

basic biological safety principles, and instill positive attitudes toward safety. Training requirements are also found in § 627.10(b). A system of communication will be established to—

(1) Implement a biological safety training program for all personnel working with hazardous biological or chemical materials.

(2) Publish information addressing useful biological safety advice and accounts of laboratory accidents, along with the lessons to be learned from them.

(3) Make reference books and regulations concerning laboratory hazards, occupational health, and proper laboratory practices readily available.

(4) Assure that material safety data sheets (MSDS) for hazardous chemicals used in the laboratory are readily available to all employees.

(f) *Safety audits.* One of the essential elements of a good safety program is the conduct of periodic audits of the safety performance in a laboratory. Observing individual safety practices and checking the operability of safety equipment and compliance with safety rules must be part of the audit.

(1) An individual and an alternate will be appointed for each laboratory or room where BDP work is conducted. On a daily basis he or she will monitor the conduct of personnel within their room(s) and maintenance of the room to see that they comply with the safety program and SOPs.

(2) Supervisors will ensure that their projects comply with applicable safety requirements and will audit their areas at least weekly to ensure compliance.

(3) The safety officer or his or her qualified designee will inspect the institution's BL-1, BL-2, and toxin laboratories quarterly. BL-3 and BL-4 laboratories and those in which dry forms of highly potent toxins are handled will be inspected monthly by safety and health professionals. These inspections will be announced and include coverage of general safety practices as well as features specific to a particular biosafety level.

(i) Reports of deficiencies or procedures that create a potentially life-threatening situation will be made directly to supervisory personnel and the commander or institute director and

actions will be taken immediately to correct the situation. The operation will not continue until every deficiency is corrected.

(ii) Reports of deficiencies for other than life-threatening situations will be made as soon as possible to the appropriate supervisor, with copies furnished to the commander or institute director. If a problem is widespread, all affected personnel will be notified.

(4) Supervisory personnel notified of safety deficiencies by the safety officer will ensure that the people directly concerned are contacted and that the deficiencies are remedied before operations are resumed.

(5) Malfunctioning equipment must be reported to the appropriate individuals, labeled to indicate that it should not be used, and repaired promptly.

(6) As a minimum, the audits conducted by the safety officer or his or her qualified designee will cover the items listed in appendix C to this part.

(g) *Documentation.* Records, documenting the following items, will be maintained for 3 years:

(1) Safety audits and the corrective measures.

(2) Risk assessments for proposed new laboratory procedures.

(3) Annual reviews of established SOPs.

(4) Training.

(5) Engineering controls and protective equipment certifications and tests.

(6) Safety committee meeting minutes and recommendations.

(7) Any outside auditor comments and responses.

### § 627.8 Occupational health.

An occupational health program will be implemented per AR 40-5, chapter 5, for all employees whose employment requires that they conduct duties in a BDP etiologic agent area. Essential elements of the program will include—

(a) *Medical surveillance examinations.* Medical examinations by a licensed medical doctor will be given prior to employment, at least every 3 years thereafter, and upon termination of duties requiring access to laboratories where etiologic agents are used. When full medical examinations are not given annually, health professionals will perform annual health screening.

Safety and health professionals will ensure that medical examiners are made aware of all hazardous substances each employee works with at the time of the medical examination. The physician's findings will include assessment of whether an employee has any health condition that would preclude work with etiologic agents. If any of the findings obtained during the examination are outside the normal range, the employee's supervisor and the employee will be notified and counseled on the courses of action available. In addition, a safety and health audit will be conducted to identify any potential occupational causes for the abnormalities, and corrective measures will be taken if applicable.

(b) *Serum samples.* When appropriate, considering the agent(s) handled, baseline serum samples for laboratory and other at-risk personnel will be collected and stored for their biologically useful lifetime, but not longer than 40 years. Additional serum specimens will be collected periodically, based upon the agents handled, or as required by participation in a special immunizations program. SOPs will be written detailing the collection procedures and periods if serum sampling is deemed necessary.

(c) *Assignment of personnel.* Personnel assigned duties in work areas where etiologic agents are used will be evaluated to determine their suitability for their assigned tasks by the installation medical authority. Only personnel who are physically and mentally capable of working in biocontainment areas (BL-3 and BL-4) or with toxins will be assigned to these duties.

(d) *Immunization of at-risk personnel.* The guidelines for immunizations in the latest edition of the American College of Physicians' Guide for Adult Immunizations and recommendations of Health and Human Services (HHS) in publication number (NIH) 88-8395 shall be followed. A resource list for available immunizations for personnel at risk is given in appendix B of this part.

(e) *Reporting exposures.* Spills and mishaps which result in observable, known or potential exposures to etiologic agents will be immediately reported to the supervisor, the safety officer, the responsible medical per-

sonnel, and the commander. Appropriate medical evaluation, surveillance, and treatment will be provided and written records of these occurrences will be maintained for 40 years. A Med-16 report will be initiated (see AR 40-400).

(f) *Quarantine.* When etiologic agents designated as BL-4 by the CDC-NIH in HHS publication no. (NIH) 88-8395, (or most recent edition) are handled, a facility for the quarantine, isolation, and medical care of personnel with potential or known laboratory-associated exposures will be available.

#### § 627.9 Medical records.

Army activities will maintain medical records in accordance with AR 40-66 and FPM 293-31 for all military and Department of the Army (DA) civilian employees who work with etiologic agents under sponsorship of the BDP.

### Subpart C—Operational Requirements

#### § 627.10 Personnel prerequisites.

(a) *Medical.* Before to assignment to work with etiologic agents, personnel will be evaluated by the appropriate medical personnel with respect to their assignment and will be evaluated in the medical surveillance program described in § 627.8.

(b) *Training.* All personnel directly or indirectly involved with containment or handling of known and potentially biohazardous material shall receive instruction that adequately prepares them for their assigned duties. Training will be given by occupationally qualified personnel as determined by the commander. This training will be documented and will include—

(1) General training—

(i) Personal hygiene related to laboratory work.

(ii) Laboratory practices.

(iii) Personal protective equipment.

(iv) Effective use of engineering controls.

(v) Packaging, transportation, and shipment of etiologic agents (when applicable).

(vi) Hazardous and infectious waste disposal, handling, and minimization procedures.