NIST) are continuing their efforts to develop appropriate standards and test procedures for respirators that will provide respiratory protection from chemical, biological, radiological, and nuclear (CBRN) agent inhalation hazards.

The National Institute for Occupational Safety and Health (NIOSH), as part of the U.S. Centers for Disease Control and Prevention (CDC), has implemented a voluntary program to approve full-facepiece air purifying respirators (APR) for use by fire fighters and other first responders to terrorist attacks.

CBRN APR Certification

Certification requirements for full-facepiece air purifying respirators have been developed under agreements with the National Institute for Standards and Technology (NIST), the Occupational Safety and Health Administration (OSHA), and the National Fire Protection Association (NFPA), and in response to comments received during numerous stakeholder meetings.

The applicant shall provide three complete respirator systems with the application. One system will be used for general examination, and the other two will be used for testing in accordance with the CBRN standard test procedure for chemical agent permeation resistance against distilled mustard (HD) and sarin (GB) agents.

Following successful completion of one GB and one HD test, the applicant will be instructed to send all additional test equipment and preapproval test data. The additional test equipment and data must be provided within eight weeks of notification to complete the application. For a new certification that requires all tests, a minimum of 48 respirator assemblies and 125 canisters must be submitted to complete testing.



Contacts

For a complete set of application procedures, contact NIOSH by e-mail at npptl@cdc.gov, or call 412-386-4000.

DHHS/CDC/NIOSH/NPPTL Respirator Branch

P.O. Box 18070

626 Cochrans Mill Road

Pittsburgh, PA 15236

(412) 386-4000

Fax (412) 386-4051

Technical Information and Assistance

(9:00 – 4:00 daily, EST)

1-800-35-NIOSH

(1-800-356-4674)

Applying for Certification

Applications are being accepted for review of CBRN APR respirators for use by first responders and emergency responders.

Where to Apply

Applications and associated correspondence should be mailed to:

Records Room/Respirator Branch

NIOSH/NPPTL

P.O. Box 18070

626 Cochrans Mill Road

Pittsburgh, PA 15236-18070

CBRN APR hardware should be mailed to:

Attn: Engineering Directorate/Mr. Ron Pojunas

U.S. Army

Research, Development and Engineering Command (RDECOM)

5183 Blackhawk Road

Aberdeen Proving Ground, MD 21010-5423

Application Fees

The following fees shall be charged for examination, inspection and testing of the CBRN APR respirator.

Itemized Testing Fees	
Environmental Conditioning	\$ 30,500.00
Laboratory Respirator Protection Level (LRPL)	\$ 11,900.00
Modified LRPL	\$5,900.00
P100 Particulate	\$1,200.00
Service Life Test	\$3,300.00
Systems Agent Test (Smartman)	\$27,025.00
Bench Tests (Resistance, Valve Leakage, CO ₂)	\$750.00
Communications	\$5,600.00
Fogging	\$2,700.00
Field of View	\$950.00
Haze, Luminous Transmittance & Abrasion	\$1,850.00
Total Application Fees for CBRN APR	\$91,675.00

NOTE: All CBRN Respirator Protective Device (RPD) Fee Schedules are subject to change based upon annual cost adjustments by NIOSH and/or the supporting testing laboratory(s).

CBRN Certification Program for SCBA Retrofit Kits

Website Links

NIOSH/NPPTL website:
www.cdc.gov/niosh/npptl/default.html

CBRN SCBA certification test requirements: www.cdc.gov/niosh/npptl/pdfs/scba-attach-a.pdf

CBRN SCBA certification test procedures: www.cdc.gov/niosh/npptl/pdfs/scba-attach-b.pdf and www.cdc.gov/niosh/npptl/pdfs/scba-attach-c.pdf

CBRN SCBA upgrade letter:
www.cdc.gov/niosh/npptl/upgradeltr.html

Check the status of your application: www.cdc.gov/niosh/status.html

Check the Certified Equipment List (CEL): www.cdc.gov/niosh/celintro.html

Changes to the CEL:
www.cdc.gov/niosh/celpamp.html

The National Institute for Occupational Safety and Health (NIOSH), the U.S. Army Research, Development and Engineering Command (RDECOM) (formerly SBCCOM), and the National Institute for Standards and Technology (NIST) are continuing their efforts to develop appropriate standards and test procedures for respirators that will provide respiratory protection from chemical, biological, radiological, and nuclear (CBRN) agent inhalation hazards.

Manufacturers and users have expressed the desire and need to upgrade equipment placed in service prior to issuance of CBRN approval. The National Institute for Occupational Safety and Health (NIOSH), as part of the U.S. Centers for Disease Control and Prevention (CDC), has implemented a program to approve retrofit kits for self-contained breathing apparatus (SCBA) for use by fire fighters and other first responders to terrorist attacks involving CBRN hazards.

CBRN SCBA Retrofit Kit Certification

The purpose of the program is to test and evaluate retrofit kits intended to upgrade field-deployed SCBA units for use in CBRN environments. Testing and evaluation will ensure that the components and procedures used to upgrade existing SCBAs establish the CBRN-approved configuration, and that upgraded SCBAs comply with approved CBRN SCBA certification requirements.

The SCBA equipment must meet the following minimum testing requirements:

- Approval under the following standards: (1) NIOSH 42 CFR Part 84, Subpart H, (2) Compliance with National Fire Protection Association (NFPA) Standard 1981 for Open-Circuit Self-Contained Breathing Apparatus for Fire Fighters.
- Special tests under NIOSH 42CFR 84.63(c): (1) chemical agent permeation and penetration resistance against distilled sulfur mustard and sarin, and (2) laboratory respirator protection level (LRPL).

Standard test procedures will be used to conduct the special tests to determine chemical agent permeation and penetration resistance, and the quantitative laboratory respirator protection levels.



Contacts

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626 Cochrans Mill Road
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(412) 386-4000
Fax (412) 386-4051

For application procedures,
contact NIOSH by e-mail at
npptl@cdc.gov, or call
412-386-4000.

Technical Information and
Assistance

(9:00 – 4:00 daily, EST)

1-800-35-NIOSH

(1-800-356-4674)

Applying for Certification

Applications are being accepted to test and evaluate CBRN SCBA retrofit kits for use by first responders and emergency responders.

Where to Apply

Applications can be submitted electronically at npptl@cdc.gov or by mail to:

Records Room/Respirator Branch
NIOSH/NPPTL
P.O. Box 18070
626 Cochrans Mill Road
Pittsburgh, PA 15236

Review of SCBA retrofit kits for CBRN certification follows the same process as outlined in the standard application form. Submit retrofit applications as an extension of approval and include the following for consideration:

- Quality assurance provisions that identify the resulting retrofit configuration and protection for each SCBA model updated under this program.
- A description of the estimated frequency of use for the submitted units since being placed into service, and how this has been determined to be typical of the model's normal firefighter usage.
- Two (2) retrofit kits and (two) 2 NFPA (1981, 1997 Edition, or 2002 Edition) compliant SCBAs. These two SCBA units should be supplied from a metropolitan fire department and must represent the oldest SCBAs remaining in service under the NFPA edition under which they are compliant.

Installation of the retrofit kits on the two SCBA test units may be performed by a manufacturer-trained and authorized technician in the presence of NIOSH representatives, or installation can be accomplished prior to submission, provided the units are accompanied by a notarized statement certifying that requirements have been followed for installation of the submitted SCBAs.

Application Fees

SCBA Open Circuit (OC) Upgrade Retrofit Fee Schedule	
Two Live Agent Testing (LAT) tests @ \$5,000.00 per LAT	\$10,000.00
Total	\$10,000.00

NOTE: All CBRN Respirator Protective Device (RPD) Fee Schedules are subject to change based upon annual cost adjustments by NIOSH and/or the supporting testing laboratory(s).

CBRN SCBA Approved Respirators

Website Links

NIOSH/NPPTL website:
www.cdc.gov/niosh/npptl/default.html

Check the CEL: www.cdc.gov/niosh/celintro.html

Changes to the CEL:
www.cdc.gov/niosh/celpamp.html

The National Institute for Occupational Safety and Health (NIOSH), as part of the U.S. Centers for Disease Control and Prevention (CDC), has implemented a program to approve self-contained breathing apparatus (SCBA) for use by fire fighters and other first responders to terrorist attacks.

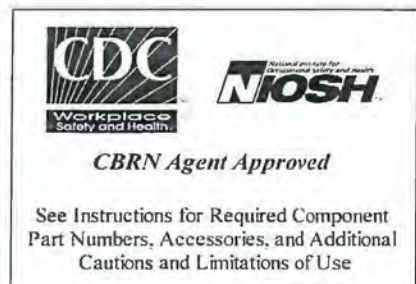
NIOSH approval under the program signifies that an SCBA is expected to provide necessary protection to first responders in situations where an act of terror has released harmful chemicals, pathogens, or radioactive materials into the air. Approvals are based on positive results from rigorous tests on sample units submitted to NIOSH by manufacturers, and from stringent evaluation of manufacturers' quality-control practices, technical specifications, and other documentation.

Identifying CBRN Certified Respirators

You can identify a CBRN agent approved respirator by the approval label and approval number on the equipment, and by checking NPPTL's online Certified Equipment List.

Approval Label

Look for the CBRN Agent Approval label on the respirator. If an SCBA is CBRN-approved by NIOSH, it will always carry this label. If this CBRN Agent Approval label is not on the SCBA, it is not approved by NIOSH for use by emergency responders in CBRN environments.



Approval Number

Approval numbers for CBRN-certified equipment appear in the respirator's instruction manual, and will always have a CBRN suffix (TC-13F-XXXXCBRN). If the approval number does not include a CBRN suffix, it is not certified for use by emergency responders in CBRN environments.



Contacts

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Technical Information and
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CBRN Approved Parts

For correct protection in CBRN environments, check the part numbers of the unit against the parts listed as CBRN approved in the manufacturer's instructions. The complete CBRN SCBA assembly must be composed of only those component parts with a CBRN approval number listed in the instructions. Parts that do not contain a CBRN approval number must not be used as part of a CBRN SCBA assembly.

Checking the Certified Equipment List (CEL)

NIOSH maintains a database of equipment it certifies. This list contains CBRN approved SCBA equipment.

CBRN approved equipment is identified in the CEL by manufacturer, model, and approval number. For each of these models, two versions are certified: one for traditional use, and one for use by emergency responders for CBRN environments. **Only the versions for CBRN use by emergency responders will contain both the CBRN Agent Approved label on the respirator, and the CBRN suffix in the approval number.**

The CEL is updated frequently, and newly certified models are posted on the NIOSH website (see Website Links).

General Cautions and Limitations for Use of CBRN SCBA

- Use in conjunction with personal protective ensembles that provide appropriate levels of protection against dermal hazards.
- Some CBRN agents may not present immediate effects from exposure, but can result in delayed impairment, illness, or death.
- Direct contact with CBRN agents requires proper handling of the SCBA after each use and between multiple entries during the same use. Decontamination and disposal procedures must be followed. If contaminated with liquid chemical warfare agents, properly dispose of the SCBA after decontamination.
- The respirator should not be used beyond six (6) hours after initial exposure to chemical warfare agents to avoid possibility of agent permeation.

These limitations are not all inclusive. NIOSH may identify other model-specific cautions and limitations as a condition of approval. The respirator manufacturer may identify further cautions and limitations for their respirators. Regulatory agencies may also place a limit on the use of respirators in their standards. Check the label and user instructions for the units.

CBRN Approved Retrofit Kits for SCBA Respirators

Website Links

NIOSH/NPPTL website:
www.cdc.gov/niosh/npptl/default.html

Check the CEL: www.cdc.gov/niosh/celintro.html

Changes to the CEL:
www.cdc.gov/niosh/celpamp.html

The National Institute for Occupational Safety and Health (NIOSH), the U.S. Army Research, Development and Engineering Command (RDECOM) (formerly SBCCOM), and the National Institute for Standards and Technology (NIST) are continuing their efforts to develop appropriate standards and test procedures for all classes of respirators that will provide respiratory protection from chemical, biological, radiological, and nuclear (CBRN) agent inhalation hazards.

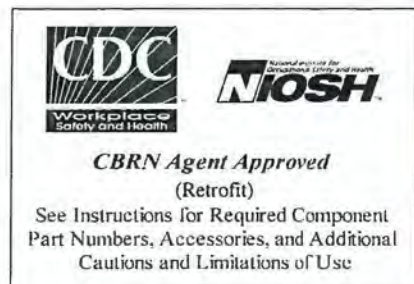
Manufacturers and users have expressed the desire and need to upgrade equipment placed in service prior to issuance of CBRN approval. The National Institute for Occupational Safety and Health (NIOSH), as part of the U.S. Centers for Disease Control and Prevention (CDC), has implemented a program to approve retrofit kits for self-contained breathing apparatus (SCBA) for use by fire fighters and other first responders to terrorist attacks involving CBRN hazards.

Identifying CBRN Certified Retrofit Kits

Retrofit Kits can be used to upgrade existing SCBA configurations to approved CBRN configurations. You will be able to identify a CBRN agent approved SCBA by the label, the manufacturer's instruction manuals, and by checking NPPTL's online Certified Equipment List.

Approval Label

CBRN Agent Approved retrofit kits will contain a NIOSH CBRN Agent Approved label. If an SCBA retrofit kit is CBRN approved by NIOSH, it will always carry this label. If this CBRN Agent Approved label is not present, the retrofit kit is not approved by NIOSH for use by emergency responders in CBRN environments.



Retrofit Kits

In addition to the NIOSH CBRN Agent Approved label, CBRN retrofit kits for SCBA respirators will contain the replacement



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components, parts, materials, and operation instructions. The manufacturer's instruction manuals will provide a list of these components, as well as the following:

- The minimum technician qualifications for performing the retrofit, and the level of manufacturer training required.
- A list of SCBA models certified for use with the CBRN approved retrofit kit.
- Detailed procedures for replacing components, parts, and materials to complete the CBRN retrofit of an appropriate SCBA unit.
- Operating instructions for the CBRN configuration; differences between these and normal SCBA operating instructions will be detailed.
- Required post retrofit inspections and tests to verify that the retrofit has been properly performed, and that the CBRN SCBA operates in accordance with the NIOSH, NFPA, and manufacturer requirements. At a minimum, tests will include: leak tightness of assembly and components, positive pressure (static facepiece pressure), exhalation resistance, bypass function, remaining service life alarm operation, pressure gauge accuracy, and flow performance.
- Instructions for installing the NIOSH CBRN SCBA Retrofit Approval Label.

Checking the Certified Equipment List (CEL)

NIOSH maintains a database of equipment it certifies. This list contains CBRN approved SCBA equipment and retrofit kits by manufacturer, model, and approval number.

The CEL is updated regularly, and newly certified models are also posted on the NIOSH website (see Website Links).

Cautions and Limitations for Use of CBRN SCBA

- Use in conjunction with personal protective ensembles that provide appropriate levels of protection against dermal hazards.
- Some CBRN agents may not present immediate effects from exposure, but can result in delayed impairment, illness, or death.
- Direct contact with CBRN agents requires proper handling of the SCBA after each use and between multiple entries during the same use. Decontamination and disposal procedures must be followed. If contaminated with liquid chemical warfare agents, properly dispose of the SCBA after decontamination.
- The respirator should not be used beyond six (6) hours after initial exposure to chemical warfare agents to avoid possibility of agent permeation.

These limitations are not all inclusive. The respirator manufacturer may identify further cautions and limitations for their respirators. Regulatory agencies may also place a limit on the use of respirators in their standards.

CBRN APR Approved Respirators

Website Links

NIOSH/NPPTL website:
www.cdc.gov/niosh/npptl/default.html

Check the CEL: www.cdc.gov/niosh/celintro.html

Changes to the CEL:
www.cdc.gov/niosh/celpamp.html

The National Institute for Occupational Safety and Health (NIOSH), as part of the U.S. Centers for Disease Control and Prevention (CDC), has implemented a program to approve air-purifying respirators (APR) for use by fire fighters and other first responders to terrorist attacks.

NIOSH approval under the program signifies that an APR is expected to provide necessary protection to first responders in situations where an act of terror has released harmful chemicals, pathogens, or radioactive materials into the air. Approvals are based on positive results from rigorous tests on sample units submitted to NIOSH by manufacturers, and from stringent evaluation of manufacturers' quality-control practices, technical specifications, and other documentation.

Identifying CBRN Certified Respirators

You can identify a CBRN agent approved respirator by the approval label and markings on the equipment, the manufacturer's instruction manual, and by checking NPPTL's online Certified Equipment List.

Approval Labels and Markings

Full-facepiece air purifying respirators (APR) will contain approval labels that identify a CBRN rating. For example, canisters tested for 30 minutes will be marked CBRN 30.

CBRN canisters can be identified by color markings. Either the CBRN canister body, or the label affixed to the canister must be olive colored. Canister bodies may be any color if the label is olive. Every canister must be labeled with a CBRN rating.

Checking the Certified Equipment List (CEL)

NIOSH maintains a database of equipment it certifies. This CEL contains CBRN approved, full-facepiece air purifying respirators as a separate category. CBRN certified equipment is listed by manufacturer, model, component parts, accessories, and rated duration.

Checking the Web

NIOSH will also post a list of approved CBRN full-facepiece air purifying respirators on its website, and seeks to have it placed on or linked to other appropriate websites that disseminate information to the first responder community. NIOSH will also supply the list to the Occupational Safety and Health Administration (OSHA) for dissemination to its district offices.



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Cautions and Limitations for Use of CBRN APR

Please follow these cautions and limitations for proper use and maintenance of your CBRN APR respirator.

- Not for use in atmospheres containing less than 19.5 percent oxygen.
- Not for use in atmospheres immediately dangerous to life and health, or where hazards have not been fully characterized.
- Do not exceed the rated service time. Follow established canister change schedules, and observe end of service life indicators to ensure that canisters are replaced before breakthrough occurs.
- Failure to properly use and maintain this product could result in injury or death.
- Follow the manufacturer's instructions for changing canisters.
- All approved respirators must be selected, fitted, used, and maintained in accordance with MSHA, OSHA, and other applicable regulations.
- Use replacement parts in the configuration as specified by the applicable regulations and guidance.
- Refer to the manufacturer's instructions and/or maintenance manuals for information on use and maintenance of this respirator.
- Consult manufacturer's instructions for information on the use, storage, and maintenance of this respirator at various temperatures.
- This respirator provides respiratory protection against inhalation of radiological and nuclear dust particles. Procedures for monitoring radiation exposure and full radiation protection must be followed.
- If an unexpected hazard is encountered during use, such as a secondary CBRN device, or pockets of entrapped or unforeseen hazards, immediately leave the area for clean air.
- Use in conjunction with personal protective ensembles that provide appropriate levels of protection against dermal hazard. Failure to do so may result in personal injury, even when the respirator is properly fitted, used, and maintained.
- Some CBRN agents may not present immediate effects from exposure, but can result in delayed impairment, illness, or death.
- Direct contact with CBRN agents requires proper handling of the respirator after each use, and between multiple entries during the same use. Decontamination and disposal procedures must be followed. If contaminated with liquid chemical warfare agents, dispose of the respirator after decontamination.
- Do not use beyond eight (8) hours after initial exposure to chemical warfare agents to avoid possibility of agent permeation. If liquid exposure is encountered, the respirator should not be used for more than two (2) hours.

These limitations are not all inclusive. NIOSH may identify other model-specific cautions and limitations as a condition of approval. The respirator manufacturer may identify further cautions and limitations for their respirators. Regulatory agencies may also place a limit on the use of respirators in their standards. Check the label and user instructions for the units.

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