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OPERATIONS MANUAL

STANDARD INSTRUCTION 14, SECTION 01

PERSONAL PROTECTIVE EQUIPMENT: RESPIRATORY PROTECTION

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I. PURPOSE

San Diego Fire-Rescue Department (SDFD) employees in the course of their duties are routinely exposed to high heat, smoke, toxic gases, oxygen deficient atmospheres, flashovers, hazardous materials and other respiratory hazards. Respiratory injuries are alarmingly high in the fire service. For this reason it is standard practice at all incidents to not enter any structure that is charged with smoke, fire gases or hazardous materials unless one is equipped with a respirator including, but not limited to a Self-Contained Breathing Apparatus (SCBA). For the purpose of this document, 'respirator' will include all types of respirators used by the SDFD.

Personnel may also be at risk for exposure to disease during Emergency Medical Service operations, as a result SDFD must operate under the OSHA guidelines for Aerosolized Transmittable Disease protection. Employees will be given guidelines for the use, storage and fit testing of the negative pressure respirator or the tight fitting respirator (N100).

This policy is an abbreviated version of the Respiratory Protection Program Guide (RPPG). Further details are available within the RPPG.

All of the personnel identified within the scope of this policy (hereafter referred to as "employees") must be enrolled in the SDFD Respiratory Protection Program.

II. SCOPE

This policy shall apply to all SDFD personnel that are required to wear an SCBA, APR or N100 respirator during the normal course of their duties.

III. AUTHORITY

The fire chief authorizes the information within this policy.

IV. POLICY

A. Responsibilities

1. Program Administrator

The Assistant Fire Chief of Operations (or designee) shall be the Program Administrator. The Program Administrator shall be responsible for administering the Respiratory Protection Program. Duties of the Program Administrator shall include:

- a. Identifying and establishing policies regarding use, training and fit testing.
- b. Selecting respiratory protection options.
- c. Monitoring department respirator use and ensuring that respirators are used within their specifications.
- d. Ensuring all required federal, state, county and department respirator training is conducted.
- e. Ensuring proper storage and maintenance of respiratory protection equipment.

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- f. Administering the medical program to include:
 - 1) Providing the San Diego Firefighters Regional Wellness Center (Wellness Center) and/or the City of San Diego contract medical provider a current copy of the Respiratory Protection Program Guide, a copy of the respiratory protection standard, and the scope of work of each employee requiring evaluation.
 - 2) Ensuring that all pertinent records required by the Respiratory Protection Program are maintained.
 - 3) Evaluating the Respiratory Protection Program.
 - 4) Updating the Respiratory Protection Program Guide, as needed.
2. Supervisors

Supervisors are responsible for ensuring the Respiratory Protection Program is implemented in their respective divisions. In addition to being knowledgeable about the Respiratory Protection Program requirements as they pertain to their personal protection, supervisors must also ensure that the program is understood and adhered to by the employees under their charge. Duties of the supervisor include:

 - a. Ensuring that employees under their supervision (including fire recruits and probationary personnel) have received all appropriate training, annual fit-testing, and medical evaluation required for respirator use.
 - b. Ensuring the availability of appropriate respirators and accessories.
 - c. Being aware of tasks requiring the use of respiratory protection.
 - d. Enforcing the proper use of respiratory protection when necessary.
 - e. Ensuring that respirators are properly cleaned, maintained, and stored according to SDFD adopted practices.
 - f. Ensuring that respirators properly fit and do not cause discomfort.
 - g. Continually monitoring work areas and operations to identify respiratory hazards.
 - h. Coordinating with the Program Administrator to address respiratory hazards or other concerns regarding the Respiratory Protection Program.
 - i. Company officers shall ensure that each individual in their command is assigned an SCBA for use.
3. Human Resources Division
 - a. SDFD Human Resources Division (HR) shall maintain all Medical Respiratory Clearance Forms originating from the Wellness Center and/or the City of San Diego contract medical provider.
 - b. The HR Division shall be responsible for tracking all SDFD employees and ensuring compliance. The HR Program Manager shall be ultimately responsible for employee tracking.
4. Wellness Officer

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The Wellness Officer is the administrator of the SDFD Wellness Program. The Wellness Officer shall be responsible for the following:

- a. Ensuring that respiratory fitness exams are provided to all employees who wish to participate at the Wellness Center.
- b. Ensuring that HR receives Medical Respiratory Clearance Forms for all employees that receive a respiratory fitness exam through the Wellness Center.
- c. Notifying HR when an employee has opted out of the respiratory fitness exam offered by the Wellness Center.
- d. Ensuring all examinations and questionnaires remain confidential between the employee and the physician.
- e. Additionally, the Wellness Officer shall provide any employee who opts out of a respiratory fitness exam offered through the Wellness Center with a confirmation statement, signed by the employee, which states in essence:
 - 1) The employee has been offered the opportunity to participate in a required annual respiratory fitness exam.
 - 2) The employee has refused this exam.
 - 3) The employee has been advised that within 30 business days a respiratory fitness exam must be completed by the employee through the City of San Diego contract medical provider.
 - 4) A completed and approved Medical Respirator Clearance Form must be submitted to HR within 45 business days or December 31st of the current calendar year, whichever occurs first.
 - 5) The employee has been advised that HR will be notified of his/her refusal to participate in the respiratory fitness exam offered by the Wellness Center.
 - 6) A copy of the signed document will be sent to the HR Division.

5. Training Division

The Training Division shall be responsible for the following:

- 1) Notification to personnel of annual SCBA/Respirator refresher training.
- 2) Track and maintain documentation of completed training through the departmental training website.
- 3) Develop and maintain a roster of non-compliant personnel and forward these names, through the chain-of-command, to the appropriate deputy chief of operations.
- 4) Assist supervisors in providing resources and personnel to assist in remedial training.
- 5) Maintain and revise the Drill Manual section related to the SCBA and other respirators.

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- 6) SDFD shall provide effective training to all employees who are required to use respirators. The training must be comprehensive, understandable, and recur at least annually. Additional training shall occur when deemed necessary.
- 7) Employees who are required to wear a respirator are responsible to know and understand all current information about respirators as outlined in the Drill Manual. SDFD shall provide retraining on an annual basis or when necessary.

6. SCBA Technicians (Fire Station 36)

SCBA Technicians shall be responsible for the following:

- 1) Maintain a current roster of all employees who have been SCBA face piece fit-tested.
- 2) Develop a schedule of annual SCBA flow and face piece fit testing and notification to all personnel no later than 30 days prior to start of testing.
- 3) Establish a roster of non-participants and forward these names to the Program Administrator prior to the established deadline.

7. Employees

Each employee has the responsibility to wear a respirator when and where required and in the manner in which they were trained. Employees shall also:

- a. Participate in the annual SCBA flow and face piece fit test.
- b. Care for and maintain their assigned respirators as instructed including cleaning and disinfecting after each use and storing in a clean, sanitary location.
- c. Inform their supervisor if their assigned respirator no longer safely fits and request a replacement or repair.
- d. Inform their supervisor or the Program Administrator of any respiratory hazards they feel are not being adequately addressed in the workplace and of any other concerns that they may have regarding the Respiratory Protection Program.
- e. Participate in an annual medical respiratory fitness exam within each calendar year (January 1 – December 31).
- f. Be granted the opportunity to speak with the treating physician about their medical evaluation, if they so request.
- g. Complete the annual SCBA/Respirator refresher training.
- h. Be competent at all times in the operation of the SCBA and/or respirator and all related components.
- i. Participate in annual education, training, and fit testing for a negative pressure or tight fitting (N100) respirator.

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Any Operations employee that has not completed their medical respiratory fitness exam within the calendar year (January 1 – December 31) shall be considered out of compliance and can be subjected to discipline and/or removal from Operations until an exam has been completed and an approved medical respiratory clearance form is received in HR.

B. Types of Respirators

1. The respirators used by SDFD employees include:
 - a. Self-Contained Breathing Apparatus (SCBA)
 - b. Air Purifying Respirators (APR)
 - c. Negative pressure/tight fitting respirators (N100)
2. The positive-pressure SCBA is the preferred device for respiratory protection. At no time shall an APR replace the use of a positive-pressure SCBA when an SCBA is immediately available and its application is practical for the incident.
3. APRs shall be provided to each firefighter for the purpose of escape from a known/suspected air-borne contaminant, when immediate access to an SCBA is not available.
4. Negative pressure respirators shall be used when filtration of small airborne particulates are present. The atmosphere must have sufficient oxygen levels and not have airborne petroleum particles.

C. Respirator Use

1. Fire Operations
 - a. It is the policy of the SDFD that all personnel that are expected to respond to and function in areas of atmospheric contamination shall be equipped with an appropriate respirator and trained in its proper use and maintenance.
 - 1) The primary function of the SCBA/respirator is to protect the user from any respiratory contact with products of combustion, superheated gases, toxic products or other hazardous contaminants.
 - 2) CO (carbon monoxide) readings shall not be used as an indicator of safe atmospheric conditions in the context of firefighting operations. CO does not correlate with the presence or absence of toxic, carcinogenic airborne contaminants. Numerous toxic, carcinogenic contaminants may be present in environments that appear safe and where CO readings are low or absent.
 - 3) All personnel shall wear an SCBA/respirator while operating in the following atmospheres:
 - a) Any contaminated atmosphere, as determined by the Incident Commander.
 - b) Any atmosphere that has the potential to suddenly become contaminated.

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- c) Any atmosphere that is oxygen deficient.
- d) Any atmosphere which is suspected of being contaminated or oxygen deficient.
- e) In any environment known or suspected to be an IDLH environment.
- f) In any situation that is known or has the potential for having hazardous materials present. These areas may include:
 - i. Any active fire area, structure, vehicle or dumpster, excluding wild land fire operations
 - ii. Any area directly above an active fire area
 - iii. Any confined space not tested for respiratory safety
 - iv. Any area where toxic products are present, suspected to be present, or may be released without warning
 - v. Throughout overhaul operations at all fires excluding wildland fires.
 - vi. In patient care situations in which petroleum products are known or suspected to be in the atmosphere

2. Fire Prevention Bureau

- a. Any Fire Prevention Bureau staff assigned to the Combustible Explosive and Dangerous Materials and Technical Services (CEDMAT) section shall be issued an APR and trained in its use.
- b. The issued APRs shall be used for potential exposure to chemicals during the course of industrial inspections in the event of a hazardous material or hazardous waste release.
- c. The APRs are issued for escape from known or suspected air-borne contaminants.
- d. Bureau personnel may be issued negative pressure respirators (N100) if they are EMT trained and may provide medical care during the course of their duties.

3. Lifeguard Personnel

- a. Lifeguard personnel assigned to fire suppression duties shall comply with all policies regarding the training, fit testing, maintenance and use of the SCBA.
- b. Permanent Lifeguard personnel assigned to Operations shall be trained, fit tested, and issued a negative pressure respirator (N100) for use according to the guidelines described within this Standard Instruction.

4. Interior Structural Firefighting

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a. In addition to the requirements for respirator use listed in the previous section, the following requirements shall apply specifically to interior structural firefighting operations

1) Personnel shall be in compliance with all Rapid Intervention Crew/2 In – 2 Out policies.

5. Aerosolized Transmittable Disease (ATD) environments

a. Personnel encountering a patient that may have a known or suspected ATD shall utilize the PPE identified in Standard Instruction 14, section 02. Personnel shall also utilize the appropriate respiratory protection which shall include:

1) N100 respirator

2) An SCBA shall be worn by rescue personnel when airborne petroleum products are known or suspected to be in the same atmosphere as the patient.

a) AN N100 MASK SHALL NOT BE WORN IN THESE TYPES OF ENVIRONMENTS.

b) N100 respirators will break down in these types of environments and will no longer provide 99.97% filtration.

D. Medical Evaluation

Any SDFD employee required to wear respirators must pass a medical evaluation prior to being permitted to wear a respirator. Employees are not permitted to wear respirators until a Physician or Professional Licensed Health Care Practitioner (PLHCP) has determined that they are medically able to do so.

1. The medical evaluation shall consist of a questionnaire, medical examination, or both, which will be evaluated or conducted by a PLHCP.
2. Any employee refusing the medical evaluation shall not be allowed to work in any function requiring the use of a respirator.
3. SDFD requires that each employee, as defined in this Standard Instruction, complete an annual respiratory fitness exam in accordance with Title 8, Section 5144.
4. The Wellness Center will offer an annual respiratory fitness exam to all SDFD employees required to wear a respirator in accordance with this policy.
5. Any employee who refuses the annual respiratory fitness exam offered by the Wellness Center may have the exam performed by the City of San Diego contract medical provider. In this case, it shall be that employee's responsibility to ensure a completed, department approved, Medical Respiratory Clearance Form is returned to HR within the required time limits listed in this policy.
6. SDFD shall only retain the PLHCP's written recommendation regarding each employee's ability to wear a respirator.

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7. Employee respiratory fitness exam records shall be retained only until the next fit test is administered.
8. Treating Facility Requirements
 - a. In administering the medical evaluation, the treating facility shall ensure the following:
 - 1) The medical questionnaire and examination shall be administered confidentially.
 - 2) The exam shall be conducted during the employee's normal working hours or at a time and place reasonably convenient to the employee.
 - 3) The medical questionnaire shall be administered in a manner that ensures that the employee understands its content.
 - 4) The employee shall be provided with an opportunity to discuss the questionnaire and examination results with the PLHCP.
9. Supplemental Information
 - a. The following information must be provided to the PLHCP before the PLHCP makes a final recommendation concerning an employee's ability to use a respirator:
 - 1) The type and weight of the respirator to be used by the employee
 - 2) The duration and frequency of respirator use (including use for rescue and escape)
 - 3) The expected physical work effort of the employee
 - 4) Additional protective clothing and equipment to be worn
 - 5) Temperature and humidity extremes that may be encountered
10. Determination
 - a. The treating PLHCP shall complete a written recommendation regarding the employee's ability to use a respirator. The recommendation shall be limited to the following information:
 - 1) Any limitations on respirator use related to the medical condition of the employee or relating to the workplace conditions in which the respirator will be used including whether or not the employee is medically able to use the respirator
 - 2) The need, if any, for follow-up medical evaluations
 - 3) A statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation
11. Re-evaluation Criteria
 - a. After an employee has received written clearance from the PLHCP and has been cleared to wear a respirator, additional medical evaluations will be provided under the following circumstances:

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- 1) An employee or employee's supervisor reports signs and/or symptoms related to their ability to use a respirator, such as shortness of breath, dizziness, chest pains, or wheezing.
 - 2) The treating PLHCP or supervisor informs the Program Administrator that the employee needs to be re-evaluated.
 - 3) Information from the Respiratory Protection Program, including observations made during fit testing and program evaluation, indicate a need for re-evaluation.
 - 4) A change occurs in workplace conditions that may result in an increased physiological burden on the employee.
 - 5) Annually, per SDFD requirements.
12. SDFD shall ensure a follow-up medical evaluation is provided to any employee meeting the criteria listed above.
 13. The follow-up medical evaluation shall include any medical tests, consultations, or diagnostic procedures that the PLHCP deems necessary to make a final determination.
 14. Any supplemental information provided previously to the PLHCP regarding an employee need not be provided for a subsequent medical evaluation if the information and the PLHCP remain the same.
 15. Documentation
 - a. HR shall maintain a current list of the medical exam status for all Respiratory Protection Program participants. This list shall be made available to the Program Administrator on a quarterly basis, or whenever requested.

E. Fit Testing

1. SCBA and APR
 - a. SDFD requires that each employee working in Operations complete an annual face piece fit test for the purpose of employee safety, in compliance with standards and procedures set forth in CCR, Title 8, Section 5144.
 - b. Face piece Fit-Testing
 - 1) SDFD shall maintain a record of the qualitative and quantitative fit-tests administered to all employees participating in the Respiratory Protection Program which will include the following:
 - a) The name or employee identification number of the employee tested.
 - b) Type of fit test performed.
 - c) Specific make, model, style, and size of respirator tested.
 - d) Date of test.
 - e) The pass/fail results for the qualitative (QLFT) fit test or the fit factor and strip chart recording or other recording of the test results for the quantitative fit test (QNFT).

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2. Negative Pressure / Tight Fitting Respirator (N100)
 - a. OSHA regulations also require that any respiratory that draws a positive or negative pressure, will be fit tested annually.
 - b. The N100 respiratory requires a complete seal to the user's face to filter any airborne particulates or microbes from the air.
 - c. An annual qualitative fit test shall be performed to ensure this seal.

F. Inspection and Maintenance

1. All employees required to use respirators and any issued SCBA face piece shall be responsible for:
 - a. Inspecting
 - b. Cleaning
 - c. Disinfecting
 - d. Storing
 - e. Repairing
 - f. Replacing
 - g. Otherwise maintaining their assigned respirators
2. All employees shall conduct daily and monthly respirator checks as detailed in the Drill Manual.

G. Repair

1. SCBAs in need of repair shall be cleaned, tagged (including a description of the required repair) and delivered to Fire Station 36.
2. SCBA Technicians shall evaluate, diagnose and repair the SCBA. A loaner SCBA shall be provided by Fire Station 36 to be used in place of the normally assigned SCBA while it is being repaired.
3. Any SCBA sent in for repair shall be tracked by the assigned fire station utilizing the Equipment Transfer Form located in the Engineers Manual. Once repairs are completed and the normally assigned SCBA is received by the assigned station, the loaner SCBA shall be returned to Fire Station 36. This transfer should also be reflected on the Equipment Transfer Form.

H. Storage

1. SCBA
 - a. SCBAs shall be stored on the assigned apparatus onto specially designed brackets in a closed compartment or in custom made jump seats specifically designed to store them.
 - b. Additionally SDFD maintains various satellite storage locations for air cylinders, and SCBA filling stations.
2. N100
 - a. Negative pressure or tight fitting respirators (N100) may be utilized in the presence of Aerosolized Transmittable Diseases.

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- b. Personnel have been issued a fanny pack and crush proof canister to store the respirator.
- c. Personnel shall have the mask accessible during emergency operations.
- d. Personnel involved in direct patient care **of a known or suspected ATD patient** shall don the appropriate level **of P.P.E.**, including respiratory protection, prior to making contact with the patient.

I. Program Evaluation

- 1. SDFD shall conduct evaluations of the workplace to ensure that the established Respiratory Protection Program is being properly implemented, and to ensure employees are using the respirators properly.
- 2. Employees identifying deficiencies with the Respiratory Protection Program are required to notify their supervisor of the issue and all pertinent details. The supervisor shall notify the Program Administrator of the issue via the chain of command.

J. Documentation and Recordkeeping

- 1. SDFD shall establish and retain written and/or electronic records regarding medical evaluations, fit testing, and all required training listed in the Respiratory Protection Program.
- 2. All documentation shall be maintained and available in accordance to the OSHA regulations, Title 8, section 5144.