



GENERAL ORDER

DURHAM POLICE DEPARTMENT
DURHAM, NC

NUMBER:

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RESPIRATORY PROTECTION PROGRAM

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INTRODUCTION

To establish a comprehensive program, in compliance with all federal and state requirements regarding respiratory protection for emergency responders, specifically [29 CFR 1910.134](#), in order to provide for the safety and well-being of Durham Police Department general duty and special assignment personnel when operating in atmospheres that are, or have the potential of becoming, an immediate danger to their life and health. This includes general duty officers whose assignments do not normally include contact with hazardous materials.

DEFINITIONS

The following definitions are taken from [29 CFR 1910.134](#) and [NFPA 1404](#):

- Air Purifying Respirator (APR) – A respirator that works by removing gas, vapor, or particulate, or combinations of gas, vapor, and/or particulate from the air through the use of filters, cartridges, or canisters that have been tested and approved for use in specific types of contaminated atmospheres by the National Institute for Occupational Safety and Health. This respirator does not supply oxygen and therefore cannot be used to enter an atmosphere that is oxygen deficient.
- Emergency Situation – Any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that may or does result in the uncontrolled significant release of an airborne contaminant.
- Escape Only Respirator – A respirator intended to be used only for emergency exit - also known as an escape hood.
- Fit Factor – A quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.
- Immediately Dangerous to Life and Health (IDLH) – An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape a dangerous atmosphere.
- N95 mask – A respirator designed to achieve a very close facial fit and very efficient filtration of airborne particles. In addition to blocking splashes, sprays and large droplets, the respirator is also designed to prevent the wearer from breathing in very small particles that may be in the air. The 'N' designation denotes the mask is not oil resistant and the 95 designation denotes that when subjected to

careful testing, the respirator blocks at least 95% of very small test particles. This respirator does not supply oxygen and therefore cannot be used to enter an atmosphere that is oxygen deficient.

- Oxygen Deficient Atmosphere – An atmosphere with an oxygen level below 19.5% by volume.
- Quantitative Fit Test – An assessment of a respirator fit by numerically measuring the amount of leakage into the respirator
- Respirator – The term respirator may be used to describe N95, APRs and SCBAs.
- Self-Contained Breathing Apparatus (SCBA) – A device (respirator) worn by emergency responders to provide breathable air in an IDLH atmosphere. The term "self-contained" means that the breathing set is not dependent on a remote supply (e.g., through a long hose). SCBA are always used in conjunction with some type of personal protective clothing, garment, or suit.
- Service Life – The period of time that a respirator provides adequate protection to the wearer - determined in this policy through a field test of timed air consumption through simulated tasks while wearing SCBA.
- Supplied Air Respirator – An atmosphere supplying respirator for which the source of breathing is not designed to be carried by the user.

SCOPE OF THE PROGRAM

This program covers equipment selection, medical screening, fit testing, training, use and maintenance of respirators to be used by the following types of officers:

- Officers who are issued respirators to be used for escape from hazardous atmospheres.
- Officers who are issued respirators for use in maintaining the perimeter at crowd-control incidents where chemical agents (e.g., CS or CN tear gas) are deployed.
- Officers who are issued respirators to prevent exposure to tuberculosis and other serious airborne respiratory infections due to sustained contact with, or transport of, persons who are suspected of carrying an active infection with a serious airborne respiratory disease.
- Officers who, in exigent or emergency situations, are required to enter an area where CS, CN, or other tearing agents have been expelled.
- Officers who are issued respirators to be used while maintaining perimeters at hazardous materials incidents. These are officers who will be stationed in the support (cold) zone where contaminants are not expected to exceed levels deemed safe for unprotected persons, as determined by the Incident Commander.
- Officers who are issued APRs and/or SCBA to operate offensively or defensively in the contamination reduction (warm) zone. In this zone, personal protective clothing must be worn in conjunction with the appropriate respiratory protection as deemed by the Incident Commander.
- Officers who are issued APRs and/or SCBA to operate offensively or defensively in the exclusion (hot) zone. In this zone, personal protective clothing must be worn in conjunction with the appropriate respiratory protection as deemed by the Incident Commander.
- Forensic Services Unit (FSU) investigators who are issued APRs to process crime scenes in which a known deployed irritant is present. In this zone, additional personal protective equipment (PPE) to be worn is optional or at the discretion of the Incident Commander.

PROGRAM ADMINISTRATION

The Durham Police Department has designated the Supervising Officer of the Biological Chemical Emergency Response Team (BCERT) as the respiratory protection administrator to oversee this program. The program administrator shall be knowledgeable about the requirements of [29 CFR 1910.134](#) and all elements of the respiratory protection program. The administrator will be responsible for assuring implementation of all elements of this program.

APPROVED EQUIPMENT

Only approved equipment may be used by agency members.

- Escape Only Respirators –
- N95 NIOSH approved particulate masks
- Full face Air Purifying Respirator (APR) with NIOSH approval for Chemical, Biological, Radiological and Nuclear incidents (CBRN).
- Self-Contained Breathing Apparatus (SCBA) that meet current NIOSH standards. It is also recommended all SCBA follow NFPA standards in addition to NIOSH standards.

SELECTION OF RESPIRATORS

All respirators purchased by Durham Police Department shall meet or exceed standards established by the NIOSH.

The list below contains recommendations only for respirator selection. Each situation is unique and will dictate the use of a given respirator or alternate method. The final decision on selection of which respirator is to be used will be made by the Incident Commander.

Recommended Equipment Use Chart

Respirator Use	Respirator Type
Escape from chem/bio/nuclear incidents	CBRN approved escape hood
Perimeter hazmat incidents with specific industrial chemicals	Full facepiece APR with CBRN canister
Perimeter chem/bio/nuclear incident	Full facepiece APR with CBRN canister
Perimeter crowd control (CN or CS tear gas)	Full facepiece APR with CBRN canister
Activation within crowd control area	Full facepiece APR with CBRN canister
Crime Scene Investigation within a CN or CS environment (FSU)	Full facepiece APR with CBRN canister
Offensive or defensive work in the support (cold) zone	N95 mask, Full facepiece APR with CBRN canister
Offensive or defensive work in the contamination reduction (warm) zone	Full facepiece APR with CBRN canister or SCBA
Offensive or defensive work in the exclusion (hot) zone	Full facepiece APR with CBRN canister or SCBA

FIT TESTING

Personnel required to wear APRs or SCBA shall receive a quantitative fit test to determine whether their assigned APR or SCBA assembly adequately seals their face from contaminants or other hazards.

All general duty and special assignment personnel shall have a quantitative fit test performed prior to their first exposure to an IDLH atmosphere, industrial chemical agent, riot control agent, or CBRN agent when using an APR or SCBA.

All FSU personnel shall have a quantitative fit test performed prior to their first exposure to a riot control agent or other irritant when using an APR.

Before an individual is required to use any respirator with a tight-fitting face piece (APR / SCBA), the individual must be fit tested with the same make, model, style and size of respirator to be used. Individuals shall be provided with a sufficient number of models and sizes so that he/she may select an acceptable face piece.

Fit tests shall be provided at the time of initial assignment and at least annually thereafter. Additional tests shall be provided whenever the officer, employer, supervisor, or program administrator makes visual observations of changes in the officer's physical condition that could affect respirator fit. These conditions include but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

All general duty and special assignment personnel shall have a qualitative fit test performed prior to their first exposure to an airborne particle when using a N95 mask.

Prior to the fit test, the officer shall be shown the proper procedures for donning and doffing a respirator. The officer shall demonstrate donning, adjusting the straps, and positive and negative pressure fit checks, if applicable.

The fit factor for all quantitative fit tests on APRs and SCBA shall be equal to or greater than 500 as stated in [29 CFR 1910.134](#).

Facial hair that interferes with the seal of the face piece shall not be allowed.

Personnel requiring corrective glasses shall be required to wear glasses with frames that do not interfere with the seal of the face piece.

Hard contact lenses are not allowed to be worn while wearing the APR or SCBA. Soft contact lenses are allowed.

MEDICAL EVALUATIONS

Members of BCERT and SET will undergo annual physical tests (known as hazmat physicals), which will include testing their ability to wear a SCBA. Information found in the medical questionnaire within 29CFR 1910.134 will be a part of this medical evaluation to determine capability to use SCBA. This is in addition to completion of a medical history statement and/or physical examination.

General duty personnel are considered medically qualified to use respiratory protective equipment after completing a medical history statement or its equivalent and successfully passing a physical examination, if so needed in accordance with [29 CFR 1910.134](#).

Medical evaluations are required for any member when:

- The member reports medical signs or symptoms that are related to the ability to use a respirator,
- A physician or other licensed health care professional, a supervisor, or the program administrator informs the agency that an officer needs to be re-evaluated,
- Observations made during fit testing and program evaluation indicate a need for re-evaluation , or
- A change occurs in workplace conditions (e.g., physical work effort, protective clothing, and temperature) that may result in a substantial increase in physiological burden placed on an officer.

INSPECTION OF SCBA

Police personnel shall inspect the APR and / or SCBA assigned to their position as part of their monthly equipment inspection for operational readiness. The inspection shall include the following:

- Face piece for cracks or deformities that would compromise either the air tight seal or the resistance to impact.
- Face piece straps for cuts, deformed or corroded buckles, ease of movement, and pliability of elastic parts.
- Face piece is not scratched to the point of reducing visibility and is firmly in place.
- Exhalation valve is working properly - no sticking or hesitation should be present.
- The low pressure hose on SCBA shall have no cuts, nicks, or punctures that compromise the flow of breathing air or have the potential for contaminating its quality. The quick connect shall have no cracks and will work properly.
- Overall check of condition of first stage regulator, audio alarm, second stage regulator, and intermediate pressure hose to determine excess wear or malfunctions on SCBA.
- The harness assembly shall be checked for condition of straps, buckles, and stitching to determine freedom of movement and excess wear on SCBA.
- Overall check of the air bottle to determine the presence of dents, gouges, blisters in the wrapping material, discolored paint, and general condition of the cylinder valve.
- The air pressure in the air bottle shall be verified and any bottle with less than 90% capacity (4050 psi) shall be replaced.
- The latest hydrostatic test date on the air bottle shall be determined and any bottle with an expired service life (3 years from most recent test date) shall be replaced immediately.

Any SCBA found to be defective shall be taken off the apparatus immediately and reported to the program administrator. SCBA found to be defective during an inspection shall remain not in service for any reason.

All personnel shall don the APR or SCBA at the conclusion of an inspection to confirm that all assemblies are functioning normally.

The APR or SCBA shall then be stored in a location on the vehicle which makes it immediately available for use but not in a location that causes unnecessary wear on any assembly. The APR or SCBA shall not be stored where it will be exposed to direct sunlight, excessive heat, dust, or other contaminants which may deteriorate or affect the operation of the unit. The APR or SCBA shall be stored in a manner that will not distort the face piece or the exhalation valve.

CLEANING AND DISINFECTANT PROCEDURES FOR SCBA AND APR

Personnel shall be responsible for cleaning their APR or SCBA face pieces at the conclusion of an inspection and after every use, regardless of the nature of the use. The following procedure shall be used:

The program administrator shall have a location designated for cleaning masks only.

The face piece shall be immersed in a cleaner/disinfectant solution prepared according to the manufacturer's specifications. This face piece shall remain immersed for two minutes. Excessive soil shall be removed at this time.

The face piece shall then be rinsed completely in clear warm running water, wiped down with a clean cloth removing all visible moisture and allowed to air dry.

The harness assembly, regulators, and air bottle shall be cleaned of excessive soil by either wiping down with a damp cloth or warm water, mild detergent or rinsing with clear water if necessary.

MAINTENANCE ON SCBA AND APR

Any APR or SCBA found to be defective during use or after inspection shall be taken out of service immediately. The user shall notify the program administrator of the problem for repair and/or replacement. The administrator shall then make the necessary arrangements for pickup, replacement and / or repair of the defective APR or SCBA.

The APR or SCBA shall be evaluated and repaired only by personnel who are technicians certified by the manufacturer.

Repairs shall be made in accordance with the manufacturer's recommendations and specifications for the type and extent of repairs to be made.

The APR or SCBA shall be re-certified as functioning properly prior to being placed back into service. A copy of all repair records shall be obtained and stored by the program administrator.

Repair records shall be maintained on all APRs or SCBA from the date the unit is placed into service until a minimum of three years from the date the unit is retired. These records shall include the face piece, harness assembly, and regulators.

Air bottles whose service life has expired shall be collected by the administrator and destroyed. The service record of each bottle shall be maintained for a minimum of three years from the time it is destroyed.

EMPLOYEE TRAINING

Members who are required to wear an APR or SCBA in IDLH atmospheres shall receive the necessary training to prepare them for such emergencies.

The training shall include requirements found in [29 CFR 1910.134](#) and [NFPA 1404](#).

Employees required to wear an APR or SCBA in IDLH atmospheres shall also receive re-training on an annual basis. Employees who are found to be deficient in related skills and knowledge will be required to obtain additional training, as necessary, to maintain their abilities in the proper use of APRs or SCBA.

At the end of employee training, employees shall be able to demonstrate knowledge in the following areas:

- Why the APR or SCBA is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the APR or SCBA.
- What the limitations of the APR or SCBA are.
- How to use the APR or SCBA effectively in emergency situations, including situations in which the APR or SCBA malfunctions.
- How to inspect, put on and remove, use, and check the proper seal of the APR or SCBA.
- What the procedures are for daily maintenance and storage of the APR or SCBA.
- How to recognize medical signs and symptoms that may limit or prevent the effective use of the APR or SCBA.

PROCEDURES FOR PROPER USE OF SCBA IN ROUTINE AND POTENTIAL EMERGENCY SITUATIONS

In routine situations no member of the Durham Police Department shall enter any atmosphere that is or may have the potential to become oxygen deficient or otherwise contaminated without wearing an approved self-contained breathing apparatus. .

Contaminated atmospheres shall include, but are not limited to, the following:

- Hazardous material incidents (when applicable)
- Indoor or outdoor chemical spills (when applicable)
- Any incident involving weapons of mass destruction including but not limited to chemical, biological, radiological, nuclear, explosive and incendiary (when applicable)
- Any atmosphere with the potential for rapid deterioration
- Below ground operations
- Industrial biological, chemical or pharmaceutical incidents resulting in a spill or release
- Crime scenes in which CN or CS or other irritant has been deployed
- Structure fires
- Vehicle fires
- Dumpster fires
- Any fire situation where smoke is visible. Woods and grass fires are excluded unless a determination is made of the presence of agricultural chemicals. In these instances, SCBA shall be in use by personnel.
- At the discretion of the incident commander during emergency incident.

APR or SCBA in use at an emergency incident shall remain in use by personnel until the atmosphere is determined to be safe. A safe atmosphere is generally determined by an atmospheric monitoring device operated by the incident safety officer. In the absence of the safety officer, the incident commander shall make the decision for personnel to remove APRs or SCBA. Safety of personnel is the primary consideration.

PROCEDURES FOR OTHER EMERGENCIES REQUIRING THE USE OF SCBA

Personnel who enter an IDLH atmosphere shall be required to do the following:

- Use SCBA along with full personal protective equipment, and enter with at least two personnel.
- Do not enter the IDLH atmosphere unless there are at least two additional personnel standing by on the outside for the purpose of rescue of the interior crews. ***
- Crews on the outside shall notify the incident commander prior to entering the structure for purposes of emergency rescue.
- Remain in either voice, visual, or signal line communication with each other at all times while in the IDLH atmosphere. Remain in radio contact with personnel outside the IDLH atmosphere.
- Personnel standing by on the outside of the IDLH atmosphere must be trained and equipped to perform an emergency rescue if necessary. At a minimum, personnel standing by on the outside shall wear SCBA with full protective equipment as well as the necessary retrieval equipment to perform a rescue.

One of the personnel standing by on the outside for the purpose of rescue may perform additional duties as assigned by the incident commander as long as these duties do not interfere with his/her availability to immediately respond to the interior for the purposes of rescue. Such activities may include accountability officer, shuttling of equipment to the point of entry, etc.

*** Note: This statement does not preclude officers from entering a structure to perform rescue activities before outside personnel are available. Entry is permitted only when there is a verified or a high probability for a potential victim. This verification may be from persons who have left the building confirming victim(s) are inside, neighbors who confirm there are victim(s) still inside, or circumstances that lead officers to believe, beyond a reasonable doubt, there are victim(s) still inside.

AIR QUALITY MAINTENANCE FOR SCBA

The Durham Fire Department has agreed to maintain the quality of breathing air provided for SCBA through a quarterly and annual check of all systems. The program administrator is responsible for actively monitoring air quality tests of the equipment by the DFD. The program administrator shall obtain and store records of air quality tests and copies of the vendor's certification for a minimum of three years from the date of the test or certification.

PERMANENT RECORD KEEPING

A comprehensive record shall be maintained on all aspects of the respiratory protection program. These records shall be compiled by the program administrator for storage for a minimum of three years from the date the equipment is retired. These records shall include the following:

- Complete inventory of all APRs and SCBAs within the department. These records are to include any SCBA in reserve status as well as those in active service.
- Identification of each cylinder and SCBA by inventory or serial number.
- Record of each regulator and harness assembly, cylinder and face piece to include (where appropriate):
 - Inventory/Serial #
 - Date of purchase
 - Date of manufacture
 - Date placed in service
 - Maintenance, inspections and repair

- Replacement Parts
 - All upgrades
 - Test performance
 - Location
 - Hydrostatic test pressure and dates
- Hydrostatic test dates to appear according to manufacturer's specifications
 - Test performance
- All SCBA purchased by the Durham Police Department shall undergo the following quality control measures prior to being placed into service:
 - Certificate of documentation of factory testing
 - A full inspection and testing by Durham Fire Department certified technicians.
 - Inspection of major components for completeness of assembly
 - Any visible signs of damage
 - All components tested for proper function and performance:
 - Manipulation of all adjustable components to include all slides, buckles, valves, and levers.
 - Face piece, regulator, alarms, and cylinder valve tested on test equipment for specification compliance.

DISCIPLINARY ACTION

Violations of this policy may result in disciplinary action determined on a case by case basis. Disciplinary action includes possible suspension or reassignment from specialized teams.



Jose L. Lopez, Sr.
Chief of Police