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Fire & Rescue Division Hazardous Materials Section

BULLETIN # 16

(Version 1.3)

NIOSH LABEL REQUIREMENTS for SCBA and APR WMD / CBRN CERTIFICATION

Section twelve (12) of Part Two of the FIRESCOPE Standardized Equipment List (SEL) concentrates on respiratory protection. It describes the minimum requirements regarding self-contained breathing apparatus criteria for Type III and Type II teams and special requirements for SCBA and air purifying respirators that apply only for Type I teams.

Section 12.1 addresses Self-Contained Breathing Apparatus (SCBA).

Team Type	SEL Item that applies	Protection Criteria	Certification
III	12.1.1 SCBA, Complete 12.1.3 FACEPIECE, Full Face	STRUCTURAL STRUCTURAL	NFPA + NIOSH NFPA + NIOSH
II	12.1.1 SCBA, Complete 12.1.3 FACEPIECE, Full Face	STRUCTURAL STRUCTURAL	NFPA + NIOSH NFPA + NIOSH
I	12.1.2 SCBA, Complete 12.1.4 FACEPIECE, Full Face	STRUCTURAL + WMD STRUCTURAL + WMD	NFPA + NIOSH / CBRN NFPA + NIOSH / CBRN

Section 12.2 addresses Air Purifying Respirators (APR).

Team Type	SEL Item that applies	Team Type Requirement	Certification
III	12.2.1 MASK, Complete, Industrial 12.2.2 MASK, Complete, CBRN 12.2.5 Cartridges, Industrial 12.2.6 Cartridges, CBRN	Optional (not required) Not Applicable Optional (not required) Not Applicable	
II	12.2.1 MASK, Complete, Industrial 12.2.2 MASK, Complete, CBRN 12.2.5 Cartridges, Industrial 12.2.6 Cartridges, CBRN	Optional (not required) Not Applicable Optional (not required) Not Applicable	
I	12.2.1 MASK, Complete, Industrial 12.2.2 MASK, Complete, CBRN 12.2.5 Cartridges, Industrial 12.2.6 Cartridges, CBRN	Required Required Required Required	NIOSH / CBRN NIOSH / CBRN NIOSH / CBRN NIOSH / CBRN

Type I Team:

SCBA: For a Type I team certification, SCBA must also meet additional NIOSH* requirements for testing and certification to WMD / CBRN** threat atmospheres. A NIOSH / CBRN label

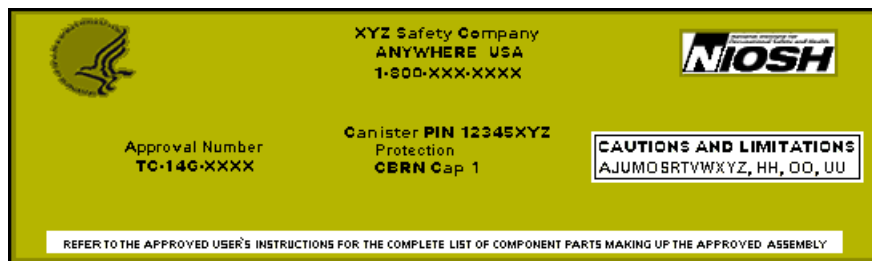
must be attached to the frame of the SCBA. During inspection, the inspection team will look for and verify the presence of this label on each breathing apparatus. An example of this label is shown here:



*NIOSH – National Institute for Occupational Safety and Health, a part of OSHA

**CBRN - Weapons of Mass Destruction / Chemical, Biological, Radiological particulates, Nuclear

APR: For a Type I team certification, APR must also meet additional NIOSH* requirements for testing and certification to WMD / CBRN* threat atmospheres. A NIOSH / CBRN label must be attached or imprinted in some way onto the approved canisters for use in a WMD threat atmosphere. During inspection, the inspection team will look for and verify the presence of this label on the canisters. An example of this label is shown here:



For more information please go to the NIOSH websites as noted below. These websites also include a comprehensive list of all breathing apparatus manufacturers who have submitted models for testing, as well as lists of models that have passed CBRN testing and are certified by NIOSH:

SCBA:

<http://www.cdc.gov/niosh/npptl/topics/respirators/cbrnapproved/scba/>

APR:

<http://www.cdc.gov/niosh/npptl/topics/respirators/cbrnapproved/apr/>

PAPR:

<http://www.cdc.gov/niosh/npptl/topics/respirators/cbrnapproved/papr/default.html>

CBRN SCBA Approved Respirators

Website Links

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

Download the CEL: www.cdc.gov/niosh/celzip.html

Search the CEL online: www2.cdc.gov/drds/cel/cel_form.asp

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

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

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

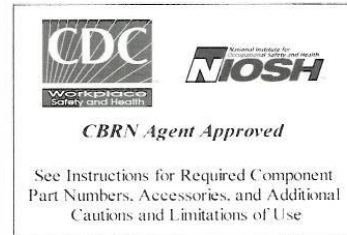
NIOSH approval under the program signifies that an SCBA is expected to provide necessary protection to first responders in situations where an act of terror has released harmful chemicals, pathogens, or radioactive materials into the air. Approvals are based on positive results from rigorous tests on 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 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

DHHS/CDC/NIOSH/NPPTL

P.O. Box 18070

626 Cochran 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)

CBRN Approved Parts

For correct protection in CBRN environments, the complete CBRN SCBA assembly must be composed of *only* those component parts listed in the row with the CBRN approval number. Parts not listed in the CBRN approval row 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 listed 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 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 regularly, and newly certified models are posted on the NIOSH website.

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.

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CBRN Approved Retrofit Kits for SCBA Respirators

Website Links

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

Download the CEL: www.cdc.gov/niosh/celzip.html

Search the CEL online: www2.cdc.gov/drds/cel/cel_form.asp

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 Soldier Biological and Chemical Command (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.

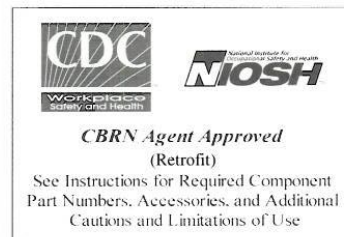
Manufacturers and users have expressed the desire and need to upgrade equipment placed in service prior to issuance of CBRN approval. The U.S. Centers for Disease Control and Prevention (CDC), through the National Institute for Occupational Safety and Health (NIOSH), has implemented a program to approve 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

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 components, parts, materials, and operation instructions required to



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upgrade your existing SCBA configuration to the approved CBRN configuration. 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.

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.

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CBRN APR Approved Respirators

Website Links

NPPTL website: www.cdc.gov/niosh/nppt/default.html

Download the CEL: www.cdc.gov/niosh/celzip.html

Search the CEL: www2.cdc.gov/drds/cel/cel_form.asp

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

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

The U.S. Centers for Disease Control and Prevention (CDC), through the National Institute for Occupational Safety and Health (NIOSH) 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 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 also be identified by color markings. The CBRN canister/label color is olive with a purple stripe indicator. However, color marking is not mandatory; canisters may be any color, but every canister must be labeled with a CBRN rating. Facepiece assemblies must be permanently marked "CBRN".

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. 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.

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