

**CALIFORNIA STATE UNIVERSITY,  
LOS ANGELES**

**Medical Monitoring Program**

**AUGUST 2019**

**PROGRAM APPROVAL AND AUTHORIZATION**

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## 1.0. PURPOSE:

The Medical Monitoring Program provides California State University, Los Angeles (Cal State LA) personnel with guidelines and procedures to insure compliance with state and federal regulations.

The program provides methods for exam protocols to aid in facilitating safe job placement of employees, satisfactory maintenance of employee's health, and to ascertain the effectiveness of hazard control methods on the campus.

Medical Monitoring or medical surveillance in the occupational setting is the systematic collection and analysis of health information on groups of workers potentially exposed to harmful agents, for the purpose of identifying health effects at an early and potentially reversible stage. Biological monitoring, or the measurement of blood and tissues levels of contaminants or metabolites, is often included as part of a medical monitoring program, even though these do not directly measure adverse health effects.

### 1.1. Introduction

- 1.1.1. A comprehensive medical surveillance program includes exposure assessment, hazard control and employee education. Medical monitoring is only one portion of a comprehensive medical surveillance program.
- 1.1.2. Engineering controls are the preferred method for maintaining levels of harmful agents low enough to protect employee health. If engineering controls are impossible, then personal protective equipment, such as respirators, gloves and hearing protection are to be used. It is important to state that respirators may be used in non-emergent industrial work situations when engineering controls are available.
- 1.1.3. In accordance with a general occupational safety and health program, standard comprehensive medical examinations are required whenever respiratory protection is used. In addition, the substance or potential exposure that prompts the use of a respirator or other protective equipment may require examination under state or federal regulations.
- 1.1.4. Many contaminants have immediate harmful effects such as irritation of the skin, eyes, nose or throat. However, the effects of other contaminants may occur only after several hours, days or in some cases, years of exposure.
- 1.1.5. California Code of Regulation (CCR) requires that employees with potential exposure to certain harmful agents shall receive medical monitoring examinations. The examinations serve the purpose of detecting adverse health effects, which could possibly be related to workplace exposures. Early detection of disease will result in earlier treatment and will also allow for cessation of additional exposures that could aggravate a potentially serious medical condition.

### 1.2. Overview

- 1.2.1. Medical monitoring provides a clinical basis of information that is used to evaluate an employee's fitness to work in various hazardous environments, to identify anomalies in a person's medical history that may be related to potential impaired health, and to evaluate a person's capability to use respiratory protective equipment. This base of medical information includes personal health history, exposure history, physical examination results, laboratory analyses, and results of screening and special tests. Medical examination may include:
  - 1.2.2. Past medical history – on entry to the program, information concerning past occupational exposures and personal as well as family history of disease.

- 1.2.3. Present medical profile – all pertinent medical information regarding present state of health and health during each year of work in potentially hazardous conditions.
- 1.2.4. Exposure history – information concerning the cumulative duration of time spent on potentially hazardous work assignments, the primary toxic substances, and the level of protection employed while working at Cal State LA and at prior and/or concurrent activities.
- 1.2.5. Blood test – hematology, liver, and kidney function tests.
- 1.2.6. Urine test – kidney function.
- 1.2.7. Hearing test – audiometric pure tone test performed at 500, 1000, 2000, 3000, 4000 and 6000 Hertz (Hz).
- 1.2.8. Vision test – near and far vision, color vision and peripheral vision.
- 1.2.9. Pulmonary function test – including forced expiratory volume in 1 second (FEV1), forced vital capacity (FVC), and FEV1 –to– FVC ratio.
- 1.2.10. Electrocardiogram – standard 12-lead resting EKG.
- 1.2.11. Chest X-ray – posterior/anterior view chest x-ray, the lateral of oblique views if indicated or mandated by state or federal regulations. B-reader is chest x-ray for asbestos.
- 1.2.12. Physical examination – vital signs, comprehensive physical examination.
- 1.2.13. Special tests – medical information concerning the effects of exposure to specific contaminants.

### 1.3. Initial Baseline Information

- 1.3.1. The purpose of the baseline examination is pre-placement screening. All applicable employees shall be given a baseline examination before being assigned to work with respirators or in areas containing potentially hazardous or Cal/OSHA regulated substances above established threshold limit values (TLV).
- 1.3.2. If an employee has recently undergone an exam and the testing as part of a comprehensive exam for another purpose, the employee is still required to complete the CSU Occupational / Medical History Questionnaire (see section 5.0) and provide results of previous examinations for review by a physician. After review by the physician, the baseline examination may be waived.

### 1.4. Periodic / Annual Examinations

- 1.4.1. All personnel who have taken the initial baseline examination and have received clearance by the examining physician to participate in activities that may potentially result in exposure shall be reexamined annually. The date of each annual examination should fall on, or be scheduled as closely as possible to the anniversary of the previous examination.
- 1.4.2. Any employee who has not participated in potentially hazardous work, or who is no longer require to use a respirator, during the 12 month period following his/her last annual examination and who does not expect to continue to participate, may discontinue participation in the medical monitoring program. RM/EH&S Department must be advised and consent to this change. The employee must be cleared by the

physician and not had exposure to asbestos or certain other Cal/OSHA regulated carcinogens during this period.

#### 1.5. Exit Examination

- 1.5.1. An exit examination must be given to any employee whose employment has included contact with Cal/OSHA regulated agents and who has been a participant in medical monitoring. When the employee has terminated employment, the final paycheck will be held pending completion of the exit examination.

#### 1.6. Special/Emergency Examination (Situational Medical Clearance)

- 1.6.1. Special testing may be required on certain projects due to the potential for exposure to specific substances. Emergency testing may be necessary in the event of employee exposure. The need for special testing will be assessed by the RM/EHS Director on an ongoing basis.

#### 1.7. Physician's Reports

- 1.7.1. Examining Physicians will use the information provided by the employee in the questionnaire, the examination results, and the results of laboratory test to determine if any work restrictions or occupational health problems appear to be present. The Physician will send a report of the examination directly to the employee as well as the Student Health Center. The files custodian will place a report in the employee's Personnel File. These files are confidential. Access restricted as described in paragraph 3.0.
- 1.7.2. On-work related health issues may arise during the course of the medical evaluation. The Examining Physician may recommend that the employee sees his/her family doctor or specialist. Any additional test required to investigate non-work related health issues will be the employee's responsibility.

#### 1.8. Objectives

- 1.8.1. An effective medical monitoring program has several specific objectives. At a minimum, these include the following:
  - 1.8.1.1. Evaluate health status of potential employees to determine whether they can perform the job in a safe and effective manner. A case by case determination will be made as to whether workplace conditions or exposures could be or should be modified to accommodate worker limitations.
  - 1.8.1.2. Detect exposure-related adverse health effects at an early and potentially reversible stage so that occupational diseases can be prevented and proper medical care rendered, if necessary.
  - 1.8.1.3. Periodically assess employee's suitability for ongoing or new assignments that involve potential contact with hazardous agents.

### 2.0. REGULATORY COMPLIANCE:

- 2.1. Cal State LA complies with the California Occupational Safety and Health Act (Cal/OSHA). In addition, other branches of federal and state government promulgate regulations that pertain to certain university employees.

- 2.2. Appendix A contains an evaluation of regulations from Titles 3, 8 and 10 for the California Code of Regulations (CCR), including a synopsis of the medical monitoring requirement or specific preventive measures where applicable:

	<u>Topic</u>	<u>Regulation</u>
1)	Hearing Protection Program	T8 CCR 5097
2)	Respiratory Protection Program	T8 CCR 5144
3)	Laboratories	T8 CCR 5191
4)	Hazardous Waste Operations	T8 CCR 5192
5)	Radiation workers	T10 CRC 20
6)	Listed carcinogens	T8 CCR 5209
7)	Asbestos	T8 CCR 5208
8)	Lead	T8 CCR 5216
9)	Formaldehyde	T8 CCR 5217
10)	Benzene	T8 CCR 5218
11)	Ethylene dibromide (EDB)	T8 CCR 5219
12)	Ethylene oxide	T8 CCR 5220
13)	Bloodborne pathogens	T8 CCR 5231
14)	Methylene chloride	T8 CCR 5202
15)	Cadmium	T8 CCR 5207
16)	Arsenic (inorganic)	T8 CCR 5214
17)	Pesticide workers	T3 CCR 6228, 6760

- 2.3. Cal/OSHA Ergonomics regulation for repetitive motion injuries, T8 CCR 5110 is being met by Cal State LA's Ergonomic Standard Program. The RM/EHS Office provides guidance, advice and training for its workers in an ongoing program.
- 2.4. Regulations mandating medical monitoring, access and confidentiality of medical records are summarized in T8 CCR 3204. These regulations are the responsibility of Human Resources Management and the Student Health Center. Access to medical records is summarized in Section 4.4.
- 2.5. Employees handling animals, animal wastes, animal tissues and other research program animal materials are provided medical surveillance compliance by procedures within the responsibility of the Institutional Animal Care and Use Committee (IACUC).
- 2.6. Exposure to lentivirus has potential for a wide range of human diseases. Lentiviruses containing any of the diseases identified as bloodborne pathogens in T8 CCR 5231 are to provide prophylaxis and medical monitoring as applicable per T8 CCR 5231. Experimental protocols and measures to avoid exposure to any lentivirus must be treated diligently due to the potential for unknown disease consequences. The using department, the IACUC, and RM/EHS must jointly be satisfied with handling safety prior to potential exposure and research use.

### 3.0. RESPONSIBILITIES:

- 3.1. The Risk Management/Environmental Health and Safety Office (RM/EHS) will:
- 3.1.1. Develop and administer procedures relating to the Medical Monitoring Program.
  - 3.1.2. Be responsible for determining which job descriptions meet the criteria for required medical monitoring.
  - 3.1.3. Provide assistance to departments and boards overseeing employees that are involved in work requiring medical monitoring.

3.2. Department Supervisors are:

3.2.1. Responsible for identifying all employees' inclusion in medical monitoring.

3.3. Human Resources Management (HRM) will:

3.3.1. Incorporate the requirement for medical monitoring as a part of the advertising of available jobs.

3.3.2. Notify RM/EHS of all new hires requiring medical monitoring prior to their start date.

3.4. The Examining Physician will:

3.4.1. Examine the employee or potential employee to determine if any work restrictions or occupational health problems appear to be present.

3.4.1.1. Examination findings are provided to the University for determination of acceptability for the position based on the physician's findings.

3.4.1.2. Findings that are determined not to be work-related health issues during the course of examination are the employee's responsibility to follow up privately.

4.0. RECORDKEEPING AND CONFIDENTIALITY:

4.1. Right to Receive Exposure / Medical Information

4.1.1. In accordance with Title 8 CCR Section 3204, the following individuals and organizations have a right to receive copies of medical monitoring exposure, analysis based on exposure, and medical records:

4.1.1.1. Employees (both current and former)

4.1.2.2. Representatives of current or former employees as follows:

- a) Holding employee's written authorization to represent
- b) Their recognized collective bargaining agent (see exception below)
- c) Legal representatives of those employees that are:
  - 1) Deceased, or
  - 2) Legally incapacitated
- d) Representatives of Cal/OSHA

Exception: A collective bargaining representative must have written authorization to have access to the employee's medical records.

4.2. Records Covered

4.2.1. All records covering environmental monitoring, biological monitoring results (excludes results, which assess the biological effect), Safety Data Sheets (SDS) and chemical inventories. Employee medical records such as questionnaires, examination results, laboratory test, medical opinions and diagnosis, first-aid records, employee treatment and employee complaints.

#### 4.3. Retention of Records

**4.3.1. *All medical records will be retained for thirty (30) years following the employee's employment termination date.***

Exception: An employee who has worked for less than one (1) year may choose to receive his/her medical records. If choosing to receive these medical records, the employee must sign an acknowledgment of receipt of the records, citing Title 8, CCR Section 3204.

#### 4.4. Obtaining Records

4.4.1. Employees or designated representatives have the right to receive one (1) copy of medical records after providing Human Resources with a written authorization.

4.4.2. Authorization contains the following:

- a) The name and signature of the employee.
- b) The date of the request/authorization.
- c) The name of the individual or organization authorized to release the medical information.
- d) The name of the individual or organization authorized to receive the released information.
- e) A general description of the medical information that is authorized to be released.
- f) A general description of the purpose for release of the medical information, and a date or condition upon which the written authorization will expire.

4.4.3. A copy of the requested medical records is provided without cost.

#### 5.0. APPENDICES:

Appendix A - Exposures Requiring Medical Monitoring.





## Exposures Requiring Medical Monitoring

The following categories of work and / or substance exposures that are included in the Medical Monitoring Program along with page numbers within the Appendix:

	<u>Page</u>
Potential Exposure Based On Type of Work:	
Occupational Noise	A-2
Respirator Users	A-3
Laboratories	A-4
Hazardous Waste Operations	A-5
Radiation	A-6
Class A or B Operators License	A-7
Work With Exposure To The Following Substances:	
Carcinogens	A-8
Asbestos	A-9-10
Lead	A-11-12
Formaldehyde	A-13
Benzene	A-14-16
Ethylene Dibromide	A-17-18
Ethylene Oxide	A-19
Bloodborne Pathogens	A-20
Methylene Chloride	A-21
Cadmium	A-22-23
Inorganic Arsenic	A-24-25
Pesticides and Pest Control	A-26

Each of the above types of work or program area is covered in more detail in specific sections below.



## **OCCUPATIONAL NOISE** (8 CCR Section 5097)

### Employees covered:

All employees whose workplace noise exposures equal or exceed 85 dB 8-hr time weighted average are required to be in a Hearing Conservation Program. Due to the nature of work, Groundskeepers and Bargaining Unit 6 employees (except Painters) are in the Hearing Conservation Program and participate in annual hearing tests.

### Examinations:

Employees are tested annually at no cost to the employee by a certified technician and equipment meeting the standards of 8 CCR 5097. A baseline examination will be performed within 6-months of an employee's hire date and must be preceded by fourteen (14) hours without exposure to workplace noise. Excessive workplace noise would be above 80 dB.

Prior to any audiological testing, it is the responsibility of the supervisor to inform employees to limit high levels of noise, whether within work or prior to work within fourteen (14) hours of the audiological testing.

The audiological testing, comparison with baseline results and allowance for age degradation (presbycusis) are accomplished by contract audiological specialists.

### Recordkeeping and Notifications.

Testing results are confidential records supplied to the employee and kept on file with Facilities Services. The employee and his/her supervisor will be notified for any requests for retesting.

If a standard threshold shift (STS) has been determined, a confirmation retest may be obtained within thirty (30) days. If a physician determines that a STS has occurred, the employee must be notified in writing within twenty-one (21) days. The notification is filed with Human Resources Workers' Compensation and with the Safety and Health Coordinator for CAL/OSHA reporting purposes. Further, the employee must be retrained in hearing conservation and the proper wearing of hearing protection.



## RESPIRATOR USERS (8 CCR Section 5144)

Employees covered:

Case 1. Employees that are required to wear respiratory protection within the University's respiratory protection program. Note: Presently, only HAZWOPER certified employees are required to be in the respirator program.

Case 2. Employees that are not required to wear respiratory protection but choose to wear a respirator voluntarily.

Initial Respirator Questionnaire and Examination:

Any employee that wears a respirator whether required (Case 1) or voluntarily (Case 2) must receive an initial evaluation by physician or licensed health care professional (PLHCP) for using respirators. Examinations and evaluations are based on the Respiratory Questionnaire, 8 CCR 5144, Appendix C. Following clearance to wear respirators, an employee required to wear a respirator (Case 1) is required to have annual medical testing to ensure fitness for wearing respirators.

If the health conditions stated in the Respiratory Questionnaire change for either a Case 1 or a Case 2 employee, a PLHCP must reexamine the employee's ability to wear respirators. An example of a new respiratory hazard is developing asthma or an emerging heart condition.

Records:

- a. To Human Resources Management (HRM) (employee's personnel file):
  - i. Answers to Respiratory Questionnaire.
  - ii. Medical test results. The medical provider may elect to keep records such as x-rays internally.
  - iii. Upon termination of the medical provider, these records need to be transferred to HRM control for storage until no longer required.
  
- b. To Department Supervisors:
  - i. Authorization or denial of respirator use.
  - ii. Limitations of respirator use for the employee.
  - iii. Need, if any, for follow-up examinations.
  - iv. Statement that the employee has received a copy of the PLCHP's recommendation.



## **LABORATORIES** (8 CCR Section 5191)

### Employees Covered:

Those engaged in the laboratory use of hazardous chemicals as defined in the regulation.

### Examinations:

The employer shall provide all employees who work with hazardous chemicals an opportunity to receive medical attention, including any follow-up examinations which the examining physician determines to be necessary, under the following circumstances:

1. When an employee develops sign or symptoms associated with a hazardous chemical.
2. Where exposure monitoring reveals an exposure to a regulated substance where medical surveillance requirements have already been established.
3. When an event such as a spill, leak, explosion or other exposure has occurred, a medical consultation shall be provided in determining the need for a medical examination.

All medical examinations and consultations shall be performed by or under the direct supervision of a licensed physician and shall be provided at no cost to the employee.

Regular medical surveillance should be established to the extent required by regulations. Anyone whose work involves regular frequent handling of toxicologically significant quantities of a chemical should consult a qualified physician to determine on an individual basis whether a regular schedule of medical surveillance is desirable.

### Frequency:

Immediately upon any of the above and as determined by the examining or consulting physician.

### Contents of Exam:

As determined by the examining physician appropriate for the exposure.

### Information Provided:

The identity of the hazardous chemical; a description of the physician; conditions under which the exposure occurred including quantitative data; a description of the signs symptoms of exposure that the employee is experiencing.

### Physician's Report Includes:

Recommendations for further medical follow-up; the results of the medical examination and any associated test, if requested by the employee; any medical condition which may be revealed in the course of the examination that may place the employee at increased risk as a result of exposure to a hazardous chemical found in the workplace.

A statement that the employee has been informed, by the physician the results of the consultation or medical examination or treatment.

The written opinion shall not reveal specific findings of diagnoses unrelated to occupational exposure.



## HAZARDOUS WASTE OPERATIONS (8 CCR Section 5192)

### Hazardous Waste Covered:

This regulation pertains to hazardous waste or hazardous substances as defined by: Hazardous waste with characteristics listed in 40 CFR, Part 261, Subpart C, and listed waste under subpart D. Hazardous substances are listed under 40 CFT, Part 302.4 CERCLA.

### Work Site Covered:

Operations at this University do not meet the specified sections cover under 8 CCR 5144. However, individuals are required to handle hazardous waste. This action requires the relocation of the waste from a laboratory to storage.

### Employees Covered:

The University has adopted the following guide lines for the protection of its employee's:

Medical examinations and consultations will be provided upon notification by the employee either that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards or that the employee has been injured or exposed above the PEL's or published exposure levels in an emergency situation.

### Frequency:

Determined by the treating physician.

### Contents of Examination:

The specific protocol or content of the medical surveillance program is not detailed in these regulations. The regulations state that appropriate medical tests and examinations shall be selected by the physician, depending upon the substances to which the employee is exposed and whether the employee wears a respirator. **Since employees on emergency response teams may be exposed to differing substances, it is inappropriate to define in advance all appropriate medical tests. Specific test protocols should be developed based on the substances encountered.**

### Information Provided to the Physician:

Cal State LA is required to provide the physician information on exposure, respirator use and duties related to field assignments.

### Physician Report Includes:

Recommendations for further medical follow-up; the results of the medical examination and any associated test, if requested by the employee; any medical condition which may be revealed in the course of the examination which may place the employee at increased risk as a result of exposure to a hazardous chemical found in the workplace.

A statement that the employee has been informed, by the physician the results of the consultation or medical examination or treatment.

The written opinion shall not reveal specific findings of diagnoses unrelated to occupational exposure.



The physician shall make a report to the employer of the medical conditions which make the employee at increased risk to work at the site, and any recommendations on limitation of the use of a respirator or other personal protective equipment as a result of the medical condition. Confidentiality: The physician shall not reveal diagnoses or conditions unrelated to employment, but shall inform the employee directly of those conditions and any or all occupationally related conditions.

## **RADIATION** (10 CFR 20)

### Employees Covered:

All persons who receive, possess, use or transfer material licensed by the Nuclear Regulatory Commission, or who use radioactive material and who may have had exposure to a total occupational dose in excess of the standard.

Assessment of individual's intakes of radioactive materials should be in accordance with U.S. Nuclear Regulatory Guides 8.9. External radiation monitoring is done with thermoluminescent dosimeters (TLD's)

### Frequency:

Baseline test will be performed on any individual who may use Iodine-125 or Tritium under conditions that might require bioassay. Routine bioassays are performed depending on the circumstances. Bioassays are also performed after exposure has been discontinued.

When respiratory protection equipment is used to limit inhalation exposure, examination by a physician prior to initial use of respirators and at least every twelve (12) months thereafter is required.

### Content of Exam:

The Nuclear Regulatory Commission incorporates appropriate surveillance (bioassay) provisions in each license. Determination of ability to wear a respirator is per Title 8 CCR Section 5144 and 29 CFR 1910.134



## **CLASS A & B OPERATORS LICENSE** (13 CCR Section 12804.9, 49 CFR 391.41)

### Employees Covered:

All employees that require a Class A & or B license to operate motor vehicles. This includes operators of vehicles with a GVWR of more than 26,000 lbs., 3-axle vehicles weighing over 6,000 lbs., buses, any farm labor vehicle, and heavy equipment operators.

Vanpool drivers, and security personnel are covered under a separate plan.

### Frequency:

Medical examinations are to be provided every two years on or before the anniversary date of the first examination.

### Examination:

Examinations are performed by a licensed or certified health care professional at no cost to the employee.

### Physician's Report:

The report shall be on a form approved by the Department of Motor Vehicles or Federal Highway Administration. It will identify any physical defect of the applicant, which, in the opinion of the physician will deter from safely operating a vehicle.



## CARCINOGENS (8 CCR Section 5209)

Employee Covered:

Those employees who are in an area in which any of the substances listed below is manufactured, processed, used, repackaged, released, stored or otherwise handled but does not apply to solid or liquid mixtures with a content less than the percent specified below:

<u>Chemical [CAS #]</u>	<u>Percent</u>
2-Acetylaminofluorene [53963]	1.0
4-Aminodiphenyl [92671]	0.1
Benzidine [92875] (and its salts)	0.1
3,3'-Dichlorobenzidine [91941] (and its salts)	1.0
4-Dimethylaminoazobenzene [91941]	1.0
Alpha-Naphthylamine [134327]	1.0
Beta-Naphthylamine [91598]	0.1
4-Nitrobiphenyl [92933]	0.1
N-Nitrosodimethylamine [62759]	1.0
Beta-Propiolactone [57578]	1.0
Bis-Chloromethyl ether [542881]	0.1
Methyl chloromethyl ether [107302]	0.1
Ethyleneimine [151564]	1.0

Examinations:

A program of medical surveillance shall be established and implemented for employees considered for assignment to enter regulated areas, and for authorized employees. Exams are provided at no cost to the employee.

Frequency:

Before an employee is assigned to enter a regulated area and not less than annually thereafter.

Content of Exam:

Employee's personal history and that of the employee's family insofar as these are related to genetic, occupational or environmental factors. The physician shall consider whether factors exist, which would predispose the employee to increase risk, such as reduced immunological competence, treatment with steroids or cytotoxic agents, pregnancy and cigarette smoking.

Special medical surveillance shall be instituted within twenty-four (24) hours for employees present in a potentially affected area at the time of an emergency.

Physician's report: A report shall be furnished to the employer containing a statement concerning the employee's suitability for employment in areas containing the specific exposure.





## ASBESTOS (8 CCR Section 5208)

### Employees Covered:

All employees, who are, or may reasonably be expected to be, exposed to asbestos at or above the action level and/or excursion limit.

### Examinations:

Performed by or under the supervision of a licensed physician and shall be provided at no cost to the employee and at a reasonable time and place.

### Frequency:

Medical examinations will be before an employee is assigned to work involving exposure or within thirty (30) days of the employee's initial exposure to asbestos in the event of an emergency and at least annually thereafter. A termination examination shall be given unless the employee has had an exam within the past one (1) year.

### Content of Exam:

In addition to evaluating for asbestos-related disease, the physician shall evaluate for fitness to wear personal protective equipment including respirators.

**Medical and work history** plus completion of the required Initial Medical Questionnaire for pre-placement or initial examinations or the Periodic Medical Questionnaire for subsequent examinations found in B CCR Section 5208 Appendix D.

**Complete examination** with emphasis on the respiratory system, cardiovascular system and the gastrointestinal system.

**Chest x-rays** shall consist of a 14"X17" AP and right and left anterior oblique views interpreted by a NIOSH certified B-reader on an ILO rating form. The following frequencies for chest x-rays shall be observed:

Years Since First Exposure	Age of Employee	
	Less than 40	40 and Older
0 – 10	Every 3 years	Annually*
10 +	Annually*	Annually*

\*Oblique x-rays need only be performed every three (3) years.

**Spirometry** to include forced vital capacity (FVC) and forced expiratory volume at 1 second (EFV1) performed by a technician certified by NIOSH in pulmonary function testing.

Additional tests deemed appropriate or necessary by the examining physician.



## Information Provided to the Physician:

A copy of 8CCR 5208 and Appendices D,E, and I; a description of the employee's duties; his / her representative or anticipated exposure levels; description of any personal protective equipment to be used; information from previous medical examinations.

## Physician Report:

The report shall contain the results of the examination without diagnosis disclosure unrelated to occupational exposure to asbestos. It shall also contain any recommended limitations on the employee or upon the use of personal protective equipment; the physician's opinion as to whether the employee has any detected medical conditions that would place the employee at an increased risk of material impairment from exposure to asbestos; and a statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions resulting from asbestos exposure that required further explanation or treatment.



## **LEAD** (8 CCR Section 5216)

### Employees Covered:

All employees who are or may be exposed at or above the action level for more than thirty (30) days per year.

### Examinations:

Examinations shall be performed by or under the supervision of a licensed physician. This shall be without cost to the employee and at a reasonable time and place.

### Frequency:

Medical examinations shall be performed at least annually for each employee:

1. Indicating a blood lead level at or above 40ug/100g.
2. Prior to assignment for each employee being assigned for the first time to an area in which 8-hour, time-weighted concentrations of airborne lead are at or above the action level.
3. As soon as possible when either the employee has developed signs or symptoms commonly associated with lead intoxication, desires medical advice concerning reproductive hazards, or the employee has demonstrated difficulty in breathing during a respirator fitting or during use and as medically appropriate for each employee removed from exposure to lead.

Biological monitoring shall be performed at least every six (6) months; every two (2) months for each employee whose blood lead level was at or above 40 ug/100g until two (2) samples in a row are less than 40ug/100g: at least monthly during the removal period for each employee removed from exposure to lead due to an elevated blood lead.

Whenever the results of a blood lead level test indicates that an employee's blood lead level exceeds the numerical criterion for medical removal, the employer shall provide a second (follow-up) blood sampling test within two (2) weeks after the employer receives the results of the first blood sampling test.

A mechanism exists for multiple physician review. The employee may designate a second physician to review any findings, determinations, or recommendations of the initial physician and to conduct a second examination.

### Content of Exam:

Biological monitoring shall consist of a zinc protoporphyrin and blood lead level performed at least every six (6) months or as scheduled above.

Medical examinations shall be performed upon initial exposure, and annually, for blood lead levels greater than 40ug/100g or as otherwise required above.

### Components of the Examination:

A detailed work history and medical history with particular attention to past lead exposure (occupational and non-occupational), personal habits (smoking, hygiene) and past gastrointestinal, hematologic, renal, cardiovascular, reproductive and neurological problems.

A physical examination will be administered, with particular attention to teeth, gums, hematologic, gastrointestinal, renal, cardiovascular, and neurological systems. Pulmonary status should be evaluated if respiratory protection will be used.



## Blood Pressure:

### Blood samples to include:

1. Blood lead level.
2. Hemoglobin and hematocrit, red cell indices and peripheral smear morphology.
3. Zinc protoporphyrin (ZPP).
4. Blood urea nitrogen and creatinine.

## Urinalysis with Microscopic Examination:

This includes any laboratory or other test which the examining physician deems necessary by sound medical practice.

The contents of the examinations made available because of concerns about symptoms or reproductive hazards shall be determined by the examining physician and, if requested by the employee, shall include pregnancy testing or laboratory evaluation of male fertility.

## Medical Removal Protection:

The employer shall remove an employee from work having an exposure to lead at or above the action level on each occasion that a periodic and follow-up blood sampling test conducted indicate that the employee's blood lead level is at or above 50ug/100g.

The employer shall remove an employee from work having an exposure to lead at or above the action level, or on each occasion that a final medical determination results in a medical finding or opinion that the employee has a detected medical condition which places the employee at increased risk of material impairment to health from exposure.

## Return to Former Job Status:

The employee shall be returned to former job status:

1. If removed for a level at or above 50ug/100g when two consecutive tests indicate the blood lead level is at or below 40mg/100g;
2. When removed due to a final medical determination when a subsequent final medical determination states that the employee no longer has a detected medical condition which places the employee at increased risk of material impairment to health.



## **FORMALDEHYDE** (8 CCR Section 5217)

### Employee Covered:

All employees exposed to formaldehyde at concentrations at or exceeding the action level or exceeding the short-term exposure limit (STEL).

### Examinations:

Available for employees who develop signs and symptoms of overexposure and for those exposed to formaldehyde in emergencies. All medical procedures, including administration of medical disease questionnaires, shall be performed by or under the supervision of a licensed physician and shall be provided without cost to employee, without loss of pay, and at a reasonable time and place.

### Frequency:

Prior to assignment where exposure is at or above the action level or above the STEL and annually thereafter or upon determining that an employee is experiencing signs and symptoms indicative of possible overexposure to formaldehyde.

### Content of Exam:

Medical Disease Questionnaire, which is to elicit information on work history, smoking history any evidence of eye nose or throat irritation; chronic airway problems or hyperactive airway disease; allergic skin conditions or dermatitis; and upper or lower respiratory problems.

A determination by the physician based on evaluation of the medical disease questionnaire, of whether a medical examination is necessary for employees not required to wear respirators to reduce exposure to formaldehyde.

Medical examinations shall be given to any employee who the physician feels may be of increased risk from exposure and to those employees who are required to wear a respirator.

### Components of the Examination:

Physical examination with emphasis on evidence of irritation or sensitization of the skin and respiratory system, shortness of breath, or irritation of the eyes.

Spirometry including FVC, FEV 1, and forced expiratory flow (FEF).

Any other test which the examining physician deems necessary.

Counseling of employees having medical conditions that would be directly or indirectly aggravated by exposure to formaldehyde or the increased risk of impairment of health.



## **BENZENE** (8CCR Section 5218)

### Employees covered:

All employees who are or may be exposed at or above the action level for thirty (30) or more days per year; for employees who are or may be exposed to benzene at or above the PEL and /or STEL for ten (10) or more days per year; for employees who were exposed above 10 ppm of benzene for thirty (30) or more days by their current employer; and for employees involved in the use of solvents containing greater than 0.1 percent benzene.

### Examinations:

Shall be performed by or under the supervision of a licensed physician and that all laboratory tests are conducted by an accredited laboratory. The results of the laboratory test shall be reviewed by the examining physician. This shall be without cost to the employee and at a reasonable time and place.

### Frequency:

An initial examination shall be performed before the time of initial assignment unless adequate records show that the employee has examined in accordance with these procedures within the past twelve (12) months. They shall be performed annually following the previous examination.

When the employee develops signs and symptoms commonly associated with toxic exposure to benzene. The employer shall provide the employee with an additional medical examination which shall include those elements considered appropriate by the examining physician.

### Components of the Initial Examination:

A detailed work history and a medical history:

- 1) With particular attention to past benzene exposure or any other hematological toxin
- 2) Family history of blood dyscrasia including hematological neoplasms.
- 3) A history of blood dyscrasia including genetic hemoglobin abnormalities, bleeding abnormalities, abnormal function of formed blood elements.
- 4) A history of renal or liver dysfunction.
- 5) A history of medicinal drugs routinely taken.
- 6) A history of previous exposure to ionizing radiation.
- 7) Exposure to marrow toxins outside of the current work situation.

### A Complete Physical Examination:

A complete blood count including:

1. White blood count with differential platelet count, hematocrit, hemoglobin, erythrocyte count and erythrocyte indices (MCV, MCH, MCHC).
2. Additional tests as necessary in the opinion of the examining physician. Based on alterations, to the components of the blood other signs which may be related to benzene exposure.

For all workers required to wear respirators for at least thirty (30) days a year, the physical examination shall pay special attention to the cardiopulmonary system and shall include a pulmonary function test.



## Components of the Periodic Examination:

A brief history regarding any new exposure to potential marrow toxins, changes in medicinal drug use, and the appearance of physical signs relating to blood disorders.

A complete blood count including:

1. White blood count with differential platelet count hematocrit, hemoglobin, erythrocyte count and erythrocyte indices (MCV, MCH, MCHC).
2. Appropriate additional test as necessary, in the opinion of the examining physician, in consequence of alterations in the components of the blood or other signs, which may be related to benzene exposure

For persons required to use a respirator at least thirty (30) days a year, a pulmonary function test shall be performed every three (3) years, but is recommended annually. A specific evaluation of the cardiopulmonary system shall be made at the time of the pulmonary function test.

## Emergency Examination:

If an employee is exposed to benzene in an emergency situation, the employer shall have the employee provide a urine sample at the end of the employee's shift and have a urinary phenol test performed on the sample within seventy two (72) hours. The urine specific gravity shall be corrected to 1.024.

If the results of the urinary phenol is  $<75$  mg phenol/L of urine, no further testing is required.

If the result is  $>75$  mg phenol/L of urine, the employee shall have a complete blood count including an erythrocyte count, leukocyte count with differential, and platelet count at monthly intervals for a duration of three (3) months following the emergency exposure.

If any abnormalities are found included under the section "Additional Examinations and Referrals", then these requirements shall be met and the employer shall in addition provide the employees with periodic examinations if directed by the physician.

## Additional Examinations and Referrals:

If the complete blood count indicates any of the following, it shall be repeated within two weeks:

1. The hemoglobin level or the hematocrit falls below the normal limit or if these indices show a persistent downward trend from the individual's pre-exposure norms; provided these findings cannot be explained by other medical reasons.
2. The platelet count varies more than twenty percent (20%) below the employee's most recent values or falls outside the normal limit as determined by the laboratory.
3. The leukocyte count is below 4,000 per  $\text{mm}^3$  or there is an abnormal differential count.

If the abnormality persists, the examining physician shall refer the employee to a hematologist or internist for further evaluation unless the physician has good reason to believe such referral is unnecessary despite abnormal blood limits are due to some unrelated medical abnormality.

The employee shall provide the hematologist or internist with the information required to be provided to the physician and the medical record required by this regulation. The hematologist's or internist's evaluation shall include a determination as to the need for additional test, and the employer shall assure that these tests are provided.



## Information Provided:

To the physician: A copy of Title 8CCR Section 5218 and its appendices; a description of the affected employee's duties as they relate to the employee's exposure; the employee's actual or representative exposure level; a description of any personal protective equipment used or to be used; and information from previous employment-related medical examinations of the affected employee which is not otherwise available to the examining physician.

## Physician's report:

Shall contain the occupationally pertinent results of the medical examination and test; the physician's opinion concerning whether the employee has any detected medical conditions which would place the employee's health at greater than normal risk of material impairment from exposure to benzene; the physician's recommended limitations upon the exposure to benzene or upon the employee's use of protective clothing or equipment and respirators; and a statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions resulting from benzene exposure which require further explanation or treatment.

The written opinion obtained by the employer shall not reveal specific records, findings and diagnoses that have no bearing on the employee's ability to work in a benzene-exposed workplace.

## Medical Removal:

When a physician makes a referral to a hematologist/internist as required, the employee shall be removed from areas where exposures may exceed the action level until such time as the physician makes the following decisions.

After evaluation by the hematologist/internist, a decision to remove an employee from areas where benzene exposure is above the action level or allow the employee to return to areas where benzene exposure is above the action level shall be made by the physician in consultation with the hematologist/internist and shall be in writing to the employer and employee. For removal, the physician shall state the required probable duration of removal from exposure to benzene above the action level and the requirements for future medical examinations to review the decision.

For any employee removed, the employer shall provide a follow-up exam. The physician in consultation with the hematologist/internist, shall make a decision within six (6) months of the date employee was removed as to whether the employee shall be returned to the employee's former job or whether the employee should be removed permanently.

Employees removed from exposure shall be placed in positions where benzene exposure are as low as possible but no higher than the action level. The employee shall retain his current wage rate, seniority and other benefits.





## **Ethylene Dibromide (EDB), 1,2- Dibromoethane (8 CCR 5219, NIOSH 77-221)**

### Introduction:

EDB has a relatively low action level, a TWA of 15 ppb and PEL of 130 ppb. The substance is listed on the American Conference of Governmental Hygienists' (ACGIH) suspected carcinogens list. It is commercially used as a fumigant.

### Medical Surveillance:

Employees that are exposed to EDB at the action level or higher need to complete a medical history questionnaire containing the employee's personal, reproductive and family history related to pertinent genetic, occupational and environmental factors and include disorders of the heart, liver, kidneys, and central nervous system.

A consideration by the physician should be made of whether factors exist which would predispose the employee to increased risk, such as reduced immunological competence, treatment with steroids or cytotoxic agents, pregnancy and cigarettes smoking.

The physical examination should be accomplished initially on assignment, annually during the period of exposure and at termination of exposure or upon termination of work for the University. The examination is a standard comprehensive medical examination with special emphasis on the cardiovascular, pulmonary, neurologic, hepatic and renal systems, and the skin.

Employees taking disulfiram (Antabuse R) and similar compounds should be provided with information on interaction with EDB.

### Respiratory Protection Program:

Employees who must wear respirators must be entered in the Respiratory Protection Program and medical/physical requirements of the respiratory program. Note, however, that the only recommended respirator types for EDB are positive pressure.

### Personal Protective Equipment (PPE):

In areas that expect exposure above the action level, PPE must be resistant to penetration and chemical action of EDB, thus excluding most forms of rubber and leather.

1. If direct contact with EDB is anticipated, wear gloves, hip-type apron, and overshoes.
2. Eye protection is mandatory, such as chemical safety goggles or plastic face shields, 8- inch minimum, and made of EDB resistant materials.
3. Chemical cartridges are not to be used with EDB except for evaluations or escape because of EDB's poor warning properties at the recommended occupational exposure limit: a ceiling limit of 130 ppb, TWA.

### Reports:

The employer will be informed by the examining physician of the results of all examinations, without specific diagnostic conclusions. Particularly, the physician is to give to the employer and the employee a statement that the individual is fit or unfit to work with EDB, without impairing or compromising his/her health status.



## Records:

All records shall be available to CAL/OSHA and National Institute of Safety and Health (NIOSH) and designated medical representative of employer and of employee. Records are to be retained for thirty (30) years after termination of employment, and shall include environmental exposure records.

## Standards for Employment or Continuing Employment:

Each applicant for employment involving EDB exposure, as indicated above, should have a careful multi-system evaluation, and deficits of any one system should be considered with caution before placement. As dermal sensitization to EDB may develop, such comparable status of the skin may preclude contact with EDB.

## Education:

Training required as to toxicity and hazards involved with EDB exposure, an understanding of maximal care in work practices, and trained in the use and leakage testing of respirators assigned. In addition, the training program must cover the SDS for EDB, which may be obtained from the manufacturer or seller. There shall be included an explanation of, or rationale for, the medical surveillance program. The emergency procedures indicated following skin or eye contact with liquid EDB or liquid mixtures containing >0.1% EDB by weight, as described in Title 8 CCR Section 5219 (i), shall be covered. There must also be included information concerning the interaction of disulfiram (Antabuse R) with EDB since there may be employees who are taking that medication.



## **ETHYLENE OXIDE (8 CCR Section 5220)**

### Employees covered:

All employees who are or may be exposed to ethylene oxide at or above the action level, without regard to the use of respirators, for at least thirty (30) days a year. As well as employees who are exposed to ethylene oxide in an emergency situation.

### Examinations:

All medical procedures and examinations shall be performed by or under the supervision of a licensed physician and shall be provided without cost to the employee, without loss of pay, and at a reasonable time and place.

### Frequency:

Prior to assignment where exposure may be at or above the action level for at least thirty (30) days a year and annually thereafter; at the termination of employment or reassignment to an area where employee exposure is not at or above the action level for at least thirty (30) days a year; as medically appropriate for any employee exposed during an emergency, or as soon as possible when the employee has developed signs or symptoms indicating possible overexposure to ethylene oxide or when the employee desires medical advice concerning the effects of current or past exposure to ethylene oxide on the employee's ability to produce a healthy child; and as recommended more frequently by a physician.

### Content of Exam / Components of the Examination:

A medical and work history with special emphasis directed to symptoms related to the pulmonary, hematologic, neurologic and reproductive systems and to the eyes and skin.

Physician examination with emphasis on the pulmonary, hematologic, neurologic and reproductive systems and to the eyes and skin.

A complete blood count to include at least a white cell count with differential and red cell count and hematocrit and hemoglobin.

Any other test which the examining physician deems necessary by sound medical practices.

The content of examinations or consultations made available because of the development of symptoms or because of reproductive concerns shall be determined by the examining physician and shall include pregnancy testing or laboratory evaluation of fertility if requested by the employee and deemed appropriate by the physician.

Information provided to the physician: A copy of title 8 CCR Section 5220 and Appendices A, B, and C as description of the affected employees duties as they relate to the employee's exposure; the employee's representative exposure level or anticipated exposure level; a description of any personal protective and respiratory equipment used or to be used; and information from previous medical examinations of the affected employee that is not otherwise available to the examining physician.



## Physician's Written Opinion:

Shall contain the result of the medical examination and shall include the physician's opinion as to whether the employee has any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to ethylene oxide; any recommended limitations on the employee or upon the use of personal protective equipment such as clothing or respirators; and a statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions resulting from ethylene oxide exposure that require further explanation or treatment. The physician shall not reveal in the written opinion to the employer specific findings or diagnoses unrelated to occupational exposure to ethylene oxide. The employer shall provide a copy of the physician's written opinion to the affected employee within fifteen (15) days from its receipt.



## **BLOODBORNE PATHOGENS (BBP) (8 CCR 5193)**

### Employee Covered:

All employees who could be “reasonably anticipated” to have occupational exposure to blood or other potentially infectious materials (OPIM). OPIM is defined as the following: human body fluids, semen, vaginal secretions, peritoneal fluid, amniotic fluid, saliva in dental procedures, any other body fluid that is visibly contaminated with blood such as saliva or vomit, and all body fluids in situations where it is difficult to differentiate between body fluids such as emergency response; any unfixed tissue or organ (other than intact skin) from a human (living or dead); and HIV containing cell or tissue cultures, organ cultures, and HIV or HBV containing culture medium or other solutions.

### Examinations:

The rule requires that a hepatitis B vaccine and vaccination series be made available to all employees who have occupational exposure, and that post exposure evaluation and follow-up be made available to all employees who have had an exposure incident. All medical evaluations and procedures are to be done under the supervision of a licensed physician or by or under the supervision of a licensed healthcare professional. A “licensed healthcare professional” is defined in the regulation as a person whose legally permitted scope of practice allows him / her to independently perform the activities required.

### Program:

Voluntary Hepatitis B Vaccinations (HBV) are offered to BBP trained employees that may participate in cleanup activities which potentially expose them to blood and OPIM. Additionally, employees that have been potentially exposed to BBP are offered an HBV vaccination series as early as possible to the exposure incident. Along with the offer of HBV, the employee must sign a document stating that the offer of HBV vaccination has been given and whether the vaccine was accepted or refused. The refusal to receive the vaccination may be withdrawn at any time. Prescreening is not a condition for receiving the vaccine.

Following an exposure incident, a confidential medical evaluation must be performed to include documentation regarding circumstances of exposure, source testing if feasible, testing exposed employee’s blood (with consent), post-exposure prophylaxis, counseling and evaluation of reported illness. All diagnoses are confidential.

### Information Provided to the Physician:

The health care professional must be provided specific information to facilitate the evaluation and their written opinion on the need for an HBV following the exposure.

### Medical Record Retention:

Duration of employment plus thirty (30) years retention of all records. Medical records are placed in the employee’s personnel records in Human Resources.

Records must be made available to the employee, anyone with the employee’s written consent, CAL/OSHA and NIOSH but not to the employer. Disposal of the records must be in accordance with CAL/OSHA’s standards.



## **OCCUPATIONAL EXPOSURE TO METHYLENE CHLORIDE (MC)** (Federal and State Governments)

### Employees Covered:

Those exposed to MC for thirty (30) or more days per year, even if below the current permissible exposure limits. The proposed rule would reduce the permissible worker exposure limit from the current 500 parts of MC per million parts of air (500ppm) to 24 ppm, average over eight hours.

### Examinations:

Performed by or under the supervision of a licensed physician and shall be provided at no cost to the employee and at a reasonable time and place.

### Frequency:

Before an employee is assigned to work involving exposure, annually and at termination of exposure. Evaluation following an emergency must also be offered.

### Contents of Examination:

Medical-work history; complete examination; serum specimen for evaluation of liver function. Any other test which the examining physician deems necessary by sound medical practice.

### Physician's Report:

A statement of employee's suitability for continuous exposure to methylene chloride, including use of protective equipment and respirators, with a copy sent to the employee.

### Record Retention:

Duration of employment plus thirty (30) years.



## CADMIUM (8 CCR Section 1532)

### Employees Covered:

Applies to all occupational exposures to cadmium and cadmium compounds, in all forms, in all construction work where an employee may potentially be exposed to cadmium. Construction work is defined as work involved construction, alteration and / or repair, including but not limited to the following: Paints containing cadmium and cutting, brazing, burning, grinding or welding on surfaces that were painted with materials containing cadmium. Alteration, repair, maintenance or renovation of structures, substrates that contain cadmium or materials that contain cadmium. Installation of products that contain cadmium. Electrical grounding with cadmium-coated equipment. Cadmium contamination / emergency clean-up and transportation or disposal / storage.

### Examination:

The employer shall provide an initial medical examination to those employees within thirty (30) days after initial assignment to a job with exposure to cadmium.

1. A detailed medical and work history, with emphasis on: past, present, and anticipated future exposure to cadmium; any history of renal, cardiovascular, respiratory, hematopoietic, reproductive, and/or musculoskeletal system dysfunction; current usage of medication with potential nephrotoxic side-effects; and smoking history and current status.
2. Biological monitoring that includes the following tests:
3. Cadmium in urine (CdU), standardized to grams of creatinine (g/Cr).
4. Beta-2 microglobulin in urine (a2-M), standardized to grams of creatinine (g/Cr), with pH specified, as described in Appendix F.
5. Cadmium in blood (CdB), standardized to liters of whole blood (lwb).
6. Recent Examination: An initial examination is not required to be provided if adequate records show that the employee has been examined in accordance with (1) (2) (b) above with in the past twelve (12) months. In that case, such records shall be maintained as part of the employee's medical record and the prior exam shall be treated as if it were an initial examination.

### Action Level:

Action level (AL) is defined as an airborne concentration of cadmium of 2.5 micrograms per cubic meter of air (2.5 ug/m<sup>3</sup>), calculated as an 8-hour time-weighted average (TWA).

### Actions Triggered:

#### By Initial Biological Monitoring:

If the results of the biological monitoring test in the initial examination show the employee's CdU level to be at or below 3 ug/g Cr, a2-M level to be at or below 300 ug/g Cr and CdB level to be at or below 5 ug/lwb, then:

1. For employees who are subject to medical monitoring surveillance because of current or anticipated exposure to cadmium, the employer shall provide the minimum level of periodic medical surveillance.
2. For employee's who are subject to medical surveillance because of prior but not current exposure the employer shall provide biological monitoring for CdU, a2-M, and CdB one year after the initial biological monitoring.
3. If the results of the initial biological monitoring tests show the level of CdU to exceed 3ug/g Cr, the level of a2-M to be in excess of 300 ug/g Cr, or the level of CdB to be in excess of 5 ug/lwb, the employer shall:



- a) Within two weeks after receipt of biological monitoring results, reassess the employee's occupational exposure to cadmium as follows:
  - i. reassess the employee's work practices and personal hygiene;
  - ii. reevaluate the employee's respirator use, if any;
  - iii. review the hygiene facilities;
  - iv. reevaluate the maintenance and effectiveness of the relevant engineering controls;
  - v. assess the employee's smoking history and status.
- b) Within thirty (30) days after the exposure reassessment take reasonable steps to correct any deficiencies found.
- c) Within ninety (90) days after receipt of biological monitoring results, provide a full medical examination to the employee.

#### Periodic Medical Surveillance:

Any employee covered by the medical surveillance the employer shall provide at least the minimum level of periodic medical surveillance, which consists of periodic medical examination and periodic biological monitoring. A periodic medical examination shall be provide within one (1) year after the initial examination and there after at least biennially. Biological sampling shall be provided at least annually either as part of a periodic medical examination or separately.





## **INORGANIC ARSENIC** (8 CCR Section 5214)

### Employees Covered:

All employees who are or will be exposed above the action level, without regard to the use of respirators, at least thirty (30) days per year. And all employees who have been exposed above the action level, without regard to respirator use, for thirty (30) days or more per year for a total of ten (10) years or more of combined employment with the employer or predecessor employers prior to the effective date of the standard.

### Examinations:

Performed by or under the supervision of a California licensed physician without cost to the employee.

### Frequency:

Initial examinations; at the time of assignment to an area where the employee is likely to be exposed over the action level at least thirty (30) days per year.

### Action level:

The action level over an 8-hour time-weighted average concentration of fifteen (15) parts of EDB per billion parts of air by volume (ppb) but not exceeding 130 ppb over any 15-minute period

### Content of exam:

1. A work and comprehensive medical history, including smoking history.
2. A physical examination with special attention to skin, nose, respiratory tract, lymph nodes, nervous system, and liver.
3. Posterior-anterior chest X-ray (14" x 17").
4. A sputum cytology examination and other examinations which the physician believes appropriate based on the employee's exposure to inorganic arsenic or because of required respirator use.

### Periodic Examinations:

The employer shall provide each affected employee under forty five (45) years of age with fewer than ten (10) years of exposure over the action level a semi-annual examination, including a sputum cytology examination. Whenever an affected employee terminates without an applicable examination one will be offered within six (6) months after termination.

1. The employer shall instruct the physician not to reveal in the written opinion specific findings or diagnoses unrelated to occupational exposure.
2. The physician's written report shall include a statement the employee has been informed by the physician of the results of the medical examination and any medical conditions which require further explanation or treatment.
3. A written copy of the physician's report shall be provided to the employee.

### Record keeping:

Exposure monitoring. The employer shall establish and maintain a record of all required monitoring. The records shall include:



1. The dates, numbers, duration, location and results of each of the samples taken, including a description of the sampling procedure used to determine representative employee exposure.
2. A description of the sampling and analytical method used and evidence of their accuracy.
3. The employer shall maintain these monitoring records for at least forty (40) years or for the duration of employment plus twenty (20) years, whichever is longer.

#### Physician's Written Report:

The employer shall establish and maintain an accurate record of the physician's written reports for each affected employee. The records shall include the name and social security number (SSN) of the employee and the following:

1. Results of exposure monitoring conducted by the physician.
2. Any employee medical complaints related to exposure to inorganic arsenic.
3. This record shall be maintained for at least forty (40) years or for the duration of employment plus twenty (20) years, whichever is longer.



## PESTICIDES AND PEST CONTROL (3 CCR Sections 6728)

### Employees Covered:

Those employees who regularly handle, mix, load, or apply for more than six (6) days in thirty (30) day period any for the following:

- Organophosphates
- Guthion,
- Diazinon,
- Lorsban,
- N-methyl carbamate,
- Lannate,
- Temik,
- Sevin,

Pesticides with the signal word "DANGER" or "WARNING" on the label.

Note: It is the intent of the University to reduce exposure to these pesticides by using low- and non-hazardous pesticides and pest control methods by University employees. For more hazardous pesticides, licensed pesticide contractors will be used.

### Examination:

All employees regularly handling pesticides specified above shall include the following:

1. All covered employees shall have baseline red cell and plasma cholinesterase determinations. Baseline values shall be verified every two years. For new employees, the physician may accept previously established baseline values if they are obtained in accordance with these regulations by the same laboratory methodology and are acceptable to the laboratory which will analyze the new employee's samples.
2. The employer shall ensure that each employee, not previously within the University's medical supervision Program, has red cell and plasma cholinesterase determinations within three working days after the conclusion of each 30-day period in which pesticides specified above are regularly handled.
3. After three tests at 30-day intervals, further periodic monitoring shall be at intervals specified in writing by the physician except for verification of baseline as specified in (a) above.
4. When the physician has made no written recommendation for continued periodic monitoring, the testing interval shall be sixty (60) days.

### Record Keeping:

Records shall be maintained for three years and shall be available for inspection by the employee, the director, commissioner, county health officials, or state health official.

### Medical Removal Protection:

The employer shall investigate the work practices of any employee whose red cell or plasma cholinesterase levels fall below eighty percent (80%) of the baseline.

The employer shall remove an employee from exposure to organophosphate or carbamate pesticides if the employee's plasma cholinesterase level falls to sixty percent (60%) or less of baseline, or if red cell cholinesterase falls to seventy percent (70%) or less of baseline.



## Emergency Medical Care:

Emergency medical care for employees handling pesticides shall be planned for in advance. The employer shall locate a facility where emergency medical care is available for employees who will be handling pesticides.