

**CHAPTER 9**

**HAZARDOUS CONDITIONS AND SUBSTANCES EXPOSURE  
CONTROL PROGRAMS**

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## CHAPTER 9

### HAZARDOUS CONDITIONS AND SUBSTANCES EXPOSURE CONTROL PROGRAMS

1. PURPOSE. The purpose of this chapter is to establish policy and procedure for the appropriate control of employee exposure to potentially harmful conditions and substances in the work environment.
  
2. AUTHORITY. California Code of Regulations (CCR), Title 8, General Industry Safety Order, Section 3203 mandates appropriate corrective measures be taken in a timely manner whenever an unhealthy or unsafe condition, practice, or procedure is identified or reported in the workplace. Additionally, CCR Title 8, General Industry Safety Order, Section 5141 mandates employees be protected from potentially harmful exposures to hazardous conditions, substances, or forms of energy found in the work environment through the use of appropriate engineering and/or administrative controls. Personal protective equipment (PPE) shall be utilized only when engineering and/or administrative controls are not feasible, or during the time necessary to install or implement feasible engineering controls, or in an emergency.
  
3. POLICY. It is the Department's policy to implement appropriate engineering and administrative controls which reduce or eliminate hazardous conditions or substances at their source. The use of PPE will be the primary control measure when a hazard remains present in the environment.
  
4. RESPONSIBILITIES. Commanders shall ensure they:
  - a. Identify activities within their areas of responsibility which may require exposure control.
  - b. Implement and maintain applicable exposure control procedures.
  - c. Monitor conditions or substances in the work areas that have been identified as potentially hazardous.
  
5. PROCEDURES. Methods of controlling harmful exposures to potentially hazardous conditions and substances or forms of energy found in the work environment typically are classified into three broad categories:

a. Engineering Controls. Engineering controls are passive measures designed into the work environment to prevent contact with a harmful condition, substance, or other hazard. Common examples of engineering controls include the following:

- (1) Eliminating toxic materials or using less toxic substitutes.
- (2) Changing process design.
- (3) Positioning structural or mechanical barriers to isolate the condition or substance.
- (4) Installing guards on machinery.
- (5) Using local exhaust ventilation.
- (6) Modifying workstation design.

b. Administrative Controls. Whenever engineering controls are inadequate or not feasible, administrative controls shall be implemented, if practicable. Administrative controls include the following:

- (1) Rotating employees to minimize exposure.
- (2) Implementing proper housekeeping practices.
- (3) Developing appropriate worker training.

c. Control by Personal Protective Equipment. The use of PPE provides a barrier between the hazard and the employee. Improper use or failure of the equipment means the employee may still be exposed to unsafe or unhealthy conditions. The use of PPE is the least desirable means of controlling exposure to harmful conditions and substances in the work environment and shall not be used unless engineering and/or administrative controls are not practical (see Chapter 10 for more information specific to PPE). Personal Protective Equipment may be requisitioned from the Supply Services Catalog. Personal protective equipment includes:

- (1) Respiratory protective equipment.
- (2) Head protection.
- (3) Eye and face protection.
- (4) Body protection.
- (5) Hand protection.

- (6) Foot protection.
- (7) Hearing protection.
- (8) Similar devices whose proper use reduces the risk of personal injury or illness resulting from occupational hazards.

6. RESPIRATORY PROTECTION. Commanders shall ensure employee risk of exposure to harmful levels of airborne contaminants and substances is mitigated in accordance with the Respiratory Protection Program (Annex A).

7. HEARING CONSERVATION. Commanders shall ensure employees are protected from noise levels which equal or exceed permissible levels in accordance with the Hearing Conservation Program (Annex B).

8. LEAD EXPOSURE. Commanders shall comply with the directives in the Lead Exposure Control Program (Annex C).

9. POTENTIAL FETAL HEALTH HAZARDS ASSOCIATED WITH FIREARMS TRAINING. Commanders shall ensure pregnant employees are made aware of the risks associated with firearms training (Annex D). Pregnant employees shall confer with their medical care providers regarding the advisability of the employee participating in, or performing duties associated with, firearms training.

10. MATERIALS HANDLING AND LIFTING. Proper materials handling techniques, including lifting procedures, shall be employed (Annex E).

11. AIR QUALITY. Air quality can be affected by a variety of conditions. Poor indoor air quality may be the result of inadequate engineering or design of the ventilation system or facility as well as contaminants that exceed acceptable concentrations known to impair health or cause discomfort to employees. Poor outdoor air quality may be caused by wildfires, pollution, or other environmental factors. Annex F provides additional information regarding poor air quality.

12. ELECTRIC AND MAGNETIC FIELDS. Electric and Magnetic Fields (EMFs) are present wherever electricity flows, including workplaces and homes, and around appliances and power lines. These are not generally considered hazardous (at low levels), unless clearly marked.

13. LIGHTING EQUIPMENT. Lighting equipment shall be maintained in accordance with Highway Patrol Manual (HPM) 11.1, Administrative Procedures Manual, Chapter 14, Facilities Development, Repairs, and Maintenance.

14. POISON OAK AND POISON IVY. The only known methods of preventing exposure to poison oak and poison ivy are to wear protective clothing and recognize plants and avoid contact. Information regarding symptoms of exposure and decontamination are contained in Annex G.

15. AFRICANIZED HONEY BEES. Information regarding Africanized Honey Bees (AHB) characteristics and what should be done in the event of an AHB attack is contained in Annex H.

16. BLOODBORNE PATHOGENS/AEROSOL-TRANSMISSIBLE DISEASES.

a. Guidelines for the management of incidents involving the Human Immunodeficiency Virus, Acquired Immune Deficiency Syndrome, Hepatitis, and other communicable diseases are contained in HPM 70.2, Emergency Medical Services Manual, Chapter 11, Communicable Disease Exposure/Prevention and Human Immunodeficiency Virus Management.

b. Additional guidance, including efforts to mitigate exposure to aerosol-transmissible disease, can be found in Annex A.

17. ULTRAVIOLET RADIATION/SKIN CANCER PREVENTION. The major cause of skin cancer is exposure to ultraviolet (UV) rays from natural sunlight and artificial sources. Commanders shall ensure that employees are made aware of the dangers associated with UV exposure and preventative measures are taken to limit UV exposure (Annex I).

18. HEAT INJURY AND ILLNESS PREVENTION. Employees may be exposed to hot weather and/or high humidity in the course of their duties. Supervisors and managers shall ensure employees are aware of signs and symptoms associated with heat injuries and illnesses, as well as preventative measures and actions they can take if they experience, or encounter, a person experiencing a heat injury or illness. Refer to Annex J for additional information.

19. REQUEST FOR ASSISTANCE. Employees may be exposed to potentially harmful conditions such as inadequate indoor air quality, insufficient containment of airborne

contaminants, excessive noise levels, and hazardous substances such as lead. To request assistance in determining the extent of risk of employee exposure:

- a. Communications Centers. Commanders shall contact their Division and Telecommunications Section. If Telecommunications Section determines a hazard may exist; they shall notify the Office of Risk Management (ORM), Occupational Safety Unit (OSU); Office of Employee Relations (OER); and Facilities Section.
- b. Commercial Vehicle Inspection Facilities. Commanders shall contact their Division and the Enforcement Planning Division, Commercial Vehicle Section (CVS). If CVS determines a hazard may exist, they shall notify ORM, OSU; OER; and Facilities Section.
- c. All Other Commands. Commanders shall contact their Division. If their Division determines a hazard may exist, they shall notify ORM, OSU. ORM, OSU will notify OER, and Facilities Section, as appropriate.

20. INJURY, ILLNESS, AND EXPOSURE REPORTING AND ROUTING PROCEDURES. Reporting and routing procedures shall be conducted in accordance with policy contained in HPM 10.7, Injury and Illness Case Management Manual.

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## ANNEX A

### RESPIRATORY PROTECTION PROGRAM

1. PURPOSE. The purpose of this program is to establish departmental policy and procedures regarding the use of respiratory protective equipment and provide personnel with a comprehensive plan for the use of respiratory protection. This policy establishes minimum standards for the implementation of a Respiratory Protection Program. It does not limit individual commands, with Division level approval, from electing to be more restrictive in the designated use and fit testing of any specific respiratory equipment.
  
2. AUTHORITY. California Code of Regulations, Title 8, General Industry Safety Order, Section 5141, mandates employee protection from potentially harmful exposures through the use of appropriate engineering and/or administrative controls and, if necessary, respiratory protective equipment. The CCR, Title 8, General Industry Safety Order, Section 5144, directs employers who utilize respiratory protective equipment to establish a written Respiratory Protection Program.
  
3. POLICY. Respiratory protective equipment shall be used during the time period necessary to install or implement feasible engineering controls, when feasible engineering and or administrative controls are inadequate or unavailable, or in an emergency.
  
4. PROGRAM ADMINISTRATION. The Office of Risk Management, Occupational Safety Unit (OSU), shall act as the office of primary interest for the Respiratory Protection Program. Divisions shall assign a Respiratory Protection Program Coordinator and will be responsible for facilitating the implementation and maintenance of the respiratory protection program including the following:
  - a. Identification. Activities requiring respiratory protection usage within the Division are identified and documented in accordance with Chapter 7 of the Injury and Illness Prevention Program (IIPP).
  
  - b. Implementation. Applicable Respiratory Protection Program procedures shall be implemented in accordance with this manual and HPM 50.5, Civil Disturbance Planning and Operations Manual, Chapter 7.
  
  - c. Monitoring. Environmental conditions in the work areas identified as potentially hazardous shall be appropriately monitored.
  
  - d. Procedures. Division shall ensure implementation of the following procedures:

## ANNEX A

### RESPIRATORY PROTECTION PROGRAM (*continued*)

- (1) Employees shall be made aware of potentially harmful airborne contaminants and substances to which they may be exposed during the course of their duties which would require the use of a respirator. Employee training shall be documented and maintained in accordance with the command IIPP.
- (2) Safety inspections of work sites and equipment shall be conducted and documented at least annually and maintained in accordance with the command IIPP.
- (3) The OSU shall be contacted regarding the initial proposed use of respiratory protective equipment. The OSU will assist in selecting respiratory protective equipment specific to the potential hazard involved. Only respirators approved by the National Institute for Occupational Safety and Health, or the Mine Safety and Health Administration shall be used.
- (4) Respiratory protective equipment shall not be used unless:
  - (a) Performance of a duty or an existing medical condition requires the use of a respirator.
  - (b) The respirator is properly fit tested in accordance with the CCR, Title 8, General Industry Safety Order, Section 5144, and manufacturer's instructions.
  - (c) The employee has a current completed medical evaluation questionnaire on file.
  - (d) The use of the selected respirator is approved by the Department.

5. **EXEMPTIONS.** The directives contained in this program and CCR, Title 8, General Industry Safety Order, Section 5144, do not apply when disposable paper mask respirators are being used properly for nose and mouth barrier protection against "nuisance" exposure and are disposed of after each use. Nuisance exposure is defined as exposure to nonhazardous levels of airborne contaminants or substances. Disposable paper masks respirators may be used for protection against nuisance exposure to airborne contaminants and substances such as dust, mist, fumes, and airborne debris which may be encountered during sweeping, cleaning, gardening, or other similar activities. Disposable paper masks respirators shall not be used if the potential for hazardous exposure exists.

## ANNEX A

### RESPIRATORY PROTECTION PROGRAM (*continued*)

6. EQUIPMENT. All respiratory protection must be approved by the National Institute for Occupational Safety and Health for the environment in which it is going to be used. The following definitions apply:

- a. Air-purifying respirators work 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. This respirator does not supply oxygen and therefore cannot be used to enter an atmosphere that is oxygen deficient.
- b. Atmosphere supplying respirators supply the user with air from a source independent of the ambient atmosphere and includes supplied air respirators in self-contained breathing apparatus (SCBA) units.

7. MEDICAL. Employees required to wear respiratory protective equipment shall complete a medical evaluation questionnaire in accordance with CCR Title 8, General Industry Safety Order, Section 5144. The questionnaire must be completed during the employee's normal working hours, or at a time and place convenient to the employee. The questionnaire is confidential and will be reviewed by a health care professional only for the purpose of determining suitability to wear respiratory protective equipment. The Department may require additional medical evaluations for any employee when:

- a. An employee reports any medical symptoms or conditions related to their inability to wear a respirator.
- b. A physician or licensed healthcare provider, departmental supervisor or manager informs the employer that an employee needs to be reevaluated.
- c. Information from respiratory protection program coordinators, or participants, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation.
- d. A change occurs in workplace conditions (e.g., physical work effort, protective clothing, and or temperature) that may result in a substantial increase in the physiological burden placed on an employee.
  - (1) An employee may request and receive a medical evaluation if they report medical signs or symptoms that are related to, or may impair, their ability to use a respirator.

## ANNEX A

### RESPIRATORY PROTECTION PROGRAM (*continued*)

8. REQUIRED RESPIRATORY PROTECTIVE EQUIPMENT USAGE DUE TO MEDICAL CONDITION. Employees who require respiratory protective equipment due to a medical condition shall wear the equipment as prescribed by their medical care provider and in accordance with the manufacturer's instructions and this program.
9. MEDICAL STATEMENT, RESTRICTION, OR LIMITATION. If the potential exists that an employee may not be medically able to perform their duties while wearing required respiratory protective equipment, the employee shall obtain a written statement from their medical care provider which indicates the employee's restrictions or limitations and when the employee can resume their duties. If the medical care provider's written statement restricts or limits an employee from performing their full duties while wearing required respiratory protective equipment, the commander shall determine appropriate action in accordance with HPM 10.7, Chapter 8, Limited Duty/Return to Work.
10. FIT TESTING. Respirator fit testing shall be conducted in accordance CCR, Title 8, General Industry Safety Order, Section 5144, and manufacturer's instructions, and in accordance with Federal Occupational Safety and Health Administration.
- a. Employees who use a tight-fitting respirator shall perform a user seal check to ensure an adequate seal is achieved each time the respirator is put on. User seal checks are not substitutes for qualitative or quantitative fit tests.
  - b. Users shall conduct a negative pressure seal check prior to each deployment of a respiratory protection equipment, and annually thereafter. An additional fit test shall be conducted whenever there are changes in the employee's physical condition that could affect respirator fit. It is the employee's responsibility to notify their commander whenever such changes occur.
  - c. Employees must not wear respirators with tight-fitting face pieces if they have facial hair or any other condition that hinders or compromises the sealing surface or valve function of the respirator.
  - d. Employees must ensure any personal equipment utilized in conjunction with respiratory protection is worn in a manner that does not interfere with the seal of the face piece to the face of the user. Any personal equipment to be worn with the respirator shall be taken to the fit-test assessment and worn during the test.
11. TEST ATMOSPHERE. A test atmosphere is established by introducing a specified substance around the edge of the respirator face piece after the employee has

## ANNEX A

### RESPIRATORY PROTECTION PROGRAM (*continued*)

successfully completed fit-test procedures. If the employee detects a smell or taste, or experiences irritation from the test atmosphere substance, they shall repeat the fit-test procedures prior to reintroduction of the test atmosphere substance. This process shall be repeated until the employee reports that they are unable to detect a test atmosphere substance smell or taste and does not experience irritation during the test. To facilitate fit testing, please contact ORM, OSU.

12. TRAINING. All users of respiratory protection equipment shall receive annual training consisting of the following:

a. Training shall be accomplished by instruction from the Division Respiratory Protection Program Coordinator, and/or viewing the POST respiratory protection video. Employee training shall be documented and maintained in accordance with each command's IIPP, and consists of the following:

- (1) Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator.
- (2) Limitations and capabilities of the respirator in terms of chemical agents and other respiratory hazards that respirators are intended to protect against.
- (3) Proper use of respirators in emergency situations, including situations in which the respirator malfunctions.
- (4) How to inspect, don, remove, use, and check the seals of the respirator.
- (5) Procedures for maintenance and storage of the respirator.
- (6) How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.

13. MAINTENANCE. Respiratory protective equipment shall be maintained, repaired, and replaced in accordance with the manufacturer's instructions and/or as necessary.

a. Repairs shall only be performed by the equipment manufacturer or authorized representative. Parts from one respirator shall not be interchanged with parts from another respirator. If the equipment is no longer under warranty, the repair bill shall be paid in accordance with HPM 11.2, Materials Management Manual.

## ANNEX A

### RESPIRATORY PROTECTION PROGRAM (*continued*)

- b. When not in use, respiratory protective equipment shall be protected from exposure to dust, sunlight, extreme temperatures, excessive moisture, or damaging chemicals, in accordance with the manufacturer's recommendations.
  - c. Respiratory protection used by uniform employees shall be maintained in accordance with HPM 50.5, Civil Disturbance Planning and Operations Manual.
14. INSPECTION. All respiratory protection shall be inspected by the Division Respiratory Protection Program Coordinator at least annually and prior to each deployment. Inspection shall include: a check of respirator function, tightness of connections, and condition of the various parts including, but not limited to, the face piece, head straps, valves, connecting tube, cartridges, canisters or filters for pliability and signs of deterioration.
15. REQUIRED RESPIRATORY PROTECTIVE EQUIPMENT USAGE. The following employees are required to wear respiratory protective equipment when performing specified duties:
- a. Motor Carrier Specialists. Motor Carrier Specialists shall wear respiratory protective equipment when performing voluntary topside inspections of cargo tanks.
  - b. Skilled Laborers and Painters. Skilled Laborers assigned to the Cabinet Shop and Painters assigned to the Academy shall wear respiratory protective equipment while painting when airborne contaminants or substances cannot be eliminated or adequately mitigated through engineering and/or administrative controls.
  - c. Associate Business Management Analysts. Associate Business Management Analysts assigned to the Facilities Section shall wear respiratory protective equipment if potential for harmful exposure to lead, asbestos, or hazardous waste exists.
  - d. Hazardous Materials Technicians/Specialists. Hazardous materials technicians/specialists shall wear respiratory protective equipment when investigating a hazardous material or waste incident if the potential for harmful exposure exists.
  - e. Environmental Crimes Investigators. Environmental crimes investigators shall wear respiratory protective equipment when investigating a hazardous material or waste incident if the potential for harmful exposure exists.

## ANNEX A

### RESPIRATORY PROTECTION PROGRAM (*continued*)

- f. Radiological Response and Enforcement Personnel. Radiological response and enforcement personnel shall wear respiratory protective equipment when investigating an incident if the potential for harmful exposure to airborne radioactive particles exists.
- g. Uniformed Personnel.
- (1) As required by HPM 50.5, when responding to civil disturbance events.
  - (2) As required in response to natural disasters (e.g., wildfires).
  - (3) As required, in emergency response to an incident or an event, where a potential for harmful exposure exists from hazardous materials.
  - (4) Potential Aerosol-Transmissible Disease Exposure.
    - (a) In the event an officer encounters a person who is known or suspected to be infected with an aerosol-transmissible disease, they shall take proper precautions. This includes utilizing appropriate PPE, including gloves, respirator (i.e., N95 mask), and safety glasses.
    - (b) If officers must transport a person suspected or known to be infected with aerosol transmissible disease, officers shall utilize appropriate PPE and should encourage additional ventilation in their vehicle while in transport. This may be accomplished by lowering the windows in the vehicle enough to provide additional airflow, while still maintaining officer safety.
    - (c) If officers are transporting a person who is known or suspected to be infected with an aerosol-transmissible disease to a jail, hospital, or other facility, they shall notify the facility prior to bringing the person inside. This may include notifying a jailer, jail medical staff, or appropriate medical staff at the hospital. Some jails may require individuals known or suspected to have an aerosol-transmissible disease to undergo medical clearance before being booked.
    - (d) After the contact has concluded, officers are encouraged to wash their hands thoroughly using soap and warm water, and/or utilize an alcohol-based hand sanitizer.

## ANNEX A

### RESPIRATORY PROTECTION PROGRAM (*continued*)

- (e) When officers transport a person suspected or known to be infected with aerosol-transmissible disease, they shall make arrangements with a supervisor (or other appropriate personnel) to place the vehicle out of service and arrange for the interior of the vehicle to be cleaned.
- (f) If the vehicle is cleaned by CHP, personnel shall wear gloves, respirator (i.e., N95 mask), and safety glasses. The vehicle shall be cleaned in a well-ventilated location (e.g., outside parking lot with all vehicle doors open). Personnel shall use disinfectant wipes and/or cleaning products capable of killing virus and bacteria. Cleaning materials and PPE items may be requisitioned from the Supply Services Catalog. In the event appropriate cleaning materials are not available from Supply Services Section, the items may be purchased using the Procurement Card. Refer to HPM 11.2, Chapter 3, for additional information.
- (g) Exposed equipment shall be cleaned using disinfectant wipes and/or cleaning products capable of killing virus and bacteria.
- (h) Any contact with a person confirmed to be infected with an aerosol-transmissible disease shall be reported to the local county health officer, and employees shall be monitored for symptoms. In the event an employee develops symptoms, or wishes to seek medical treatment, a supervisor shall provide assistance and document the incident in accordance with HPM 10.7.
- (i) Additional information regarding aerosol-transmissible diseases may be found in Highway Patrol Manual 70.2, Emergency Medical Services Manual, Chapter 11, Communicable Disease Exposure/Prevention and Human Immunodeficiency Virus Management.

## ANNEX B

### HEARING CONSERVATION PROGRAM

1. PURPOSE. The purpose of the Hearing Conservation Program is to establish departmental policy and procedures regarding protection for all employees against the effects of noise exposure as much as practicable.
  
2. AUTHORITY. California Code of Regulations (CCR), Title 8, General Industry Safety Order, Sections 5095 through 5100 require the control of noise exposure and the establishment of a continuing, effective Hearing Conservation Program for employees exposed to noise levels which equal or exceed 85 decibels (dBs).
  
3. POLICY. Departmental policy requires appropriate hearing protection shall be worn when engineering and/or administrative controls are inadequate or not feasible.
  
4. RESPONSIBILITIES. Commanders shall ensure:
  - a. Identification of activities within their area of responsibility which would require hearing protection are recognized.
  
  - b. A Work Area Evaluation shall be conducted periodically to identify areas which may expose employees to noise above permissible levels.
  
  - c. Employee Testing for employees who are routinely exposed to noise at or above the action level<sup>1</sup> of 90 dBs receive annual audiometric tests.
  
5. EVALUATION OF EXPOSURE TO NOISE. Specific work areas which may potential subject personnel to excessive noise shall be evaluated. Subsequent monitoring shall occur whenever a change in procedures, equipment, or controls affects noise exposure within the work area. The ORM OSU can assist a command with arranging these evaluations.

<sup>1</sup> An eight-hour time weighted average of 90 dBs measured in accordance with Appendix A, CCR Title 8, General Industry Safety Order, Section 5095 through 5100.

## ANNEX B

### HEARING CONSERVATION PROGRAM (*continued*)

#### 6. EFFECTS OF NOISE ON HEARING.

- a. Low Intensity Sounds. Low intensity sounds typically are not hazardous to an individual's hearing. These noises are not regulated, and hearing protection is not required.
- b. Temporary Threshold Shift. Excessive exposure to noise at or above 85-90 dBs can cause a temporary loss of hearing. One of the symptoms is a loss of hearing in the higher frequencies, perceived as a muffing of sounds, which may be accompanied by tinnitus and usually occurs during the first two hours of continuous noise exposure.
- c. Permanent Threshold Shift. Continuous exposure to noise at or above 85-90 dBs, as well as short exposure to extremely loud noise (known as acoustic trauma), can cause permanent hearing loss, which is not medically recoverable.

7. REQUIRED HEARING PROTECTION. Hearing protection shall be provided to and worn by departmental employees whenever specific duties exposure personnel to noise which exceeds the action level of 90dBs. Otherwise, exposure shall be limited in accordance with the following levels of exposure and periods of time:

<b>Sound Level <u>dba<sup>2</sup></u></b>	<b>Permitted Duration <u>Per Work Day, Hours</u></b>
90	8.00
92	6.00
95	4.00
97	3.00
100	2.00
102	1.50
105	1.00
110	0.50
115	0.25

8. PURPOSE OF HEARING PROTECTION. Hearing protection acts as a barrier to reduce sound entering the ear to provide protection for the employee's hearing.

<sup>2</sup> dBA (Decibels-A-Weighted) – A unit of measurement of sound level corrected to the A-weighted scale as defined in American National Scientific Institutes S1.4-1971 (R19-1976).

## ANNEX B

### HEARING CONSERVATION PROGRAM (*continued*)

#### 9. SELECTION, FITTING, USE, AND MAINTENANCE OF HEARING PROTECTION.

a. Plugs. Plugs allow for some sounds to be heard for safety purposes.

(1) Description. There are three types of plugs available:

(a) Disposable.

(b) Reusable.

1 Disposable and reusable plugs are not easily reinserted after removal if hands are greasy.

(c) Headband.

1 Headband plugs allow the employee to remove the plugs from the ear to listen for specific noises. They can be easily removed and reinserted without touching the plugs. They have minimal impact on conversation, are lightweight, comfortable to wear, and effective in reducing loud noise, convenient to use, and can be worn in a ready position.

2 The band of headband plugs acts as a noise conductor and transmit sounds to the ear when the band rubs against clothing or is struck by objects. It may catch on clothing and, if worn behind the head, may hurt the neck when leaning back.

(2) Fitting. All types of plugs should fit snugly and comfortably into the ear canal. Upon insertion, employees' voices should sound louder to themselves. Additionally, headband plugs should ensure uniform pressure on the ear tips.

(3) Use. Plugs shall be used by employees when noise levels exceed permissible levels. Headband plugs are designed for employees, for example Commercial Vehicle inspection Specialists, who move in and out of excessive noise areas.

(4) Maintenance. All types of plugs shall be inspected for wax, dirt, or grease before insertion. Plugs shall be discarded if not clean.

(a) Some disposable plugs may need to be shaped prior to use. Disposable plugs are to be thrown away after use.

## ANNEX B

### HEARING CONSERVATION PROGRAM (*continued*)

(b) Reusable plugs shall be cleaned and dried after each use and stored in a plastic case. These plugs shall be replaced when they harden or become discolored.

(c) Headband plugs shall be cleaned and dried after each use and stored safely. This type of protection shall be replaced when the headband is bent or twisted or when the plugs are hardened or discolored.

(5) Issuance of Plugs. Personnel shall be issued plugs upon determination the noise exposure in their work area exceeds permissible levels.

b. Muffs. Earmuffs attenuate noise below action levels.

(1) Description. Muffs have cushions that form a seal around the ear, covering it completely and blocking out the noise.

(2) Fitting. All muffs shall be fitted carefully for maximum comfort. Muffs shall not be loosened, as this will reduce their noise-reduction efficiency. Employees who normally wear eyeglasses may need to use another type of hearing protection.

(3) Use. Muffs shall be used by all uniformed personnel during weapons training activities, as well as Department sanctioned competitive shooting events. Muffs shall be used by nonuniformed employees when earplugs are not practicable to reduce noise levels that exceed permissible levels.

(4) Maintenance. Muffs shall be cleaned by washing the cushions. The cushions shall be periodically examined to determine whether replacement is necessary. Muffs shall be stored in a safe place, such as a shelf or locker.

(5) Issuance of Muffs. All uniformed personnel are issued muffs upon entry into the Academy. Nonuniformed personnel shall be issued muffs upon determination that the noise exposure when their work area exceeds permissible levels. Muffs shall accompany employees upon reassignment unless there is a change in their working conditions.

10. AUDIOMETRIC TESTING. Audiometric testing objectively measures an individual's hearing sensitivity. Employees who are routinely exposed to noise at or above 90 dBAs, without regard to hearing protection, are required to be tested annually. Flight crew members assigned to Air Operations Units meet this criterion. The

## ANNEX B

### HEARING CONSERVATION PROGRAM (*continued*)

commander shall approve these tests in accordance with HPM 10.7, Chapter 3, Reporting and Routing Procedures.

#### 11. TRAINING.

- a. General. All employees shall be made aware of the potentially harmful levels of noise to which they may be exposed during the course of their duties that may necessitate the use of hearing protection.
- b. Job Specific. Employees whose specific duties expose them to noise at or above 85 dBAs shall receive training annually on the use of hearing protection and appropriate work practices. These employees may include, but are not limited to: Skilled Laborers, Groundskeepers, Building Maintenance Workers, and Maintenance Mechanics whose duties expose them to loud machinery such as leaf blowers, lawn mowers, saws, and drills; motorcycle officers, Motor Carrier Specialists and Commercial Vehicle Inspection Specialists whose duties expose them to excessive vehicle noise. This training shall address the following information:
  - (1) Effects of noise on hearing.
  - (2) Purpose of various types of hearing protection and their advantages, disadvantages, and attenuation.
  - (3) Instructions on selection, fitting, use, and maintenance of hearing protection.
  - (4) Purpose of audiometric testing.
- c. Documentation. This training shall be appropriately documented in accordance with the command's IIPP.

#### 12. ACCESS TO INFORMATION AND TRAINING MATERIALS.

- a. Required Regulation Postings. Commanders shall ensure copies of CCR Title 8, General Industry Safety Order, Sections 5095 through 5100 are available by posting copies on the command's occupational safety bulletin board. Copies of these regulations can be provided by OSU.

## ANNEX B

### HEARING CONSERVATION PROGRAM (*continued*)

- b. Provision of Information to Affected Employees. Commanders shall provide affected employees with informational materials relevant to hearing conservation.
- c. Provision of Information to Department of Industrial Relations. Commanders shall provide the Department of Industrial Relations, Division of Occupational Safety and Health, all hearing conservation training materials upon request.

#### 13. RECORD KEEPING AND RETENTION.

- a. Work Area Exposure Evaluations. Records shall be maintained by the command of all work area exposure evaluation in accordance with the command's IIPP for a period of two years, plus the current year.
- b. Audiometric Tests. A copy of an affected employee's audiometric test shall be maintained in the employee's field folder. This test information shall contain the date of the audiogram, the examiner's name, and the employee's most recent noise exposure assessment. These records shall be retained for the duration of the individual's employment with the Department.
- c. Access to Records. All employee audiometric test records and work area noise exposure evaluations shall be available in accordance with Chapter 5 and Chapter 6 of the command's IIPP.

## ANNEX C

### LEAD EXPOSURE CONTROL PROGRAM

1. PURPOSE. The purpose of the Lead Exposure Control Program is to establish departmental policy and procedures regarding employee exposure to airborne lead.
  
2. AUTHORITY. California Code of Regulations Title 8, General Industry Safety Order, Section 5216 mandates employee protection from exposure to airborne lead above a specified permissible exposure limit (PEL)<sup>3</sup> and establishes an action level<sup>4</sup> of employee exposure to airborne lead. If the workplace airborne lead level is at or above the action level or PEL, specified procedures shall be implemented.
  
3. POLICY. Departmental policy requires employees be protected from exposure to airborne lead above the action level through the use of appropriate engineering and/or administrative controls. Personal protective equipment shall be used when engineering and/or administrative controls are inadequate or not feasible.
  
4. RESPONSIBILITIES. Commanders shall ensure:
  - a. Identification. Workplaces within their area of responsibility which may contain airborne lead (e.g., weapons range) are identified.
  
  - b. Initial Air Monitoring. Initial air monitoring has been conducted in work areas that have been identified as containing airborne lead.
  
  - c. Employee Notification. Affected employees are notified in writing of air monitoring results.
  
  - d. Training. Those employees whose duties may result in exposure to airborne lead receive appropriate training.
  
  - e. Recordkeeping. Recordkeeping is maintained as required.
  
5. WORKPLACES IDENTIFIED AS CONTAINING AIRBORNE LEAD. Specific work areas which may potentially expose personnel to airborne lead shall be identified.

<sup>3</sup> An eight-hour time-weighted average concentration of 50 micrograms of lead per cubic meter of air which is the highest level of airborne lead to which an employee may be exposed during an eight-hour workday.

<sup>4</sup> Employee exposure, without regard to the use of respiratory protection equipment, to airborne lead at an eight-hour time-weighted average concentration of airborne lead of 30 micrograms per cubic meter of air.

## ANNEX C

### LEAD EXPOSURE CONTROL PROGRAM (*continued*)

Commanders shall notify ORM, OSU to arrange for air monitoring. Weapons ranges are identified workplaces which contain airborne lead.

#### 6. EMPLOYEES WHOSE DUTIES RESULT IN EXPOSURE TO AIRBORNE LEAD.

The following employees may be exposed to airborne lead as a result of their duties:

- a. Uniformed Employees. Uniformed employees when participating in required departmental range shoots.
- b. Other Employees. Employees whose tasks involve firearms training, such as those who maintain and inspect weapons, clean lead-contaminated areas of the weapons range, work in areas near a weapons range (e.g., Academy's weapons range office), handle or transport spent ammunition casings, and any other employee identified by the commander as possibly exposed to airborne lead.

#### 7. PROCEDURES. Commanders and OSU shall coordinate the following activities:

- a. Exposure Determination. If lead is present in any quantity in the workplace, initial air monitoring shall be conducted to determine if employee exposure to airborne lead is at or above the PEL.
  - (1) Commands utilizing contracted weapons ranges (e.g., privately owned ranges and/or allied agency owned ranges) shall obtain written certification from the facility range operator that initial air monitoring has been conducted and that airborne lead exposure is below the PEL.
  - (2) The Academy range was monitored and determined to be below the action level and PEL.
- b. Initial Air Monitoring Results.
  - (1) If initial air monitoring determines an employee exposure to airborne lead is below the action level, no further action is required other than maintaining a written record of the results.
  - (2) If initial air monitoring determines an employee exposure to airborne lead is at or above the PEL, commanders shall contact the ORM, OSU for direction.
- c. Additional Monitoring. Whenever there has been a production, process, control or personnel change, or any other change, which may result in a new or

## ANNEX C

### LEAD EXPOSURE CONTROL PROGRAM (*continued*)

additional exposure to airborne lead, additional air monitoring may be required. Commanders shall contact ORM, OSU for assistance in determining if additional air monitoring is required.

8. EMPLOYEE NOTIFICATION. Commanders shall ensure air monitoring results are posted in a conspicuous location within five working days of a command receipt of results. Additionally, if air monitoring results determine that employee exposure to airborne lead, without regard to respiratory protection, exceeds the PEL, the employee shall be notified by memorandum that the PEL was exceeded, and what corrective actions have been (or will be) taken to reduce exposure to a level at or below the PEL.

9. TRAINING. Affected employees shall be informed annually (e.g., during a command training day or in conjunction with an employee's annual performance appraisal) of potential health hazards associated with exposure to levels of airborne lead above the PEL. Commanders may contact the ORM, OSU for assistance.

#### 10. RECORDKEEPING.

a. Written Record of Air Monitoring Results. A written record of air monitoring results shall be permanently maintained with the command IIPP and shall include:

- (1) The date of determination.
- (2) The location of the workplace.
- (3) A description of, and the duration and location of, the air monitoring equipment.
- (4) Identification of the certified industrial hygienist.

b. Training Documentation. Employee training shall be documented and maintained in accordance with the command IIPP.

c. Administrative Control/Job Rotation Schedule. If administrative controls are implemented as a means of reducing employee exposure to airborne lead, a job rotation schedule shall be established to include:

- (1) The name and identification number of each affected employee.

(2) The duration and exposure levels at each job or workstation where each affected employee is located.

(3) Any other information that may be useful in assessing the reliability of the administrative control used to reduce exposure to airborne lead.

## ANNEX D

### POTENTIAL FETAL HEALTH HAZARDS ASSOCIATED WITH FIREARMS TRAINING

1. LEAD EXPOSURE. There does not appear to be a significant risk factor due to lead exposure experienced during quarterly shoots. Low-level lead exposure should not pose a risk to the fetus; however, avoidance of fetal lead exposure is recommended.
  
2. ACOUSTIC TRAUMA. There may be a potential for fetal hearing loss due to acoustic trauma experienced during firearms training.
  - a. Confer with Medical Care Provider. Pregnant employees shall confer with their medical care providers regarding the advisability of participating in, or performing duties associated with, firearms training. Employees shall present their medical care providers with a CHP 209, Advisory: Potential Fetal Health Hazards Associated with Firearms Training. The medical care provider shall indicate on the CHP 209 whether the employee may participate in firearms training.
  
  - b. Notification of Pregnancy. Pregnant employees shall submit the CHP 209, signed by their medical care providers, at the time they make their notifications of pregnancy as required by HPM 10.3, Personnel Transactions Manual, Chapter 8, Leave of Absence.
  
  - c. Nonparticipation in Firearms Training. Pregnant employees who elect not to participate in firearms training on the advice of their medical care providers shall be assigned to limited duty in accordance with the provisions of HPM 10.7, Chapter 8.

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## ANNEX E

### MATERIALS HANDLING AND LIFTING TECHNIQUES

1. GENERAL. Many injuries occur as the result of improper materials handling and lifting, carrying too heavy a load, incorrect gripping, failing to observe proper foot or hand clearances, and failing to use or wear proper safety equipment.
  
2. General Materials-Handling Precautions.
  - a. Inspect materials for slivers, jagged edges, burrs, and rough or slippery surfaces.
  - b. Grip the object firmly.
  - c. Keep fingers away from pinch points, especially when putting materials down.
  - d. Keep hands away from the ends of long objects to avoid being pinched.
  - e. Wipe greasy, wet, slippery, or dirty objects prior to handling.
  
3. Use of Materials-Handling Equipment.
  - a. Push (do not pull) hand trucks, dollies, or other materials handling equipment.
  - b. Keep the load close to the body.
  - c. Maintain a firm grip on the equipment and load.
  - d. Keep the back straight, knees bent, and lean in the direction of the movement.
  - e. Consider using gloves if they improve grip.
  
4. Lifting and Unloading Techniques.
  - a. Plan the lift and test the load to determine how heavy it is prior to lifting.
  - b. Ensure there is sufficient room to lift the load.
  - c. Ask for assistance if the load is too heavy or awkward.
  - d. Get a firm footing by placing feet apart for a firm base and pointing toes out.

## ANNEX E

### **MATERIALS HANDLING AND LIFTING TECHNIQUES (*continued*)**

- e. Bend the knees, not the waist, keeping the principles of leverage in mind.
  - f. Tighten the stomach muscles to support the spine.
  - g. Lift with the legs, not the back.
  - h. Keep the load close to the body.
  - i. Keep the back upright.
  - j. Avoid twisting.
5. Lifting and Lowering from High Places.
- a. Stand on a solid platform rather than a ladder.
  - b. Lift the load in smaller pieces, if possible.
  - c. Slide the load as close as possible to the body before lifting.
  - d. Get assistance to lift and move loads, whenever appropriate.
6. Two-Person Lifting.
- a. Both persons should lift and rise at the same time.
  - b. Both persons should keep the load at the same level while carrying it.
  - c. Both persons should move together.
  - d. Both persons should unload at the same time.
7. Drums, Barrels, and Cylinders.
- a. Lifting drums, barrels, and cylinders safety requires special training. When moving these items, it is recommended to use a drum dolly.
  - b. When two people are upending a full drum, the following procedures are recommended:

## ANNEX E

### **MATERIALS HANDLING AND LIFTING TECHNIQUES (*continued*)**

- (1) Ensure there is sufficient room to move the load.
  - (2) Stand on the opposite sides of the drum and face each other.
  - (3) Grasp both chimes (e.g., rolled edges at both ends of the drum) near their high points. Lift one end and press down on the other end.
  - (4) As the drum is upended and brought to balance on the bottom chime, release the grip on the bottom chime and straighten it up with the drum.
- c. When two people are overturning a full drum, the following procedures are recommended:
- (1) Ensure there is sufficient room to move the load.
  - (2) Stand near one another, facing the drum.
  - (3) Grip the closest point of the top chime with both hands.
  - (4) Rest palms against the side of the drum and push until the drum balances on the lower chime.
  - (5) Step forward a short distance, each person releasing one hand from the top chime and grip the bottom chime. Ease the drum down to a horizontal position until it rests solidly on its side.
- d. When one person is overturning a drum, the following procedures are recommended:
- (1) Stand in front of the drum, reach over, and grasp the far side of the top chime with both hands.
  - (2) A shorter person can grasp the near side of the chime, if easier.
  - (3) If the drum is tight against a wall or against other drums, pull on the chime with one hand and push against the wall or another drum with the other hand for additional control.
  - (4) Pull the top of the drum toward the body until the drum is balanced on the edge of the lower chime.
  - (5) Transfer both hands to the near side of the top chime.

## ANNEX E

### MATERIALS HANDLING AND LIFTING TECHNIQUES (*continued*)

(6) Keep hands far enough apart to avoid being pinched when the drum touches the floor.

(7) Lower the drum by bending the legs.

NOTE: If one person needs to upend a drum, reverse the procedures listed above

e. To roll a barrel or drum, push against the side with the hands. To change direction of the roll, grip the chime. Do not kick the drum with the feet.

f. To lower a drum or barrel down a skid or decline, turn it and slide it on end. Do not roll it.

#### 8. ADDITIONAL LIFTING GUIDENCE.

- a. Warm up before lifting.
- b. Bend or stretch gently.
- c. Break a large load into smaller loads (if possible).
- d. Wear appropriate hand/foot protection.

9. EXERCISES. A regular exercise program which includes warming-up, stretching, and strengthening exercises may increase flexibility and strength while reducing the risk of injury (including injury to the back). Prior to participating in an exercise program, employees are advised to consult their medical provider.

## ANNEX F

### AIR QUALITY

1. INDOOR AIR QUALITY. Acceptable indoor air quality is air in which there is no known contaminants at harmful concentrations and with which a substantial majority (usually 80 percent) of the employees exposed do not express dissatisfaction.
2. COMPONENTS. Indoor air quality is a function of many conditions including outdoor air quality, the design of the enclosed spaces, the design of the ventilation system and the way it is operated and maintained, and the presence of sources of contaminants and the strength of such sources.
  - a. Building Design. A building originally designed for one purpose may end up converted to another purpose. If not properly modified during renovations, the room partitions and ventilation system can contribute to indoor air quality problems by restricting air recirculation or by providing an inadequate supply of outdoor air.
  - b. Mechanical Ventilation Systems Designed and Operated. Mechanical ventilation systems are designed and operated to heat and cool the air and to draw in and circulate outdoor air. In an effort to save energy, ventilation systems may not bring in adequate amounts of outdoor air. Inadequate ventilation also occurs if the air supply and return vents within each room are blocked or placed in such a way that outdoor air does not actually reach the breathing zone of the building occupants.
  - c. Outdoor Air Intake Vents. Improperly located outdoor air intake vents can bring in air contaminated with vehicle exhaust, or other contaminants.
  - d. Indoor Pollution. Ventilation systems can be a source of indoor pollution by spreading biological contaminants that have multiplied in cooling towers, humidifiers, dehumidifiers, air conditions, or on the inside surfaces of ventilation duct work.
3. CONTAMINANTS. Contaminants include various gases, vapors, microorganisms, smoke, and other particulate matter. These may be present in the air or be introduced from indoor activities, furnishings, building materials, surface coatings, and/or air-handling and air-treatment components. Unhealthy factors include toxicity, radioactive, potential to induce infection or allergies, irritants, extreme thermal conditions, and objectionable odors. Indoor air should not contain contaminants that exceed concentrations known to impair health or cause discomfort to building occupants.
4. SYMPTOMS OF UNHEALTHY AIR QUALITY. Symptoms associated with poor indoor air quality include headaches, dizziness, nausea, fatigue, dry skin, eye irritation, sinus congestion, and nonproductive cough. Diseases that are related to unhealthy air

## ANNEX F

### AIR QUALITY (*continued*)

quality include hypersensitivity diseases such as hypersensitivity pneumonitis, humidifier fever, allergic asthma, and allergic rhinitis; infectious diseases such as legionellosis, influenza, and measles; and toxic syndromes resulting from exposure to carbon monoxide, pesticides, or microbial toxins.

5. MAINTENANCE AND INSPECTIONS. In accordance with CCR Title 8, General Industry Safety Order, Section 5142, the heating, ventilating and air conditioning (HVAC) system shall be maintained and operated to provide at least the quality of outdoor air required by the State Building Standards Code, Title 24, Part 2, California Administrative Code, in effect at the time the building permit was issued.

a. Continuous Operation. The HVAC system shall be operated continuously during work hours except:

(1) During scheduled maintenance and emergency repairs.

(2) During periods not exceeding a total of 90 hours per calendar year when a servicing electric utility by contractual agreement requests its customers to decrease electrical power demand.

(3) During periods for which the employer can demonstrate that the quality of outdoor air supplied by nonmechanical means meets the outdoor air supply rate required by CCR Title 8, General Industry Safety Order, Section 5142.

(4) The HVAC system shall be inspected at least annually, and problems found during these inspections shall be corrected within a reasonable time. Maintenance shall occur quarterly in accordance with the agreement between the local command and the contractor selected for HVAC maintenance.

b. Inspections and Maintenance Documentation. Inspections and maintenance of the HVAC system shall be documented in writing. The command shall record the name of the individuals inspecting and or maintaining the system, the date of the inspection and or maintenance, and the specific findings and actions taken. The command shall maintain these records with the command injury and illness prevention program for four years, plus the current year.

c. Record Availability. The command shall make all records required by CCR Title 8, General Industry Safety Order, Section 5142, available for examination and copying, within 48 hours of a request of any affected employee of the command, any designated representative of affected employees of the command, and to any

## ANNEX F

### AIR QUALITY (*continued*) (*continued*)

authorized representative of the Department of Industrial Relations, Division of Occupational Safety and Health.

6. PROBLEM REPORTING. In accordance with HPM 11.1, Chapter 14, Facilities Development, Repairs, and Maintenance, commands shall report any HVAC problems to their facility coordinator and/or to Facilities Section.

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## ANNEX G

### POISON OAK AND POISON IVY

1. IDENTIFICATION. Poison oak and poison ivy plants can look alike, but their growth forms vary greatly. Poison ivy has a greater variety of leaf shapes than poison oak, although both have characteristic triple leaf pattern. Poison ivy is often a plant growing less than a foot high. Poison oak plants can be shrubs growing three to 10 feet tall or long, woody, climbing vines. Appearances vary from region to region and season to season. Much of the spring and summer the leaves are waxy green. They may also be yellow, red, or a deep maroon. In autumn the full foliage is vivid red.
  
2. METHODS OF EXPOSURE. The sap from both plants contains an oil that causes reaction on the skin (rash). Contacting the oil sets off a rash that may vary from simple itching and inflammation to blisters. A person can be exposed by touching objects contaminated with the oil. Items coated with the oil can remain contaminated for long periods of time. Additionally, when the plants are burned the toxic oil coats the soot and can be inhaled.
  
3. SYMPTOMS OF EXPOSURE. Contact with either plant may cause itching, swelling, and painful blisters. A severe case can be disabling.
  
4. EXPOSURE PREVENTION AND DECONTAMINATION.
  - a. Recognizing and avoiding poison oak and poison ivy is the best way to prevent exposure.
  - b. Wearing protective clothing such as long sleeve shirts, gloves, and long pants may help prevent skin contact with the plants.
  - c. If your skin is exposed, wash the exposed area with soap and water as soon as possible.
  - d. If possible, you should machine wash exposed clothing. Clean exposed equipment with rubbing alcohol and/or with soap and water. Be careful not to touch potentially exposed clothing or equipment items while cleaning.
  
5. EXPOSURE REPORTING AND ROUTING PROCEDURES. Exposure reporting and routing procedures shall be conducted in accordance with the directives contained in HPM 10.7.

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## ANNEX H

### AFRICANIZED HONEY BEES

1. BACKGROUND. Africanized honey bees (AHBs) have migrated into California. The first AHB swarms arrived in southern California in 1994.
2. CHARACTERISTICS.
  - a. Similarities. The AHBs are similar in size and appearance and behave much like other bees.
  - b. Differences. The significant difference between AHBs and other bees is their defensive behavior they display when protecting their colony. The AHBs are very territorial, sting with more frequency, and may pursue further (distances up to a quarter mile) than other bees.
  - c. Length of Agitation. The AHB may remain agitated much longer (eight or more hours) than other bees after their colony is disturbed.
  - d. Reason for Attacks. The AHB will usually attack when it perceives its colony is being disturbed. Activities which contribute to the disturbance of AHBs include those that create vibration or noise. Other activities, such as movement within 50 feet of a colony, may contribute to defensive behavior.
3. PREVENTATIVE MEASURES. The AHB prefer to colonize in locations with limited access (e.g., barrels, buildings, tires, cars, or utility access covers). Facilities should be inspected for locations where AHBs may colonize. Cracks and openings should be sealed, damaged vent screens should be repaired or replaced, and ground holes should be filled.
4. IF A SWAM, NEST, OR COLONY IS FOUND. Do not disturb the bees. Immediately notify the appropriate local agency, pest control, and/or County Department of Agriculture.
5. WHAT TO DO IN THE EVENT OF AN ATTACK.
  - a. Leave the area quickly.
  - b. Use clothing to protect eyes and mouth from bees.
  - c. Seek an enclosed shelter. This should separate you from a majority of the bees.

## ANNEX H

### AFRICANIZED HONEY BEES (*continued*)

6. IF STUNG.

a. Remove the stinger by scraping the area with the edge of a dull thin object (e.g., credit card).

b. **If allergic to bees, seek immediate emergency medical attention.**

7. EXPOSURE REPORTING AND ROUTING PROCEDURES. Exposure reporting and routing procedures shall be conducted in accordance with the directives contained in HPM 10.7.

## ANNEX I

### ULTRAVIOLET RADIATION/SKIN CANCER PREVENTION

1. SUN EXPOSURE. Sun exposure is understood to be the major cause of skin cancer, so it is very important to take preventative measures from excessive sun exposure. Skin cancer results from the emission of ultraviolet (UV) rays from the sun, which includes ultraviolet long rays (UVA) and ultraviolet short rays (UVB). These two types of UV rays enter the skin cells causing both visible and invisible injuries. Individuals should also be aware that tanning salons, sun lamps, and sun beds emit UV radiation.
  
2. SKIN CANCER TYPES. There are three major forms of cancer that originate in the skin.
  - a. Basal Cell Carcinoma (BCC).
  - b. Squamous Cell Carcinoma (SCC).
  - c. Malignant Melanoma.
  
3. DESCRIPTION.
  - a. Skin cancer can develop anywhere on the body; however, it most often appears on the surfaces receiving the greatest amount of sun exposure. The BCC and SCC skin cancer often take the form of a pale, wax-like, pearly bump or a red, scaly, sharply outlined patch. The patches may crust, discharge, pus, and sometimes bleed. If not treated early, SCC may spread to other parts of the body. The negative effects of skin cancer can be greatly minimized when the cancers are treated in their early stages.
  - b. Malignant Melanoma is the most serious form of skin cancer. It often arises from or near a mole. It often appears on parts of the body which receive little direct sunlight. There are four basic warning signs that should prompt individuals to visit their doctor. If a person observes a mole or growth with any of the following characteristics:
    - (1) Asymmetry. An imaginary line drawn through a mole or growth that produces two halves that do not match.
    - (2) Border. The border of a mole or growth has an irregular shape of jagged edges.

(3) Color. The color is not uniform but has a mixture of bleeding of colors, including black, brown, red, and blue.

(4) Diameter. The distance across is larger than a standard pencil eraser.

4. HIGH RISK CONDITIONS FOR UV EXPOSURE. The UV rays linked to skin cancer development are more intense under certain timeframes or conditions usually related to the sun's angle to the early and/or the depth of the atmosphere through which the sun's rays must pass.

- a. From the hours of 1000 to 1600.
- b. From mid-spring to mid-fall.
- c. At geographical latitudes nearer the equator.
- d. At higher altitudes.
- e. Absent thick cloud cover.
- f. With highly reflective surfaces such as water, snow, or light-colored sand.

5. PREVENTATIVE MEASURES. The following are some basic strategies to shield an individual from excessive sun exposure:

- a. Reduce sun exposure from the hours of 1000 to 1600 hours, when UV rays are the strongest. This is especially important from mid-spring through mid-fall.
- b. Wear a wide-brimmed hat that produces a shadow that covers the nose, eyes, face, ears, and back of the neck.
- c. Wear tightly woven, loose-fitting clothing that covers as much of the body as possible.
- d. Whenever possible, find shade (e.g., trees, physical structures) to shield the body from direct sunlight.
- e. The use of sunglasses that include a warranty from the manufacturer stating the sunglasses provide 100 percent UVA and UVB (broad-spectrum) protection or a statement that the sunglasses meet, "ANSI UV Requirements" (American National Standards Institute).
- f. Liberally apply sunscreen to exposed skin 20 minutes before going outdoors. The sunscreen should contain a sun protection factor (SPF) rating of 15 or above.

## ANNEX I

### ULTRAVIOLET RADIATION/SKIN CANCER PREVENTION (*continued*)

and should state that it provides both UVA and UVB protection. Lotion or cream-based sunscreens tend to adhere to the skin longer, thus providing better protection. Avoid use of products containing Para Amino Benzoic Acid (PABA) derivatives for persons with sensitive skin.

- (1) Depending on the outdoor conditions, sunscreen should be reapplied at least every two hours or as instructed by the manufacturer.
- (2) The SPF number on the sunscreen product indicates how many times longer, under ideal conditions, an individual can stay out in the sunlight without beginning to turn red in comparison with the amount of time unprotected skin would start to burn.
- (3) Use of a lip balm that has an SPF rating of at least 15 or higher.
- (4) Do not rely on sunscreen alone to protect from skin cancer. Instead, rely as much as possible on the combination of preventative measures listed above.

g. Avoid excessive exposure from artificial sources of light which emit UV radiation, i.e., tanning salons and sun lamps.

6. DETECTION. The possible first signs of developing skin cancer can often be self-observed. Individuals should see their medical provider if they observe any abnormal moles or growths, or if they suspect any possibility of skin cancer.

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## ANNEX J

### HEAT INJURY AND ILLNESS PREVENTION

1. BACKGROUND. This section complies with the CCR Title 8, General Industry Safety Order, Section 3395, Heat Illness Prevention, and sets forth procedures for employees and supervisors who work outdoors in varying elements.
  
2. DEFINITIONS.
  - a. Shade. Blockage of direct sunlight. Blockage is deemed sufficient when objects do not cast a shadow in the shaded area. An enclosed area used to provide shade must allow cooling at least comparable to the cooling that would be provided in the shaded unenclosed area in the same location.
  
  - b. Acclimatization. The temporary and gradual physiological change in the body that occurs when the environmentally induced heat load to which the body is accustomed is significantly and suddenly exceeded by environmental changes<sup>5</sup>.
  
3. RESPONSIBILITIES.
  - a. Employees. Employees should drink water frequently. The amount of fluid is up to each individual employee. Considerations of how much water to carry are based on population density and services available in the area of responsibility. This would include possibly carrying more water or similar fluids while working in the warmer and more desolate regions of the state.
  
  - b. Supervisors. Supervisors must encourage employees to drink water frequently. The supervisor should ensure all employees are familiar with the signs and symptoms of heat related injuries and illnesses. Supervisors should be aware of the types of units (car and/or motorcycle) on a scene involving long term exposure to heat. Supervisors are required to maintain contact (radio, cell phone, or visual) with employees when those duties involve exposure during warm or hot weather.
  
4. PREVENTATIVE MEASURES. At the beginning of each shift, employees are to ensure they have a sufficient amount of fluid to last at least two hours (depending on the temperature for the day). As a general note, those working enforcement will have a greater need for fluid due to the protective equipment worn. The general recommendation is four cups (1 quart of fluid) for every hour.

<sup>5</sup> As defined by the Department of Industrial Relations.

5. SHADE. Vehicles with operable air conditioning meet the requirement for this section. Personnel on a fixed post without a vehicle, and motorcycle units, require special consideration in warmer weather.
6. FIXED POSTS.
  - a. COZEEP/MAZEEP. Prepare at the beginning of shift. You may not be able to leave the area to obtain additional fluid.
  - b. Crash Scene. Every employee should be aware of conditions within their area that would warrant checking on other employees who may need water or a break.
7. RISK FACTORS. Everyone will react differently to exposure based on the following:
  - a. Age. It is believed younger employees will adapt quicker and have more resilience to heat illnesses. This is not necessarily true in all cases. All employees can be susceptible to heat illnesses.
  - b. Current Health. Your ability to adapt to hot weather will be affected by your current health condition. Some prescription medications can also hinder the body's ability to adapt or absorb fluid.
  - c. Water Consumption. Maintain constant water intake. Even if you are not thirsty at the time, continually taking small sips will dramatically decrease the chance of heat illness. Remember, if you are thirsty, you have waited too long to hydrate.
  - d. Caffeine Intake. Although coffee and tea are mostly water, caffeine limits the ability of the body to absorb the necessary fluid. Caffeinated soft drinks have the same effect.
8. MOTOR UNITS. Motor units do not carry large or extra amounts of water and require relief at shorter intervals.
9. FIRST AID. First aid will be given based on the treating employees' level of training. If further medical services are necessary, contact the Communications Center and request transportation to a hospital or (if more appropriate) transport the party to a hospital in your patrol vehicle.
10. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION COMPLIANCE.
  - a. Employee Training. All officers and sergeants are trained at the first responder level, at a minimum. This makes them fully aware of the signs and symptoms

## ANNEX J

### HEAT INJURY AND ILLNESS PREVENTION (*continued*)

associated with heat illnesses. Supervisors or managers shall place the Heat Injury and Illness Poster where it is visible to all employees and encourage them to become familiar with its contents.

b. Procedures. The procedures for dealing with a heat illness are a combination of the location of the incident and the severity of the symptoms. It can be as basic as providing water and temporary relief from the heat, to transporting to a medical facility. Again, this will be based on the employees training and experience.

c. Contacting Emergency Medical Services. We are in a unique position by being the first responders to injuries and illnesses. Summoning assistance can be as simple as contacting a Communications Center via radio to contacting a supervisor directly using a cell phone.

Heat Illness and Injury Poster. The Department has designed a poster to aid in educating employees of the signs, symptoms, and treatments for heat illnesses. Additionally, the poster includes methods of reducing the risks associated with heat illnesses and injuries. This poster conforms to the requirements set forth in CCR Title 8, General Industry Safety Order, Section 3395. Additional posters can be obtained through the ORM, OSU