

December 8, 2005 Discussion Draft
Cal/OSHA Aerosol Transmissible Disease Standard

(a) Definitions

Acid-fast bacilli (AFB) means bacteria that retain certain dyes after being washed in an acid solution. Most acid-fast organisms are mycobacteria.

Accredited laboratory means a laboratory that is licensed by the California Department of Health Services pursuant to Title 17 of the California Code of Regulations, or which has participated in a quality assurance program leading to a certification of competence administered by a governmental or private organization that tests and certifies laboratories.

Aerosol transmissible disease (ATD) means a disease identified by the CDC (ref HICPAC) or the CDHS as requiring airborne infection isolation or droplet precautions.

Aerosol transmissible pathogen (ATP) means a pathogen, identified by the CDC (ref HICPAC) or the CDHS as requiring airborne infection isolation or droplet precautions.

Airborne infection isolation (AII) means infection control procedures that are designed to reduce the risk of transmission of airborne infectious pathogens. Airborne infection isolation procedures apply to patients known or suspected to be infected with epidemiologically important pathogens that can be transmitted by the airborne route. (Ref HICPAC)

Airborne infection isolation room or area means a room, area, booth, tent, or other enclosure that is maintained at negative pressure to adjacent areas in order to control the spread of aerosolized **M. tuberculosis** and other airborne infectious pathogens, and that meets the requirements of Title 24, Part 4, for Isolation Rooms, or the requirements stated in subsection (d) of this standard

Airborne infectious disease or pathogen means either: (1) an aerosol transmissible disease or pathogen transmitted by infectious agents through dissemination of airborne droplets or droplet nuclei or dust particles containing the infectious agent, for which AII is recommended by the CDC (Ref. HICPAC) or CDHS or (2) any disease caused by a novel or unknown ATP.

CDC means the United States Centers for Disease Control and Prevention.

CDHS means the California Department of Health Services.

Chief means the Chief of the Division of Occupational Safety and Health, Department of Industrial Relations.

Confirmed infectious case means an individual who meets the definition of a confirmed case of an ATD under diagnostic criteria accepted by the CDC or CDHS. The disease state must be capable of being transmitted to another individual (e.g., pulmonary or laryngeal TB or extrapulmonary TB where the infected tissue is exposed and could generate droplet nuclei).

Director means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designated representative.

Droplet Precautions means infection control procedures designed to reduce the risk of transmission of infectious agents through contact of the conjunctivae or the mucous membranes of the nose or mouth of a susceptible person with large-particle droplets (larger than 5 µm in size) containing microorganisms generated from a person who has a clinical disease or who is a carrier of the microorganism. Droplet Precautions apply to

any patient known or suspected to be infected with epidemiologically important pathogens that can be transmitted by infectious droplets. (Ref HICPAC)

Exposure incident means an event in which an employee has had a significant exposure to an individual with a diagnosed reportable disease or condition for which droplet precautions or airborne infection isolation is recommended, without the benefit of applicable exposure controls required by this section.

Exposure incident (laboratory) means a significant exposure to an aerosol containing an ATP or other pathogen transmissible by aerosol created by laboratory procedures, without the benefit of applicable exposure control measures required by this section.

Field Operation means an operation conducted by employees that is outside of a fixed establishment, such as paramedic and emergency medical services or transport, law enforcement outside of a fixed establishment, and home health care.

High hazard procedures means procedures performed on an individual with suspected or confirmed aerosol transmissible disease in which the potential for being exposed to aerosol transmissible pathogens is increased due to the reasonably anticipated generation of aerosolized pathogens. Such procedures include, but are not limited to, sputum induction, bronchoscopy, endotracheal intubation or suctioning, aerosolized administration of pentamidine or other medications, and pulmonary function testing. They also include autopsy, clinical, surgical and laboratory procedures that may aerosolize pathogens.

Infection control PLHCP means a PLHCP who is knowledgeable in infection control practices, including routes of transmission, isolation precautions and the investigation of exposure incidents.

Laboratory means a facility or operation in a facility where the manipulation of specimens or microorganisms is performed for the purpose of diagnosing disease, conducting research or experimentation on the microorganisms, replicating the organisms for distribution, and related support activities for these processes.

Latent tuberculosis infection (LTBI) means a condition in which living **M. tuberculosis** bacilli are present in the body without producing clinically active disease. Although the infected individual has a positive tuberculin skin test reaction or other positive TB Test reaction, he or she may have no symptoms related to the infection and may not be capable of transmitting the disease.

Local Health Officer means the health officer for the local jurisdiction responsible for receiving reports of communicable diseases, as defined in Title 17, of the California Code of Regulations. Note: Title 17, Section 2500 requires that reports be made to the local health officer for the jurisdiction where the patient resides.

M. tuberculosis means **Mycobacterium tuberculosis**, the scientific name of the bacillus that causes tuberculosis.

Negative pressure means the relative air pressure difference between two areas. A room that is under negative pressure has lower pressure than adjacent areas, which keeps air from flowing out of the room and into adjacent rooms or areas.

Novel or unknown ATP means: (1) a newly recognized pathogen, (2) a newly recognized variant of an existing pathogen, (3) a pathogen that has been recently introduced into the human population, or (4) an unknown pathogen. A novel or unknown ATP meets all of the following criteria: (a) it is capable of causing serious human disease,

(b) there is credible evidence that it is transmissible to humans by aerosols, and (c) there is insufficient evidence to rule out transmission of the pathogen by the airborne route.

Occupational exposure means reasonably anticipated exposure to a source of ATPs under conditions that create a significant risk that the exposed employee will contract the disease caused by the ATP. Examples of such conditions of exposure include: providing care or transport to suspect or confirmed infectious cases of ATDs, working in proximity to people with ATDs, working in a laboratory in which cultures containing ATPs or other pathogens are aerosolized, maintenance of ventilation systems containing air exhausted from AII rooms, and eradication of infected animals.

Physician or other licensed health care professional (PLHCP) means an individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide or be delegated the responsibility to provide some or all of the health care services required by subsection (f) or (g) of this section.

Reportable aerosol transmissible disease (RATD) means a disease or condition which a health care provider is required to report to the local health officer, in accordance with Title 17, California Code of Regulations, Chapter 4, and for which droplet precautions or airborne infection isolation are recommended by the Centers for Disease Control or the California Department of Health Services.

Respirator means a device which has met the requirements of 42 CFR Part 84, has been designed to protect the wearer from inhalation of harmful atmospheres, and has been approved by the National Institute for Occupational Safety and Health (NIOSH).

Respirator prepared employee means an employee who has been provided with the required medical evaluation, annual training, and initial fit-test, but who is not currently assigned to a task which requires the use of a respirator, in accordance with subsection (f).

Respirator user means an employee who is assigned to tasks which may require the use of a respirator, in accordance with subsection (f).

Source Control means the use of procedures, engineering controls, and other devices or materials to minimize the spread of airborne particles and droplets from an individual who has or exhibits signs or symptoms of having an ATD, such as persistent coughing.

Surge means a rapid expansion beyond normal services to meet the increased demand for qualified personnel, medical care and public health in the event of large-scale public health emergencies or disasters.

Suspect infectious case means an individual who meets criteria described by the CDC or the CDHS of a suspect infectious case for an aerosol transmissible disease.

TB Conversion means a change in tuberculosis infection test results from negative to positive, based upon current Centers for Disease Control and Prevention (CDC) or CDHS guidelines.

Test for tuberculosis infection (TB Test) means any test, including the Tuberculin skin test and interferon gamma release assays (IGRAs) which: (1) has been approved by the Food and Drug Administration for the purposes of detecting tuberculosis infection, and (2) is recommended by the Centers for Disease Control for testing for tuberculosis infection in the environment in which it is used, and (3) is administered, performed, analyzed and evaluated in accordance with those approvals and guidelines.

Tuberculin skin test means a method used to evaluate the likelihood that a person is infected with *M. tuberculosis*. The method utilizes an intradermal injection of tuberculin

antigen with subsequent measurement of the reaction induration. It is also referred to as a PPD skin test.

Tuberculosis (TB) means a disease caused by **M. tuberculosis**.

Tuberculosis disease is a condition in which living **M. tuberculosis** bacilli are present in the body, producing clinical illness. The individual may or may not be infectious.

Two-step testing is a baseline skin testing procedure used to identify a boosted skin test reaction from that of a new infection. The procedure involves placing a second skin test 1 to 3 weeks after an initial negative test. A positive reaction on the second test indicates a boosted reaction.

(b) Scope & application. This section applies to each of the following work settings:

- (1) Hospitals, and other healthcare facilities having point of first contact with potentially infected persons, or persons arriving from the scene of a release of biological agents, as defined in Section 5192.
- (2) Field operations that involve potential exposures to infectious individuals including paramedic, emergency medical transport, firefighting and police personnel.
- (3) Long term care facilities and hospices.
- (4) Correctional facilities and other facilities that house inmates or detainees.
- (5) Shelters and medical outreach services for the homeless.
- (6) Facilities that offer treatment for drug abuse.
- (7) Facilities where high-hazard procedures are performed
- (8) Home health care services and in other community-based medical services in which there is a significant potential for exposure to infectious individuals.
- (9) Operations involving the handling, culling, transport, slaughter, eradication, or disposal of animals infected with aerosol transmissible pathogens, such as avian influenza, and the cleaning of areas containing, or previously used to contain infected animals.
- (10) In any other workplace or type of workplace in which the CDC or CDHS determines that there is an elevated risk of infection with aerosol transmissible pathogens; and
- (11) In laboratories that handle specimens that may contain **M. tuberculosis** or other ATP, or process or maintain the resulting cultures, or perform related activity that may result in the aerosolization of **M. tuberculosis** or other aerosol transmissible pathogens or other pathogens that may be infectious when aerosolized by laboratory procedures. This section does not apply to laboratories in which only non-pathogenic organisms are handled, or in which no procedures are performed which are capable of aerosolizing pathogens.

Note to subsection (b): Occupational exposure incurred in any of the work settings listed in paragraphs (b)(1) through (b)(11) of this section by temporary or contract employees or by personnel who service or repair air systems or equipment or who renovate, repair, or maintain areas of buildings that may reasonably be anticipated to contain aerosolized **M. tuberculosis** or other aerosol transmissible pathogens is covered by this section.

(c) Airborne Transmissible Diseases Exposure Control Plan

- (1) All employers with operations described in subsections (b)(1) through (b)(10) shall establish, implement, and maintain a written, effective ATD Exposure Control Plan (Plan) which is specific to the work place or operation, and which contains all of the elements in subsection (c)(2).
- (2) The Plan shall contain all of the following elements:
 - (A) The name(s) or title(s) of the person(s) responsible for administering the Plan.
 - (B) The exposure determination required in subsection (c)(3).
 - (C) Methods of implementation for subsections (d), (f), (g), (h), and (i). Specific engineering, work practice, personal protective and respiratory protective control measures shall be listed for each task in which occupational exposure occurs for routine procedures and for surge conditions, where applicable. In establishments where the plan pertains to laboratory operations, it shall also contain the methods of implementation for subsection (e), unless those operations are included in a biosafety plan.
 - (D) Applicable source control measures for each operation in which employees have occupational exposure, and the methods the employer will use to implement them.
 - (E) The procedures for employees and supervisors to follow in the event of an exposure incident, including how the employer will determine which employees had a significant exposure, in accordance with subsection (g)(5).
 - (F) The procedures the employer will use to evaluate each exposure incident, in order to determine the cause, and to revise existing procedures to prevent future incidents, to the extent feasible.
 - (G) The procedures the employer will use to communicate with its employees, and with other employers of employees regarding the suspected or confirmed infectious disease status of persons to whom employees are exposed in the course of their duties.
 - (H) The procedures the employer will use to document the lack of available vaccine in accordance with subsection (g)(4).
 - (I) The procedures the employer will use to arrange to transfer patients to appropriate facilities for airborne infection isolation, and alternate procedures when those facilities are not available or transfer is not medically acceptable. These procedures shall include the methods the employer will use to document medical decisions not to transfer patients in need of AII.
 - (J) The procedures the employer will use to ensure that there is an adequate supply of personal protective equipment and other equipment necessary to minimize employee exposure to aerosol transmissible pathogens, in normal operations, in foreseeable emergencies, and in surge situations.
 - (K) The procedures the employer will use to involve employees in the review of the Plan.
- (3) Exposure Determination. Each employer who has an employee(s) with occupational exposure as defined by subsection (a) of this section shall prepare an

- exposure determination. This determination shall be made without regard to the use of personal protective equipment. This exposure determination shall contain the following:
- (A) A list of all job classifications in which all employees in those job classifications have occupational exposure.
 - (B) A list of all job classifications in which some employees have occupational exposure.
 - (C) A list of all tasks, procedures, or assignments in which occupational exposure occurs and that are performed by employees in job classifications listed in accordance with subsection (c)(3)(B).
 - (D) A list of all high hazard procedures performed by employees, and the job classifications and operations in which employees are exposed to those procedures.
 - (E) A list of all assignments in which employees are required to use respirators, in accordance with subsection (f).
- (4) The Plan shall be reviewed at least annually by the program administrator, and by employees regarding the effectiveness of the program in their respective work areas. The review(s) shall be documented in writing, in accordance with subsection (i).
- (5) The Plan shall be made available to employees, their representatives, and to the Chief or the Director and their representatives for examination and/or copying.

(d) Engineering and Work Practice Controls, and Personal Protective Equipment

(1) General. Employers shall use feasible engineering and work practice controls to minimize employee exposures to aerosol transmissible diseases. Where exposure still remains after the institution of engineering and work practice controls, the employer shall use personal protective equipment and respirators to control exposures.

- (A) Work practices shall be implemented to prevent or minimize employee exposures to airborne, droplet, and contact transmission of aerosol transmissible pathogens (ATP), in accordance with specific isolation precautions recommended in [HICPAC document] which is hereby incorporated by reference.

Note: These work practices may include, but are not limited to, appropriate handwashing and gloving procedures; the use of respiratory, eye and face protection; the use of gowns and other protective apparel; and adequate disinfection of contaminated surfaces, articles and linens.

- (B) Each employer shall implement written source control procedures. For fixed health care and correctional facilities, and in field operations and homeless shelters to the extent that it is feasible, these procedures shall incorporate the recommendations contained in the [HICPAC document] for respiratory etiquette. The procedures shall include methods to inform individuals entering the facility, being transported by employees, or otherwise in close contact with employees, of the source control practices implemented by the employer.

- (C) Employers shall develop and implement engineering and work practice controls to protect employees who operate, use, or maintain vehicles that transport individuals with suspected or confirmed TB or other ATD. The employer shall give consideration to implementing barriers and ventilation systems, where feasible. Employers shall document the basis for their determination in the Plan, and this determination shall be included in the annual review of the Plan.
- (D) Employers shall incorporate provisions for the vaccination of susceptible employees for vaccine-preventable diseases, in accordance with subsection (g).
- (2) Engineering controls shall be used in workplaces that admit or provide medical services or AII to individuals with suspected or confirmed infectious TB or other airborne infectious diseases, except in settings where home health care or home-based hospice care is being provided.
- (3) Suspect infectious cases or confirmed infectious cases of airborne infectious diseases, shall be identified, and except in settings where home health care or home-based hospice care is being provided, and in field operations these individuals shall be:
 - (A) Provided with disposable tissues and hand hygiene materials and masked or segregated in such a manner that contact with employees who are not wearing respiratory protection is eliminated or minimized until transfer or placement in an Airborne Infection Isolation (AII) room or area can be accomplished and;
 - (B) Placed in an AII room or area or transferred to a facility with AII rooms. The employer shall ensure that this placement or transfer is effected in a timely manner.
 - 1. **Transfers within facility.** Transfers to airborne infection isolation rooms or areas within the facility shall occur within 5 hours of identification.
 - 2. **Transfers to other facilities.** Transfers to other facilities shall occur within 16 hours of identification, unless the employer can document, at the end of 16 hours and at least every 24 hours thereafter that:
 - a The employer has contacted the local health officer, and
 - b There is no AII room or area available within that jurisdiction, and
 - c Reasonable efforts have been made to contact establishments outside of that jurisdiction, as provided within the Plan, and
 - d All measures recommended by the local health officer have been implemented, and
 - e All susceptible employees who enter the room or area housing the individual are provided with, and use, respiratory protection in accordance with Subsection (f) and Section 5144.

Exceptions to subsection (d)(3)(B)2.: (1) Where the treating physician determines that transfer would be detrimental to a patient's condition, the patient need not be transferred. In that case the facility shall ensure that employees use respiratory protection when entering the room or area housing the individual. The

patient's condition shall be reviewed at least every 24 hours to determine if transfer is safe, and the determination shall be recorded as described in the Plan.
(2) Where it is not feasible to provide AII facilities to individuals suspected or confirmed to be infected with novel or unknown aerosol transmissible pathogens, the employer shall provide other effective control measures to reduce the risk of transmission to employees, which shall include the use of respiratory protection in accordance with subsection (f).

(C) High-hazard procedures shall be conducted in an AII room or area.

(D) Specific requirements for Airborne Infection Isolation Rooms.

1. Hospital isolation rooms constructed in conformance with Title 24, Part 4, Chapter 4, Section 417 et seq, and which are maintained to meet those requirements shall be considered to be in compliance with subsection(d)(3)(D)2.
2. Negative pressure shall be maintained in AII rooms or areas. The ventilation rate shall be 12 or more air changes per hour. The required ventilation rate may be achieved in part by high efficiency particulate aerosol (HEPA) filtration, but in no case shall the ventilation rate be less than six ACH.
3. Negative pressure shall be qualitatively demonstrated (e.g., by smoke trails) daily while a room or area is in use for TB or airborne infection isolation. In place of daily qualitative demonstrations, the employer may rely on gauges or other monitoring systems if the employer has a preventive maintenance program that assures that alarms are not defeated and that includes an operational check performed at least monthly. The records of this program shall be maintained in accordance with section (i). Effective means shall be implemented to prevent tampering with, or disabling of gauges and alarms. During any period in which the monitoring system is inoperative, the employer shall use other methods to demonstrate negative pressure on a daily basis when the room or area is in use for AII.
4. Engineering controls shall be maintained, inspected and performance monitored for filter loading and leakage at least annually, and whenever filters are changed, and more often if necessary to maintain effectiveness. Problems found shall be corrected in a reasonable period of time. If the problem(s) found prevent the room from providing effective AII, then the room shall not be used for that purpose until the condition is corrected.
5. Ventilation systems shall be constructed, installed, inspected, operated, tested, and maintained in accordance with Section 5143. Inspections, testing and maintenance shall be documented in writing. The records shall include the names of the individual(s) performing the inspection, testing and/or maintenance, the date it was performed, the findings and the actions taken. The employer shall retain these records for at least five years.

6. Air from AII isolation rooms or areas, and areas that are connected via plenums or other shared air spaces shall be exhausted directly outside, away from intake vents, employees, and the general public. Air that cannot be exhausted in such a manner or that must be recirculated must pass through HEPA filters before discharge or recirculation.
 7. Ducts carrying air that may reasonably be anticipated to contain aerosolized **M. tuberculosis** or other airborne pathogens shall be maintained under negative pressure for their entire length before in-duct HEPA filtration or until the ducts exit the building for discharge.
 8. Doors and windows of AII rooms or areas shall be kept closed while in use for airborne isolation, except when doors are opened for entering or exiting and when windows are part of the ventilation system being used to achieve negative pressure.
 9. When an AII room or area is vacated by an individual with suspected or confirmed infectious TB or other airborne disease, the room or area shall be ventilated according to current CDC recommendations for a removal efficiency of 99.9 % before permitting employees to enter without respiratory protection.
- (4) The employer shall develop and implement written decontamination procedures including appropriate engineering controls, for employees to clean and decontaminate vehicles, PPE and equipment.
 - (5) The employer shall provide information about the infectious disease hazard to any contractor who provides temporary or contract employees who may incur occupational exposure so that the contractor can institute precautions to protect his or her employees.
 - (6) Surge capacity. Employers who will provide medical care for mass disease outbreaks or mass exposures to pathogenic organisms shall establish work practices and procedures, including patient isolation, the provision of decontamination facilities, appropriate personal protective equipment and respiratory protective equipment, for such events. Employees designated to provide care under these circumstances shall be trained in these practices and procedures.

(e) Laboratories

- (1) This subsection shall apply to employers with a laboratory or using laboratory procedures for culturing, identifying, or modifying organisms, or their derivatives, capable of causing aerosol transmissible diseases or capable of transmitting disease via aerosolization from laboratory procedures.

Note: This section does not apply to laboratories that do not perform procedures that are capable of aerosolizing pathogens, and it does not apply to laboratories that only work with non-pathogenic organisms.

- (2) **Biosafety plan:** the employer shall establish, implement and maintain an effective biosafety plan, to minimize employee exposures to pathogens that may be transmitted by laboratory aerosols.
 - (A) The biosafety plan shall identify a person with the authority and responsibility for implementing the plan and making an exposure determination as specified in subsection (c)(2).

- (B) The plan may be integrated with an existing Exposure Control Plan for bloodborne pathogens or an ATD Exposure Control Plan as described in subsection (c).
 - (C) The biosafety plan shall include an exposure determination meeting the requirements of subsection (c)(3).
 - (D) The biosafety plan shall establish a containment matrix that will implement the use of engineering controls that are appropriate for the hazard level of the organism or its derivatives as defined by Biosafety in Microbiological and Biomedical Laboratories, [Ref latest edition], which is hereby incorporated by reference. The matrix shall also establish work practice controls, and appropriate PPE including respiratory protective equipment. The use of respiratory protective equipment shall be in accordance with subsection (f) and Section 5144.
 - (E) The plan shall establish safe handling procedures and prohibit practices, such as sniffing, that increase employee exposure to infectious agents including whole organisms or their derivatives.
 - (F) The plan shall establish emergency procedures for uncontrolled releases within the laboratory facility and untreated releases outside the laboratory facility which shall include a procedure and means of reporting such incidents to local health officers and other appropriate agencies. These procedures shall be tested and verified with those agencies.
 - (G) The plan shall include a medical surveillance program consistent with subsection (g).
 - (H) The plan shall include communication of hazards and training consistent with subsection (h).
 - (I) The plan shall include an effective procedure for obtaining the active involvement of employees in reviewing and updating the biosafety plan with respect to the procedures performed by employees in their respective work areas or departments on an annual (or more frequent) basis.
- (3) Recordkeeping shall be in accordance with subsection (i).

(f) Respiratory Protection

- (1) Respirators provided for compliance with this section shall be approved by the National Institute for Occupational Safety and Health (NIOSH) for the purpose for which they are used. The employer shall select respirators that are at least as effective as those specified in CDC and CDHS guidelines in controlling employee exposures to airborne infectious pathogens.
- (2) Each employer who has any employee whose occupational exposure is based on entering any of the work settings or performing any of the tasks described in paragraph (f)(5) of this section shall establish and implement a written respiratory protection program that meets the requirements of Section 5144, except as provided in subsections (f)(6) and (f)(7) of this standard.
Note: The respiratory protection program may be incorporated into the exposure control plan or the biosafety plan.
- (3) The employer shall provide the respirator at no cost to the employee.
- (4) Selection.

- (A) Where respirator use is required solely for the purpose of infection control, the employer shall provide a respirator that is at least as effective as an N95 filtering facepiece respirator.
 - (B) The employer shall make available a powered air purifying respirator (PAPR) or an elastomeric facepiece respirator with an N, P, or R 100 cartridge to employees who conduct, or are present during, high risk procedures, unless the employer has determined that such use is not feasible. This determination shall be documented in the exposure control plan, and shall be reviewed at least annually.
 - (C) Where respirators are necessary to protect against other hazards, including the release of biological spores, and chemical or radiologic exposures, respirator selection shall be made in accordance with section 5144 and 5192, as applicable.
- (5) The employer shall provide and require employees to use a respirator when the employee:
- (A) Enters an AII room or area in use for airborne infection isolation; or
 - (B) Is present during the performance of procedures or services for an individual who is not masked, and who has suspected or confirmed infectious TB or other airborne disease; or
 - (C) Transports an individual with suspected or confirmed infectious TB or airborne disease in an enclosed vehicle (e.g., ambulance, helicopter, police car) or who transports an individual with suspected or confirmed infectious TB or airborne disease within the facility when that individual is not masked; or
 - (D) Repairs, replaces, or maintains air systems or equipment that may reasonably be anticipated to contain or generate aerosolized pathogen; or
 - (E) Is working in an area occupied by an unmasked individual with suspected or confirmed infectious TB or other airborne infections disease, and during decontamination procedures after the person has left the area; or
 - (F) Is working in a residence where an individual with suspected or confirmed infectious TB or other airborne disease is known to be present.
 - (G) Is handling, culling, transporting, slaughtering, eradicating, or disposing of animals infected with aerosol transmissible pathogens, or is cleaning areas containing, or previously used to contain infected animals.
- Exception to subsection (f)(5)(C). The employer shall not require or permit respirator use when an employee is operating a motor vehicle or helicopter and the respirator may interfere in the safe operation of that vehicle.
- (6) Medical evaluation: The employer shall provide a medical evaluation to determine the employee's ability to use a respirator, before the employee is fit tested or required to use the respirator. The employer shall identify a physician or other licensed health care professional (PLHCP) to perform medical evaluations. All medical evaluations shall be confidential in accordance with section 5144(e).
- (A) The PLHCP shall utilize the medical questionnaire in Appendix C of Section 5144, or provide a medical examination that obtains the same information.

- (B) For employees who use respirators solely for the purpose of infection control, the alternate questionnaire in Appendix B may be used. Administration of this questionnaire shall be confidential and shall comply with the requirements of Section 5144(e)(4).
 - (C) No employee shall be assigned to a task requiring the use of a respirator, if based upon the employee's most recent medical evaluation, the PLHCP determines that the employee is not able to wear a respirator.
- (7) Fit testing.
- (A) The employer shall perform either quantitative or qualitative face fit tests in accordance with the procedures outlined in appendix A to section 5144. The fit test shall be performed on the same size, make, model and style of respirator as the employee will use. When quantitative fit testing is performed, the employer shall not permit an employee to wear a filtering facepiece respirator unless a minimum fit factor of one hundred (100) is obtained. For quantitative fit-tests of N95 filtering facepiece respirators, the employer may use an adaptor recommended by the respirator manufacturer in performing the fit-test.
 - (B) The employer shall assure that each employee who is assigned to use a filtering facepiece respirator passes a fit test:
 1. At the time of initial fitting;
 2. Whenever changes occur in the employee's facial characteristics which affect the fit of the respirator;
 3. Whenever a different size, make, model or style of respirator is used; and
 4. At least annually thereafter.

Exception to subsection (f)(7)(B)4.: Employers may increase the interval for repeat fit-testing to no more than two years for employees whose sole occupational exposure is anticipated to be during surge operations.

- (8) The employer shall ensure that each respirator user is provided with initial and annual training in accordance with section 5144.
- (9) Provisions for respirator-prepared employees. Employees who are not identified as respirator users in accordance with subsection (c)(3)(E) may be designated as respirator-prepared by the employer. The employer shall provide these employees with an initial medical evaluation in accordance with subsection (f)(6), annual respirator training in accordance with section 5144(h), and an initial fit-test in accordance with subsection (f)(7). A respirator-prepared employee shall not perform any task requiring respirator use until they are provided with a new fit-test in accordance with subsection (f)(7), unless they have been fit-tested within the previous 12-month period.

Note: For pathogens for which airborne infection isolation is not required, and which are not novel or unknown ATPs, the employer may provide a respirator to respirator-prepared employees, in lieu of a surgical mask.

(g) Medical Surveillance

- (1) Each employer who has any employee with occupational exposure shall provide the employee with medical surveillance for tuberculosis and other ATD as

- recommended by the CDC and/or the CDHS. When an employer is also acting as the evaluating health care professional, the employer shall advise an employee following an exposure incident that the employee may refuse to consent to post-exposure evaluation and follow-up from the employer-healthcare professional. When consent is refused, the employer shall make immediately available to exposed employees a confidential medical evaluation and follow-up from a healthcare professional other than the exposed employee's employer.
- (2) Medical surveillance provisions, including vaccinations, examinations, evaluations, determinations, procedures, and medical management and follow-up, shall be:
- (A) Provided at no cost to the employee;
 - (B) Provided at a reasonable time and place for the employee and during the employee's working hours;
 - (C) Performed by or under the supervision of a physician or other licensed health care professional, as appropriate; and
 - (D) Provided according to recommendations of CDC and/or CDHS current at the time these evaluations and procedures take place.
- (3) The employer shall make surveillance for latent tuberculosis infection (LTBI) available to all employees with occupational exposure, in accordance with the recommendations of the CDC and CDHS.
- (A) TB tests and other forms of surveillance shall be provided at least annually, or more frequent testing if that is recommended by the CDC or CDHS.
 - (B) Employees who experience a conversion shall be referred to a PLHCP knowledgeable about TB for evaluation.
 - 1. The employer shall provide the PLHCP with a copy of this regulation, applicable CDC and CDHS guidelines, and the employee's TB Test records. If the employer has determined the source of the infection, the employer shall also provide any available diagnostic test results including drug susceptibility patterns relating to the source patient.
 - 2. The PLHCP shall perform any necessary diagnostic tests and shall inform the employee about appropriate treatment options.
 - 3. The PLHCP shall determine whether the employee has infectious TB, and if the employee needs precautionary removal from the workplace, in accordance with subsection (g)(8).
 - 4. The PLHCP shall provide a recommendation regarding precautionary removal in accordance with subsection (g)(8) and a written opinion in accordance with subsection (g)(9).
 - (C) Conversions shall be recorded in accordance with Title 8, Section 14300 et seq.
 - (D) Unless it is determined that the TB test conversion is not occupational, the employer shall investigate the circumstances of the conversion, and correct any deficiencies found during the investigation. The investigation shall be documented in accordance with subsection (i).
- (4) Laboratory tests shall be conducted by an accredited laboratory.

- (5) The employer shall make available to all employees with occupational exposure all vaccinations and immunizations recommended by the CDC and/or the CDHS to protect employees from ATDs.
- (A) Recommended vaccinations shall be made available after the employee has received the training required in subsection (h) and within 10 working days of initial assignment to all employees who have occupational exposure unless the employee has previously received the recommended vaccination(s), antibody testing has revealed that the employee is immune, or the vaccine(s) is contraindicated for medical reasons.
 - (B) The employer shall make additional vaccination(s) available to employees within ten days of the issuance of new CDC or CDHS recommendations. Exception: Where the employer can not implement these recommendations because of the lack of availability of vaccine, the employer shall document efforts made to obtain the vaccine in a timely manner and inform employees of the status of the vaccine availability. This information shall be updated every 10 days.
 - (C) The employer shall not make participation in a prescreening program a prerequisite for receiving a vaccine, unless the CDC or CDHS guidelines recommend prescreening prior to administration of the vaccine.
 - (D) If the employee initially declines a vaccination but at a later date while still covered under the standard decides to accept the vaccination, the employer shall make the vaccination available within ten days of that request, in accordance with subsection (g)(4)(B).
 - (E) The employer shall assure that employees who decline to accept a recommended vaccination offered by the employer sign the statement in Appendix A for each recommended vaccine.
- Exception to subsection (g)(4)(E) for annual influenza vaccination:** In the place of a written declination, the employer may establish effective procedures to offer the influenza vaccine. These procedures shall be in writing, and shall include 1. the manner in which employees will be made aware of that the vaccine is available, and is provided at no cost and during working hours, and 2. the manner in which employees are informed about the benefits and risks of the vaccine and the risk of not taking the vaccine. Information may be provided through postings, notices and/or announcements so long as the information is made available in a language and manner that is understood by the employees. Employers shall maintain records of employees to whom they provided vaccination.
- (6) Exposure Incidents.
- (A) An employer who determines that a person has a confirmed case of a reportable aerosol transmissible disease, shall:
 - 1. Report the case to the local health officer, in accordance with Title 17, and request advice regarding the assessment of potential employee exposures.
 - 2. Determine, to the extent that the information is available in the employer's records, any other employers who had employees who

provided medical care or transport to the infectious individual, or who had the individual in custody, or housed the individual in a shelter. The employer shall notify other employers of the date, time, and nature of the exposure, and provide any other information that is necessary for the other employer to evaluate exposure to its employees.

Note: These employees may include, but are not limited to, paramedics, emergency medical technicians, emergency responders, home health care personnel, homeless shelter personnel, referring health care facilities or agencies, and corrections personnel.

- (B) Each employer who becomes aware that its employees may have been exposed to a person with a confirmed case of a reportable disease transmitted by aerosols shall:
1. In consultation with either the local health officer or an infection control PLHCP, conduct an analysis of the exposure scenario to determine which employees had a significant exposure to the infected individual. This consultation shall be documented in writing, and shall include the name and title of the infection control PLHCP or local health officer, the names and social security numbers of employees who were included in the analysis, and the basis for any determination that an employee need not be included in post-exposure follow-up.
 2. Notify employees who had significant exposures of the date, time, and nature of the exposure.
 3. As soon as feasible provide post-exposure evaluation to all employees who had a significant exposure by a PLHCP knowledgeable about the specific disease, including appropriate vaccination or prophylactic treatment. For *M. tuberculosis*, and other pathogens where recommended by the CDC or CDHS, this shall include testing of the isolate from the source individual for drug susceptibility, unless the employer can demonstrate that this determination is not feasible.
 4. Obtain from the PLHCP a recommendation regarding precautionary removal in accordance with subsection (g)(8), and a written opinion in accordance with subsection (g)(9).
 5. Within 24 hours of notification, the notified employer shall determine from its records whether employees of other employers may have been exposed to the confirmed case, and shall notify any such employer of the nature, date, and time of the exposure, and of the contact information for the diagnosing employer or PLHCP.

(7) Information Provided to Physician or Other Licensed Health Care Professionals.

- (A) Each employer shall ensure that all PLHCPs responsible for making determinations and performing procedures as part of the medical surveillance program are provided a copy of this regulation, applicable CDC and CDHS guidelines, and, for those employees required to wear respirators under this section, information regarding the type of respiratory protection used, a description of the work effort required, any special environmental conditions

(e.g., heat, confined space entry), additional requirements for protective clothing and equipment, and the duration and frequency of usage of the respirator.

- (B) Each employer shall assure that the PLHCP who evaluates an employee after an exposure incident is provided the following information:
1. A description of the exposed employee's duties as they relate to the exposure incident;
 2. Circumstances under which the exposure incident occurred;
 3. Any diagnostic test results, including drug susceptibility pattern or other information relating to the source of exposure which could assist in the medical management of the employee; and
 4. All of the employee's medical records relevant to the management of the employee, including tuberculin skin testing and other relevant testing for ATP infections, and vaccination status.

(8) Precautionary Removal Recommendation from the Physician or Other Licensed Health Care Provider

(A) Each employer who provides a post exposure evaluation in accordance with this subsection shall obtain from the PLHCP an opinion regarding whether precautionary removal from the employee's regular assignment is necessary to prevent spread of the disease agent by the employee, and what type of alternate work assignment may be provided. A recommendation for removal shall be immediately conveyed to the employer via phone or fax, and documented in the written opinion as required in subsection (g)(8).

(B) Where the PLHCP recommends precautionary removal, the removal shall maintain the total normal earnings, seniority, and all other employee rights and benefits, including the employee's right to his or her former job status, as if the employee had not been removed from the employee's job or otherwise medically limited until the employee is determined to be noninfectious. *(note this language is taken from the federal and state lead standard).*

Note: Precautionary removal provisions do not extend to any period of time in which an employee is removed from work because of a work-related illness as defined in Labor Code Section 3200 et seq.

(9) Written Opinion from the Physician or Other Licensed Health Care Provider.

(A) Each employer shall obtain and provide the employee with a copy of the written opinion of the PLHCP within 15 days of the completion of all medical evaluations required by this section.

(B) For exposure incidents, the written opinion shall be limited to the following information:

1. The employee's TB Test status or applicable RATD test status;
2. The employee's infectivity status;
3. A statement that the employee has been informed of the results of the medical evaluation and has been offered any applicable vaccinations or prophylaxis;

4. A statement that the employee has been told about any medical conditions resulting from exposure to TB or other RATD that require further evaluation or treatment;

5. Any recommendations for precautionary removal.

(C) For respirator medical evaluations, the PLHCP's written opinion shall be limited to the employee's ability to wear a respirator, any limitations on its use, and the need, if any, for follow-up medical evaluations.

(D) All other findings or diagnoses shall remain confidential and shall not be included in the written report.

(h) Training

- (1) Employers shall ensure that all employees with occupational exposure participate in a training program which must be provided at no cost to the employee and during working hours.
- (2) Training shall be provided as follows:
 - (A) At the time of initial assignment to tasks where occupational exposure may take place;
 - (B) At least annually thereafter.
 - (C) For employees who have received training on aerosol transmissible diseases in the year preceding the effective date of the standard, only training with respect to the provisions of the standard which were not included need be provided.
 - (D) Annual training for all employees shall be provided within twelve months of their previous training.
 - (E) Employers shall provide additional training when changes, such as introduction of new engineering or work practice controls, modification of tasks or procedures or institution of new tasks or procedures, affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.
- (3) The training program shall contain at a minimum the following elements:
 - (A) Copy and Explanation of Standard. An accessible copy of the regulatory text of this standard and an explanation of its contents.
 - (B) Epidemiology and Symptoms. A general explanation of the epidemiology and symptoms of respiratory infectious diseases, including definitions for suspect cases of aerosol transmissible diseases.
 - (C) Modes of Transmission. An explanation of the modes of transmission of ATDs.
 - (D) Employer's Exposure Control Plan. An explanation of the employer's ATD Exposure Control Plan and/or Biosafety Plan and the means by which the employee can obtain a copy of the written plan.
 - (E) Risk Identification. An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to ATDs.
 - (F) Methods of Compliance. An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering and work practice controls and personal and respiratory protective equipment. This shall include a description of the employer's source control and isolation procedures

- (G) Personal Protective Equipment. An explanation of the basis for selection of personal protective equipment and its uses and limitations.
 - (H) Decontamination and Disposal. Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment.
 - (I) The employer's medical surveillance program.
 - (J) Respiratory Protection, in accordance with the provisions of Section 5144.
 - (K) Vaccination. Information on the available vaccines, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge.
 - (L) Emergency. Information on the appropriate actions to take and persons to contact in an emergency involving aerosol transmissible diseases.
 - (M) Exposure Incident. An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident, the medical follow-up that will be made available, and post-exposure evaluation.
 - (N) Interactive Questions and Answers. An opportunity for interactive questions and answers with the person conducting the training session.
- (4) Employees designated to respond to surge conditions at healthcare facilities shall receive additional training that covers the plan for surge receiving and treatment, isolation procedures, how to access supplies needed for the response including personal protective equipment, decontamination facilities and procedures, and respiratory protection, and how to coordinate with emergency response personnel from other agencies.
 - (5) Training material appropriate in content and vocabulary to the educational level, literacy, and language of employees shall be used.

(i) **Record-keeping**

(1) Medical Records.

- (A) The employer shall establish and maintain an accurate record for each employee with occupational exposure, in accordance with Section 3204.
- (B) This record shall include:
 - 1. The name and social security number of the employee;
 - 2. A copy of the employee's vaccination status including the dates of all vaccinations and any medical records relative to the employee's ability to receive vaccination as required by subsection (g)(2);
 - 3. A copy of all results of examinations, medical testing, and follow-up procedures as required by subsection (g);
 - 4. The employer's copy of the PLHCP's written opinion as required by subsection (g); and
 - 5. A copy of the information provided to the PLHCP as required by subsection (g).
- (C) Confidentiality. The employer shall ensure that employee medical records required by subsection (g) are:
 - 1. Kept confidential; and

2. Not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by this section or as may be required by law.
- (D) The employer shall maintain the records required by subsection (g) for at least the duration of employment plus 30 years in accordance with Section 3204.
- (2) Training Records.
- (A) Training records shall include the following information:
1. The dates of the training sessions;
 2. The contents or a summary of the training sessions;
 3. The names and qualifications of persons conducting the training; and
 4. The names and job titles of all persons attending the training sessions.
- (B) Training records shall be maintained for 3 years from the date on which the training occurred.
- (4) Records of Plan Implementation
- (A) Records of annual review of the plan shall include the name(s) of the person conducting the review, the date of the review, the name(s) and unit(s) of employees involved, and a summary of the conclusions. The record shall be retained for three years.
- (B) Records of availability of vaccine shall include the name of the person who determined vaccine was not available, the name and affiliation of the person providing the vaccine availability information, and the date of the contact. This record shall be retained for three years.
- (C) Records of the unavailability of Airborne Infection Isolation facilities shall include the name of the person who determined AII facilities were not available, the name and the affiliation of persons contacted for transfer possibilities and the date of the contact, the name and contact information for the local health officer providing assistance and the time and date of the contacts.
- (D) Records of decisions not to transfer a patient to another facility for AII for medical reasons shall be documented in the patient's chart, and a summary shall be provided to the Plan administrator, providing only the name of the physician determining that the patient was not able to be transferred, the date and time of the initial decision and the person, date, and time of the daily review.
- (E) Records of inspection, testing and maintenance of engineering controls shall be maintained for a minimum of 5 years and shall include the name and affiliation of the person performing the test, inspection or maintenance, the date, and any significant findings.
- (4) Availability.
- (A) The employer shall ensure that all records required to be maintained by this section shall be made available upon request to the Chief, his designated representatives, and NIOSH for examination and copying.
- (B) Employee training records required by this subsection shall be provided upon request for examination and copying to employees, to employee representatives, to the Chief, his designated representatives and to NIOSH.

- (C) Employee medical records required by this subsection shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, to the Chief, his designated representative and to NIOSH in accordance with Section 3204.
- (5) Transfer of Records.
 - (A) The employer shall comply with the requirements involving transfer of records set forth in Section 3204.
 - (B) If the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify NIOSH, at least three months prior to their disposal and transmit them to the NIOSH, if required by the NIOSH to do so, within that three month period.