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IV-31 HAZARDOUS ATMOSPHERE & RESPIRATORY PROTECTION

EFFECTIVE: 01/01/2005

CALEA Standards: N/A

CFA Standards: N/A

I. POLICY: It is the policy of the West Palm Beach Police Department to establish practices which will minimize risks of exposure for its members from airborne contaminants while establishing guidelines to enhance a departmental response to effectively deal with a Chemical, Biological, Radiological Nuclear and Explosive (CBRNE) or other incident which could harm its members or the citizens of West Palm Beach. Emphases to properly prepare and train all members of the department to safely respond to incidents in which a hazardous substance have been accidentally released or used in the proliferation of a crime and will be provided to each member of the Department. To this end, each member will be provided with a complete Personal Protective Equipment (PPE) set.

II. DEFINITIONS:

A. Level - A protection - worn when the hazardous substance has been identified and requires the highest level of protection for skin, eyes, and the respiratory system. It consists of a Self Contained Breathing Apparatus or SCBA and a totally enclosed vapor protective suit

B. Level - B protection - selected when the type and atmospheric concentration or substances being identified requires a high level of respiratory protection, but less skin protection. Consists of SCBA, protective suit, foot covering and gloves

C. Level - C protection - selected when the atmospheric contaminant, liquid splashes, or other direct contact will not adversely affect or be absorbed through exposed skin. This consists of an air purifying respirator and coverall style HazMat suit that is designed for use in a warm or perimeter zone of an incident. Consists of APR, protective suit, foot covering and gloves

D. Level - D protection - standard uniform worn by members of the West Palm Beach Police Department.

E. Decontamination or DECON: - A process to make safe by eliminating poisonous or otherwise harmful substances; such as noxious chemicals or radioactive material.

F. Hazardous Atmosphere - environmental conditions that are hazardous to the health and welfare of responding emergency personnel. These incidents require the use of appropriate PPE and respiratory protection. No member shall enter into a Hazardous Atmosphere without proper equipment, training, and classification of the environment. Although most hazards encountered in various conditions most are anticipated to be one of the following:

1. Criminal Release - individual(s) committing a crime, most commonly associated with drug labs, terrorist incidents involving a hazardous device, composed of Chemical, Biological, Radiological, Explosive and Nuclear components (CBRNE) or acts of sabotage that releases a dangerous substance.

2. Accidental Release - include the unintentional release of dangerous substances from storage facilities (tanks), transportation accidents, or structural fires.

G. SWAT Controlled Incidents - atmospheres created or altered under the direction of the SWAT Commander.

1. Consistent with existing SWAT procedures, chemical irritants employed are deemed necessary and the selection and use of appropriate personal protective equipment, proper respiratory protection level, and air monitoring during SWAT controlled Situations shall be the responsibility of the SWAT Commander.

2. Considerations for PPE prior to a SWAT operation or moving into a Hazardous Atmosphere; although there is no immediate effect on suspects or victims to a dangerous substance, consideration should be given to long term effects as a result of improper selection of PPE.

H. Disposable Particulate Respirators (DPR): - Common dust or filter type mask which are the first level of

respiratory protection. The mask is intended to protect members from particulate matter and to offer protection from individuals believed to carry contagious diseases or conditions.

I. Air Purifying Respirator (APR) - the second level of respiratory protection; commonly referred to as a *gas mask*.

J. Self Contained Breathing Apparatus (SCBA) - the third level of respiratory protection; consists of a positive air system and is used in environments that contain unknown contaminants or conditions and is too hazardous for the use of an APR.

K. Fit Testing - both quantitative and qualitative testing procedures used to determine proper fit of the assigned mask to each member.

L. Police Incident Commander (PIC) - the senior ranking officer on the scene of a hazardous atmosphere.

1. Responsible to implement and participate in the Unified Command System and ensures the safety of department resources on scene.

III. PERSONAL PROTECTION EQUIPMENT (PPE):

A. The department has adapted a level C protective equipment set and it will be issued to all sworn members.

B. PPE equipment; designed to protect members from exposure of secondary chemical contamination and allows members to operate in a chemical incident warm zone.

IV. MEDICAL EVALUATION:

A. Members selected for respirator issue shall be medically evaluated by the designated Medical Director or health care facility, at no cost to the member.

B. Each employee must complete the respirator medical questionnaire prior to evaluation by a physician (Appendix A).

1. Copies of the medical questionnaire and evaluation will be maintained in the members personnel file, in accordance with OSHA regulations.

2. Members aware of a change in their medical status shall advise their supervisor immediately.

C. Any member who cannot successfully pass medical certification will not be permitted to use or possess any respiratory protection.

D. It is the Individual Officer's responsibility to report all changes in medical conditions that would prohibit the safe use of respiratory and PPE.

V. PPE TRAINING & FIT TESTING:

A. All members will complete a course of instruction on wearing, caring, and decontaminating the PPE=s prior to their issuance.

B. All members will be fit tested, annually.

1. Facial hair will interfere with the seal of the respirator,
2. Long hair should be pulled away from the face and placed in a ponytail or bun,
3. Eyeglasses will interfere with the seal of the respirator and will not be worn.

- a. The department will provide members with a corrective lens holder,
- b. if needed, prescription inserts are the responsibility of the member.

c. contacts will not be worn by any member as they pose a contamination hazard.

VI. PPE MAINTENANCE:

A. Each member is responsible for the periodic inspection and cleaning of their issued PPE.

1. Shift Commanders will be notified and facilitate any repair or replacement of PPE.

2. PPE=s will be cleaned and sanitized after each use, disinfected as needed and in accordance with training received.

a. DECON will be conducted under the direction of fire rescue or other hazmat personnel.

B. Storage of the PPE will not expose it to excess heat or sunlight.

C. While on-duty, members will have their PPE readily available at all times.

D. Supervisors will incorporate PPE issued item inspections with the member's vehicle inspection. Equipment checks for the following will be accomplished;

1. Frayed edges or straps,
2. cracking of the silicone materiel or
3. evidence of heat damage.

VII. DUTIES AND RESPONSIBILITIES:

A. The Assistant Chief of Field Operations or designee will implement the PPE program.

B. Work Area Monitoring: - prior to any officer donning personal protective equipment, air monitoring must occur. At the scene of a Hazardous Atmosphere, a Unified Command will be implemented. In a typical emergency scenario, the Fire Department will be responsible for air sampling and monitoring. Only when it has been determined that conditions permit the use of issued respiratory equipment will officers don protective equipment. This information shall be delivered via the Unified Command System through the Police Chain of command. This is to ensure that issued equipment offers sufficient protection against the identified hazardous present on scene. In SWAT controlled situations, the Acting SWAT Commander shall be responsible for adherence to this Policy. Air Monitoring shall be accomplished by utilizing the expertise and specialty training of the assigned SWAT member.

VIII. OPERATIONAL CONSIDERATIONS:

A. PPE is designed to protect the wearer against inhalation and absorption hazards of a Chemical, Biological, Radiological, Explosive and Nuclear components.

B. The complete PPE ensemble must be worn to ensure complete protection from the environment.

C. Members deployed to a CBRNE incident shall work in two member teams.

1. Team members will monitor each other for signs of heat stress, chemical poisoning, or biological sickness.

D. While deployed to an CBRNE incident and wearing PPE ensemble members will alternate between duty and rest cycles of at least 30 minutes in duration.

1. While in a rest cycle: members will re-hydrate.

2. If a formal Incident Command rehabilitation sector is established, then members will additionally be monitored by on-duty medical personnel.

E. Any member who feels fatigued, ill or has difficulty breathing will immediately leave the area for more definitive medical treatment.

F. Officers are required to leave a hazardous atmosphere when any of the following conditions exists:

1. Respirator malfunction due to leakage into the respirator (smell or tastes),
2. increased breathing resistance,
3. discomfort associated with heat related injuries,
 - a. to include increased body temperature,
 - b. nausea,
 - c. coughing or other physical symptom
4. It is the member=s responsibility to be aware of their physical status at all times.

G. It is imperative that the member exit the warm or hot zones for decontamination before symptoms or conditions incapacitate the member.

H. Approved respirators for use by the West Palm Beach Police Department are listed in Appendix B. Use of any other respirator is not authorized.

IV. REFERENCES:

- Occupational Safety and Health Administration (OSHA) 29, CFR 1910
- SOP # IV-25 SWAT Team Function,
- SOP # IV-19 Terrorism/Weapons of Mass Destruction Response,
- SOP # IV-26 Hostage Negotiations,
- SOP # IV-27 Underwater Search & Recovery,
- SOP # II-19 Infectious Diseases,
- SOP # III - 19 Vehicle and Equipment
- SOP # I-20 Staff Inspections.

Delsa R. Bush, Chief of Police

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Job Title Task Files: Bureau Commander, Shift Commander

(Appendix A)
West Palm Beach Police Department
Hazardous Atmosphere & Respiratory Protection
Respiratory Medical Evaluation Questionnaire

Date _____

Part A. Section 1. (Mandatory/ Please Print) The following information must be provided by every employee who has been selected to use any type of respirator.

- 1. Your name: _____
2. Age: _____
3. Sex: Male Female
4. height: _____ ft. _____ in.
5. Weight: _____ lbs.
6. Your job title: Police Officer
7. A phone number where you can be reached by the health care professional who reviews this questionnaire: (____) _____
8. The best time to phone you at this number: _____
9. Has your employer told you how to contact the health care professional who will review this questionnaire: Yes No
10. Check the type of respirator you will use (you can check more than one category):
a. N, R, or P disposable respirator (filter-mask, non- cartridge type only).
b. Other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus).
11. Have you worn a respirator Yes No If "yes," what type(s): _____

Part A. Section 2. (Mandatory) Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (check appropriate box and if the answer is yes to the following questions, please describe on the last page of this questionnaire, indicating the part and question.

- 1. Do you currently smoke tobacco, or have you smoked tobacco in the last month: Yes No
2. Have you ever had any of the following conditions?
a. Seizures (fits): Yes No
b. Diabetes (sugar disease): Yes No
c. Allergic reactions that interfere with your breathing: Yes No
d. Claustrophobia (fear of closed-in places): Yes No
e. Trouble smelling odors: Yes No
3. Have you ever had any of the following pulmonary or lung problems?
a. Asbestosis: Yes No

- b. Asthma: Yes No
- c. Chronic bronchitis: Yes No
- d. Emphysema: Yes No
- e. Pneumonia: Yes No
- f. Tuberculosis: Yes No
- g. Silicosis: Yes No
- h. Pneumothorax (collapsed lung): Yes No
- i. Lung cancer: Yes No
- j. Broken ribs: Yes No
- k. Any chest injuries or surgeries: Yes No
- l. Any other lung problem that you've been told about: Yes No

4. Do you currently have any of the following symptoms of pulmonary or lung illness?

- a. Shortness of breath: Yes No
- b. Shortness of breath when walking fast on level ground or walking up a slight hill or incline: Yes No
- c. Shortness of breath when walking with other people at an ordinary pace on level ground: Yes No
- d. Have to stop for breath when walking at your own pace on level ground: Yes No
- e. Shortness of breath when washing or dressing yourself: Yes No
- f. Shortness of breath that interferes with your job: Yes No
- g. Coughing that produces phlegm (thick sputum): Yes No
- h. Coughing that wakes you early in the morning: Yes No
- i. Coughing that occurs mostly when you are lying down: Yes No
- j. Coughing up blood in the last month: Yes No
- k. Wheezing: Yes No
- l. Wheezing that interferes with your job: Yes No
- m. Chest pain when you breathe deeply: Yes No
- n. Any other symptoms that you think may be related to lung problems: Yes No

5. Have you ever had any of the following cardiovascular or heart problems?

- a. Heart attack: Yes No
- b. Stroke: Yes No
- c. Angina: Yes No
- d. Heart failure: Yes No
- e. Swelling in your legs or feet (not caused by walking): Yes No
- f. Heart arrhythmia (heart beating irregularly): Yes No
- g. High blood pressure: Yes No
- h. Any other heart problem that you've been told about: Yes No

6. Have you ever had any of the following cardiovascular or heart symptoms?

- a. Frequent pain or tightness in your chest: Yes No
- b. Pain or tightness in your chest during physical activity: Yes No
- c. Pain or tightness in your chest that interferes with your job: Yes No
- d. In the past two years, have you noticed your heart skipping or missing a beat: Yes No
- e. Heartburn or indigestion that is not related to eating: Yes No
- f. Any other symptoms that you think may be related to heart or circulation problems: Yes No

7. Do you currently take medication for any of the following problems?

- a. Breathing or lung problems: Yes No
- b. Heart trouble: Yes No
- c. Blood pressure: Yes No
- d. Seizures (fits): Yes No

8. If you've used a respirator, have you ever had any of the following problems (If you've never used a respirator, check the following space and go to question 9:)?

- a. Eye irritation: Yes No
- b. Skin allergies or rashes: Yes No
- c. Anxiety: Yes No
- d. General weakness or fatigue: Yes No
- e. Any other problem that interferes with your use of a respirator: Yes No

9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire: Yes No

Questions 10 to 15 below must be answered by every employee who has been selected to use either a full-face piece respirator or a self-contained breathing apparatus (SCBA). For employees who have been selected to use other types of respirators, answering these questions is voluntary.

10. Have you ever lost vision in either eye (temporarily or permanently): Yes No

11. Do you currently have any of the following vision problems?

- a. Wear contact lenses: Yes No
- b. Wear glasses: Yes No
- c. Color blind: Yes No
- d. Any other eye or vision problem: Yes No

12. Have you ever had an injury to your ears, including a broken eardrum: Yes No

13. Do you currently have any of the following hearing problems?

- a. Difficulty hearing: Yes No
- b. Wear a hearing aid: Yes No
- c. Any other hearing or ear problem: Yes No

14. Have you ever had a back injury: Yes No

15. Do you currently have any of the following musculoskeletal problems?

- a. Weakness in any of your arms, hands, legs, or feet: Yes No
- b. Back pain: Yes No
- c. Difficulty fully moving your arms and legs: Yes No
- d. Pain or stiffness when you lean forward or backward at the waist: Yes No
- e. Difficulty fully moving your head up or down: Yes No
- f. Difficulty fully moving your head side to side: Yes No
- g. Difficulty bending at your knees: Yes No
- h. Difficulty squatting to the ground: Yes No
- i. Climbing a flight of stairs or a ladder carrying more than 25 lbs: Yes No
- j. Any other muscle or skeletal problem that interferes with using a respirator: Yes No

Part B Any of the following questions, and other questions not listed, may be added to the questionnaire at the discretion of the health care professional who will review the questionnaire.

1. In your present job, are you working at high altitudes (over 5,000 feet) or in a place that has lower than normal amounts of oxygen: Yes No
 If "yes," do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you're working under these conditions: Yes No

2. At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (e.g., gases, fumes, or dust), or have you come into skin contact with hazardous chemicals: Yes No
 If yes, name the chemicals if you know them: _____

3. Have you ever worked with any of the materials, or under any of the conditions, listed below:

- a. Asbestos: Yes No

- b. Silica (e.g., in sandblasting): Yes No
 - c. Tungsten/cobalt (e.g., grinding or welding this material): Yes No
 - d. Beryllium: Yes No
 - e. Aluminum: Yes No
 - f. Coal (for example, mining): Yes No
 - g. Iron: Yes No
 - h. Tin: Yes No
 - i. Dusty environments: Yes No
 - j. Any other hazardous exposures: Yes No
- If "yes," describe these exposures _____

4. List any second jobs or side businesses you have: _____

5. List your previous occupations: _____

6. List your current and previous hobbies: _____

- 7. Have you been in the military services? Yes No
- If "yes," were you exposed to biological or chemical agents (either in training or combat): Yes No

8. Have you ever worked on a HAZMAT team? Yes No

9. Other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire, are you taking any other medications for any reason (including over-the-counter medications): Yes No

If "yes," name the medications if you know them: _____

10. Will you be using any of the following items with your respirator(s)?

- a. HEPA Filters: Yes No
- b. Canisters (for example, gas masks): Yes No
- c. Cartridges: Yes No

11. How often are you expected to use the respirator(s) (circle "yes" or "no" for all answers that apply to you):

- a. Escape only (no rescue): Yes No
- b. Emergency rescue only: Yes No
- c. Less than 5 hours per week: Yes No
- d. Less than 2 hours per day: Yes No
- e. 2 to 4 hours per day: Yes No
- f. Over 4 hours per day: Yes No

12. During the period you are using the respirator(s), is your work effort:

a. Light (less than 200 kcal per hour): Yes No

If "yes," how long does this period last during the average shift: _____ hrs. _____ mins.

Examples of a light work effort are sitting while writing, typing, drafting, or performing light assembly work; or standing while operating a drill press (1-3 lbs.) or controlling machines.

b. Moderate (200 to 350 kcal per hour): Yes No

If "yes," how long does this period last during the average shift: _____ hrs. _____ mins.

Examples of moderate work effort are sitting while nailing or filing; driving a truck or bus in urban traffic; standing while drilling, nailing, performing assembly work, or transferring a moderate load (about 35 lbs.) at trunk level; walking on a level surface about 2 mph or down a 5-degree grade about 3 mph; or pushing a wheelbarrow with a heavy load (about 100 lbs.) on a level surface.

c. Heavy (above 350 kcal per hour): Yes No

If "yes," how long does this period last during the average shift: _____ hrs. _____ mins.

Examples of heavy work are lifting a heavy load (about 50 lbs.) from the floor to your waist or shoulder; working on a loading dock; shoveling; standing while bricklaying or chipping castings; walking up an 8-degree grade

about 2 mph; climbing stairs with a heavy load (about 50 lbs.).

13. Will you be wearing protective clothing and/or equipment (other than the respirator) when you're using your respirator: Yes/No

If "yes," describe this protective clothing and/or equipment: _____

14. Will you be working under hot conditions (temperature exceeding 77 deg. F): Yes/No

15. Will you be working under humid conditions: Yes/No

16. Describe the work you'll be doing while you're using your respirator(s) _____

17. Describe any special or hazardous conditions you might encounter when you're using your respirator(s) (for example, confined spaces, life-threatening gases): _____

18. Provide the following information, if you know it, for each toxic substance that you'll be exposed to when you're using your respirator(s):

Name of the first toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of the second toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of the third toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

The name of any other toxic substances that you'll be exposed to while using your respirator: _____

19. Describe any special responsibilities you'll have while using your respirator(s) that may affect the safety and well-being of others (for example, rescue, security): _____

(Appendix B)

Scott AV2000 with canister adapter utilizing the responder cartridge
Scott Pak 90 SCBA
Avon S10 APR
Avon FM12 APR
3M 7800 Series APR
3M 9211 Filter Mask