Pleasant Valley Fire District
Respiratory Protection Policy

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SECTION 1

INTRODUCTION

POLICY

It is the policy of the Pleasant Valley Fire District to maintain comprehensive occupational safety and health programs based upon sound engineering, education, and enforcement. This document establishes departmental policy, responsibilities, and the requirements for the protection of firefighters whose job requires the use of respiratory protection.

This document will also aid the firefighter in the use and care of respiratory protection.

The ***District Municipal Training Officer*** is solely responsible for all facets of this program and has full authority to make necessary decisions to ensure success of this program. This authority includes recommending hiring personnel and equipment purchases necessary to implement and operate the program. ***The Municipal Training Officer*** will develop written instructions covering each of the basic elements in this program, and is the sole person authorized to amend these instructions.

The Pleasant Valley Fire District has expressly authorized the Safety Officer to halt any operation of the Department where there is danger of serious personal injury. This policy includes respiratory hazards.

SECTION 2

GUIDELINES

GENERAL

Firefighters shall wear a Self-Contained Breathing Apparatus (SCBA) while performing any work in any Immediately Dangerous to Life and Health (IDLH) situation. These include but are not limited to:

- While engaged in interior structural firefighting
- While working in confined spaces where toxic products or an oxygen deficiency may be present (see PVFD Confined Space S.O.G.)
- During emergency situations involving toxic substances
- During all phases of firefighting and overhaul: and
- While engaged at vehicle fires

All firefighters shall continue to wear the SCBA until the officer in charge determines that respiratory protection is no longer required.

Protective Clothing

Firefighters wearing a SCBA shall be fully protected with the use of approved structural firefighting clothing that meet the requirements of NFPA, OSHA, and PESH Standards for Firefighters. Protective clothing shall include turnout coat, bunker pants, bunker boots, gloves, helmets, and hood as stated in Pleasant Valley Fire District S.O.G. #2 - Personal Protective Clothing.

Operating Procedures

- Firefighters wearing SCBA shall conduct a negative fit-check prior to use
- At least two (2) trained firefighters shall work together and shall maintain visual or voice communication at all times while wearing a SCBA.
- Firefighters shall not remove the SCBA unless in extreme emergencies and shall follow emergency procedures as set forth by approved curriculum
- SCBA shall be used in accordance with the manufacturer instructions.

SECTION 3
TRAINING

Required Training

Firefighters wearing respiratory protection shall be trained in its proper use, cleaning, and maintenance. No firefighter shall wear respiratory protection without being trainined as specified in this document.

Training in the use of respiratory protection shall be done in two (2) phases. Each new firefighter will be given initial training before using respiratory protection equipment and annual training thereafter.

New Recruit Training

Initial training shall be provided during the Firefighter I course at an approved NYS training academy. No firefighter is to use respiratory protection unless training has been successfully completed. Firefighters trained at other than state approved fire academy must be certified as trained by the Municipal Training Officer before wearing an SCBA in an IDLH atmosphere.

Annual Training

On-going training shall be provided to all firefighters of the Department. Respiratory protection will be part of the on-going training conducted by on a regular basis. Topics to be covered for the month shall be disseminated by the Company Officers.

Each firefighter must pass a quantitative face-piece fit-test during initial and annual training.

Course Content

Initial and annual training in respiratory protection shall be conducted as specified in Appendix B of this document.

SECTION 4

RESPIRATOR FITTING AND SEAL

Inspection Before Use

Each firefighter shall wear the correct size face-piece as determined by annual fit-testing. A firefighter shall not wear respiratory protection unless the proper size face-piece is available and the equipment is in proper working condition according to the manufacturer's specifications. Upon completion of Firefighter I, each firefighter will be issued their own mask.

Effective Seal Required

An effective face-to-face-piece seal is extremely important when using respiratory protective equipment. Minor leakage may allow contaminants to enter the face-to-face piece, even with a positive pressure SCBA. Any outward leakage will increase the rate of air consumption, reducing the time available for use and safe exit. The facepiece must seal tightly against the skin, without penetration or interference by any protective clothing or other equipment.

Contact Lenses

The use of soft contact lenses shall be permitted with SCBA use, provided that the firefighter has been wearing soft contact lenses for at least six (6) months without any problems.

SECTION 5
INSPECTION, STORAGE, MAINTENANCE, AND AIR SUPPLY

Inspection

Inspections are required to ensure that all respiratory protection equipment is properly operating and available for use. They shall be done at least monthly.

Inspection Schedule

An officer or his/her designee shall inspect SCBA and cylinders after each use by the wearer and monthly. Guidelines for inspections are in the manufacturer's instruction found in Appendix C of this policy.

After each inspection the appropriate forms shall be completed. SCBA units determined to be unfit for use shall be taken out of service and tagged with a description of the defect.

In the event replacement or repair of SCBA components is necessary, it shall be performed according to manufacturer's instructions and only by persons trained and certified by the manufacturer or returned to the manufacturer's certified service facility.

Each SCBA shall be cleaned and disinfected after each use. Only cleaning/sanitizing solutions for respiratory equipment and approved by manufacturer should be used for cleaning and

disinfecting. Alcohol and phenol-based cleaners should be avoided due to destructive effects on the face-piece materials.

SCBA cylinders shall be hydrostatically tested within the period specified by the manufacturer and applicable government agencies. All bottles must be tested every five (5) years.

Storage

All units shall be stored so that they are protected against direct sunlight, dust accumulation, severe temperature changes, excessive moisture, fumes, and damaging chemicals. Care is to be taken so that the means of storage does not distort or damage components.

Air-Supply

Breathing air in the SCBA cylinder shall meet the requirements of the Compressed Gas Association G-7.1-1989, COMMODITY SPECIFICATION FOR AIR, with a minimum air quality of Grade D.

Private vendors supplying the fire district with compressed breathing air shall provide a copy of the most recent inspection and certification. A copy of the most recent air-test shall be posted on the Air Compressor.

SECTION 6
RECORDKEEPING

Completed SCBA inspection forms, records/results of air quality tests, completed quantitative fit test records, records for both recruit training as well as certificates of completion for all training courses involving the use of SCBA will be maintained by the Municipal Training Officer.

SUMMARY OF RESPIRATORY PROTECTION PROGRAM RECORDS

TYPE OF RECORD	SOURCE	RETENTION DATE
SCBA Inspection Records		1 Year
Incoming Inspection	ANSI & OSHA	1 Year
Routine	ANSI & OSHA	1 Year
After Use	ANSI & OSHA	1 Year
Monthly	ANSI & OSHA	1 Year
SCBA Maintenance/Repair	ANSI & OSHA	Life of equipment
Air Quality Tests	ANSI & OSHA	1 Year
Quantitative Fit Test	ANSI & OSHA	1 Year
Training	ANSI & OSHA	5 Years
Evaluation of Program	ANSI & OSHA	1 Year

SECTION 7
PROGRAM EVALUATION

Evaluation Requirements

As per ANSI Z88.2-1980, “The effectiveness of the SCBA program shall be evaluated and corrective actions taken at least annually.”

Program Monitoring

Periodic monitoring of the respiratory protection program is necessary to ensure that all firefighters are adequately protected. Random inspections shall be made by the Authority Having Jurisdiction (AHJ) or their representative to endure that the provisions of the program are being properly implemented.

An annual review of the program shall be conducted by the Chief Staff and the Municipal Training Officer. The review shall include an assessment of each element required as follows:

- Ensure that all firefighters are being properly fitted with respiratory protection. This includes fit-testing firefighters annually
- Ensure that all firefighters using SCBA are properly trained
- Ensure the proper equipment, cleaning, inspection, and maintenance procedures are in place and being followed.
- Ensure proper documentation is being kept at all levels
- Develop plans to correct faults and target dates for their implementation

Appendix A

SCBA Checkout Procedures
SCOTT 4.5

Checklist:

Backpack and Harness Assembly

1. Straps
   a. Visually inspect for complete set
   b. Visually inspect for frayed or damaged straps

2. Buckles
   a. Visually inspect for mating ends
   b. Check locking operation

3. Back Plate and Cylinder Lock
   a. Visually inspect back plate for cracks, missing rivets, screws, etc.…
   b. Visually inspect cylinder hold-down mechanism and strap-check strap tightened and lock to insure it is fully engaged

Cylinder and Valve Assembly

Physically check to ensure that the cylinder us tightly fastened to the back plate.

1. Visually inspect for large dents or gouges in the carbon covering

2. Check Hydrostatic date to make sure it is current. (Within the last five (5) years)

3. Determine that cylinder valve lock is working properly, if equipped with one.

4. Inspect condition of gauge needle, face, and lens

5. Turn on the cylinder, listen and feel for around the package for leakage. Take out of service if any leaks are observed

Regulator and High-Pressure Hose

1. Listen or feel for leakage in hose or at hose-to-cylinder connector. Ensure that the reducer hose coupling is hand tightened to the cylinder valve outlet.

2. Slowly press the center of the donning switch on the regulator and release.

3. Check that the breathing regulator purge valve (red knob on regulator) is closed (full clockwise and pointer on knob upward)

4. Slowly open the cylinder valve by rotating the knob counterclockwise. The *vibra-alert* alarm should actuate then stop.

5. Inhale sharply to start the automatic flow of air.

6. Breathe normally from the face piece to insure normal operation.

7. Remove the face piece from the face. Air should flow freely from the face piece.

8. Fully depress the donning switch on the regulator. The airflow should stop.

9. Rotate the red purge valve one-half (1/2) turn counterclockwise (pointer on knob downward). Air should flow freely from the regulator. Unit must be taken out of service if the by-pass does not operate properly.

10. Rotate the purge valve one-half (1/2) turn clockwise to full closed position (pointer on knob upward). Airflow from regulator should stop.

11. Compare the remote gauge to the cylinder gauge. The variation may be only plus or minus 10 psi. Watch remote gauge for drop in pressure after tank valve is closed. A drop in pressure indicates leakage.

12. Close cylinder valve. Rotate the purge valve counterclockwise until air begins to flow. Observe the remote pressure gauge on the harness and note the pressure when the *vibra-alert* sounds. The pressure should be 20% to 25% or about one-fourth (1/4) of the total tank pressure when the alarm begins to sound.

13. Check that pressure is less than 80% of the rated pressure.

IMPORTANT

Defective units must be taken out of service, tagged, and must not be used until the unit is repaired.

The Station Captain and Municipal Training Officer must be notified ASAP.

Appendix B

Training Outline

The following topics are to be covered in the SCBA training.

1. Instruction in the principles of operation of the various types and models of SCBA's available to the Pleasant Valley Fire District.

2. Instruction on the construction details and limitations of each type and model of SCBA used by the Pleasant Valley Fire District.

3. Instruction on the hazardous environments that may be encountered including environments with:
    a. Particulate contaminants
    b. Gas contaminants
    c. Combinations of gas, vapor, and particulate contaminants
    d. Oxygen deficiency
    e. High temperatures

4. Instruction and training for the actual use of SCBA's shall include the following subjects:
    a. Procedures for donning and removing SCBA's
    b. Practice of controlled breathing
    c. Emergency procedures
    d. Preventive maintenance, care and cleaning
    e. Practice using SCBA in simulated IDLH environments
    f. Special problems involving the use of SCBA's
    g. Low temperatures – Lenses, exhaust valves, connections, materials problems
    h. High temperatures
    i. Rapidly changing temperatures
    j. Communication difficulties
    k. Confined Spaces
    l. Vision
    m. Face-piece to face sealing problems
    n. SCBA's do not provide protection from skin absorbed materials and skin irritants, ionizing radiation
    o. Use around water

5. Instruction on the common causes of failures
    a. Abuse and misuse of equipment
    b. Psychological and physiological factors
    c. Unapproved equipment
    d. Buddy breathing
    e. Damaged equipment

Appendix C

Pleasant Valley Fire District

Monthly SCBA Inspection Form

Serial Number: _____ Model Number: 4.5 Scott

Year of Manufacture: _____ Location: _____

Storage: Acceptable _____ Not Acceptable_____

Items	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Air Cylinder Pressure												
Back Pack												
Bypass Valve												
Cleanliness												
Cylinder Valve												
Demand												
Exhalation Valve												
Facepiece Lens												
Harness												
Inhalation Valve												
Mainline Valve												
“O” Ring Connector												
PASS Alarm												
Pressure Demand												
Regulator Diaphragm												
Regulator Face piece												
Rubber Hoses												

Appendix D

Pleasant Valley Fire Department
Annual SCBA Certification

Year: _____

Name: _____ Rank: _____ Badge: _____

Medical Date: _____ Fit Test: _____

EES: _____ SCBA Skill sheets attached: Y N

Respirator Type Selected: _____

Manufacturer: _____ Model #: _____

Mask Size selected: S M L XL

Conditions, which could affect respirator fit (check all that apply)

• Clean Shaven	Yes □	No □
• Beard Growth	Yes □	No □
• Mustache	Yes □	No □
• Dentures	Yes □	No □
• Weight Gain or Loss	Yes □	No □
• Facial Scar	Yes □	No □
• Dentures Absent	Yes □	No □
• Glasses	Yes □	No □

If any of the above interfere with the function or seal of the respirator, fit testing is not permitted unless the condition is corrected

Comments: _____

MTO Approval: _____

Date: _____