**Lead Safety and Awareness Program**

**Contact:** Director of Risk Management

1. Rogue Community College is committed to the safety of all employees regarding lead exposure in the workplace. RCC is also committed to complying with all applicable federal, state and local health and safety codes and regulations. To ensure that all affected employees are provided with the necessary information and training, the following Lead Safety and Awareness Program has been established. All employees of RCC will participate and comply with all sections of the Lead Safety and Awareness Program. The written Lead Safety and Awareness Program is reviewed, updated and maintained by the RCC Risk Management Department. A printed copy of the program is available at the Risk Management office and online at https://web.roguecc.edu/risk-management/campus-occupational-safety.

2. Responsibilities

    a. Employer
        i. Rogue Community College will evaluate, develop and implement each area of the Lead Safety and Awareness as required by OAR Division 2 Subdivision Z Toxic Substances - Lead.

    b. Employee
        i. All employees of RCC will comply with each area of the Lead Safety and Awareness Program while employed at RCC.
        ii. All employees will report signs and symptoms of health problems related to lead exposure or lead poisoning to the Risk Management Department immediately. Employees will also notify the Risk Management Department if they have difficulty breathing during a respirator fit test or while wearing a respirator. In each of these cases RCC will make available to you, appropriate medical examinations or consultations. These will be provided at no cost to you and at a reasonable time and place.

3. Examples of actives with potential lead exposure

    a. Making or fixing batteries

    b. Melting, casting or grinding lead, brass or bronze

    c. Making or fixing radiators

    d. Removing old paint

    e. Tearing down or remodeling houses, buildings, tanks or bridges

f. Soldering

g. Working with scrap metal

h. Working at a shooting range

4. Health Effects of Lead

a. When absorbed into your body in certain doses lead is a toxic substance. The object of the Lead Safety and Awareness Program is to prevent absorption of harmful quantities of lead. The program is intended to protect you not only from the immediate toxic effects of lead, but also from the serious toxic effects that may not become apparent until years of exposure have passed.

b. Lead can be absorbed into your body by inhalation (breathing) and ingestion (eating). Lead (except for certain organic lead compounds not covered by the standard, such as tetraethyl lead) is not absorbed through your skin. When lead is scattered in the air as a dust, fume or mist it can be inhaled and absorbed through your lungs and upper respiratory tract. Inhalation of airborne lead is generally the most important source of occupational lead absorption. You can also absorb lead through your digestive system if lead gets into your mouth and is swallowed. If you handle food, cigarettes, chewing tobacco, or make-up which have lead on them or handle them with hands contaminated with lead, this will contribute to ingestion.

c. A significant portion of the lead that you inhale or ingest gets into your blood stream. Once in your blood stream, lead is circulated throughout your body and stored in various organs and body tissues. Some of this lead is quickly filtered out of your body and excreted, but some remains in the blood and other tissues. As exposure to lead continues, the amount stored in your body will increase if you are absorbing more lead than your body is excreting. Even though you may not be aware of any immediate symptoms of disease, this lead stored in your tissues can be slowly causing irreversible damage, first to individual cells, then to your organs and whole body systems.

d. Short term (acute) overexposure. Lead is a potent, systemic poison that serves no known useful function once absorbed by your body. Taken in large enough doses, lead can kill you in a matter of days. A condition affecting the brain called acute encephalopathy may arise which develops quickly to seizures, coma, and death from cardiorespiratory arrest. A short-term dose of lead can lead to acute encephalopathy. Short term occupational exposures of this magnitude are highly unusual, but not impossible. Similar forms of encephalopathy may, however, arise from extended, chronic exposure to lower doses of lead. There is no sharp

dividing line between rapidly developing acute effects of lead, and chronic effects which take longer to acquire. Lead adversely affects numerous body systems, and causes forms of health impairment and disease which arise after periods of exposure as short as days or as long as several years.

e. Long-term (chronic) overexposure. Chronic overexposure to lead may result in severe damage to your blood-forming, nervous, urinary and reproductive systems. Some common symptoms of chronic overexposure include loss of appetite, metallic taste in the mouth, anxiety, constipation, nausea, pallor, excessive tiredness, weakness, insomnia, headache, nervous irritability, muscle and joint pain or soreness, fine tremors, numbness, dizziness, hyperactivity and colic. In lead colic there may be severe abdominal pain. Damage to the central nervous system in general and the brain (encephalopathy) in particular is one of the most severe forms of lead poisoning. The most severe, often fatal, form of encephalopathy may be preceded by vomiting, a feeling of dullness progressing to drowsiness and stupor, poor memory, restlessness, irritability, tremor, and convulsions. It may arise suddenly with the onset of seizures, followed by coma, and death. There is a tendency for muscular weakness to develop at the same time. This weakness may progress to paralysis often observed as a characteristic "wrist drop" or "foot drop" and is a manifestation of a disease to the nervous system called peripheral neuropathy. Chronic overexposure to lead also results in kidney disease with few, if any, symptoms appearing until extensive and most likely permanent kidney damage has occurred. Routine laboratory tests reveal the presence of this kidney disease only after about two-thirds of kidney function is lost. When overt symptoms of urinary dysfunction arise, it is often too late to correct or prevent worsening conditions, and progression to kidney dialysis or death is possible.

f. Chronic overexposure to lead impairs the reproductive systems of both men and women. Overexposure to lead may result in decreased sex drive, impotence and sterility in men. Lead can alter the structure of sperm cells raising the risk of birth defects. There is evidence of miscarriage and still-birth in women whose husbands were exposed to lead or who were exposed to lead themselves. Lead exposure also may result in decreased fertility, and abnormal menstrual cycles in women. The course of pregnancy may be adversely affected by exposure to lead since lead crosses the placental barrier and poses risks to developing fetuses. Children born of parents either one of whom were exposed to excess lead levels are more likely to have birth defects, mental retardation, behavioral disorders or die during the first year of childhood.

g. Overexposure to lead also disrupts the blood-forming system resulting in decreased hemoglobin (the substance in the blood that carries oxygen to the cells) and ultimately anemia. Anemia is characterized by weakness, pallor and fatigability as a result of decreased oxygen carrying capacity in the blood.

5. Exposure Monitoring

    a. Permissible exposure limit (PEL). RCC shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air (50 µg/m3) averaged over an 8-hour period.

    b. If an employee is exposed to lead for more than 8 hours in any work day, the permissible exposure limit, as a time weighted average (TWA) for that day, shall be reduced according to the following formula: Maximum permissible limit (in µg/m3) = 400 ÷ hours worked in the day.

    c. When respirators are used to supplement engineering and administrative controls to comply with the PEL and all the requirements of RCC Respiratory Protection Program have been met, employee exposure, for the purpose of determining whether Rogue Community College has complied with the PEL, may be considered to be at the level provided by the protection factor of the respirator for those periods the respirator is worn. Those periods may be averaged with exposure levels during periods when respirators are not worn to determine the employee's daily TWA exposure.

    d. Exposure monitoring.
        i. For the purposes of this program, employee exposure is that exposure which would occur if the employee were not using a respirator.
        ii. With the exception of initial monitoring, RCC shall collect full shift (for at least 7 continuous hours) personal samples including at least one sample for each shift for each job classification in each work area.
        iii. Full shift personal samples shall be representative of the monitored employee's regular, daily exposure to lead.

    e. Initial determination.
        i. Rogue Community College will determine if its operations are covered by OAR Division 2 Subdivision Z Toxic Substances - Lead and will evaluate each workplace to determine if any employee may be exposed to lead at or above the action level.

    f. Basis of initial determination.
        i. RCC will monitor employee exposures and shall base initial determinations on the employee exposure monitoring results and any of the following, relevant considerations:
            B. Any information, observations, or calculations which would indicate employee exposure to lead;
            C. Any previous measurements of airborne lead; and

D. Any employee complaints of symptoms which may be attributable to exposure to lead.

ii. Monitoring for the initial determination may be limited to a representative sample of the exposed employees who Rogue Community College reasonably believes are exposed to the greatest airborne concentrations of lead in the workplace.

iii. Measurements of airborne lead made in the preceding 12 months may be used to satisfy the requirement to monitor if the sampling and analytical methods used meet the accuracy and confidence levels required.

g. Positive initial determination and initial monitoring.

i. Where a determination conducted shows the possibility of any employee exposure at or above the action level, RCC will conduct monitoring which is representative of the exposure for each employee in the workplace who is exposed to lead.

ii. Measurements of airborne lead made in the preceding 12 months may be used to satisfy this requirement if the sampling and analytical methods used meet the accuracy and confidence required.

h. Negative initial determination.

i. Where a determination is made that no employee is exposed to airborne concentrations of lead at or above the action level, Rogue Community College will make a written record of such determination. The record shall include all relevant information at a minimum the date of determination, location within the worksite, and the name of each employee monitored.

i. Frequency.

i. If the initial monitoring reveals employee exposure to be below the action level the measurements need not be repeated except as otherwise described under Additional Monitoring.

ii. If the initial determination or subsequent monitoring reveals employee exposure to be at or above the action level but below the permissible exposure limit RCC will repeat monitoring in accordance with this paragraph at least every 6 months. Rogue Community College will continue monitoring at the required frequency until at least two consecutive measurements, taken at least 7 days apart, are below the action level at which time RCC may discontinue monitoring for that employee except as otherwise described under Additional Monitoring.

iii. If the initial monitoring reveals that employee exposure is above the permissible exposure limit RCC will repeat monitoring quarterly. RCC will continue monitoring at the required frequency until at least two consecutive measurements, taken at least 7 days apart, are below the

PEL but at or above the action level at which time RCC will repeat monitoring for that employee at the frequency described above, except as otherwise described under Additional Monitoring.

j. Additional monitoring. Whenever there has been a production, process, control or personnel change which may result in new or additional exposure to lead, or whenever RCC has any other reason to suspect a change which may result in new or additional exposures to lead, additional monitoring in accordance with this paragraph shall be conducted.

k. Employee notification.
    i. RCC will, within 15 working days after the receipt of the results of any monitoring performed under this section, notify each affected employee of these results and the steps being taken to reduce exposures within the permissible exposure limit either individually in writing or by posting the results in an appropriate location that is accessible to affected employees.
    ii. Whenever the results indicate that the representative employee exposure, without regard to respirators, exceeds the permissible exposure limit, RCC will include in the written notice a statement that the permissible exposure limit was exceeded and a description of the corrective action taken or to be taken to reduce exposure to or below the permissible exposure limit.

l. Accuracy of measurement. RCC will use a method of monitoring and analysis which has an accuracy (to a confidence level of 95%) of not less than plus or minus 20 percent for airborne concentrations of lead equal to or greater than 30 µg/m3.

6. Methods for Compliance

a. Engineering and work practice controls.
    i. Where any employee is exposed to lead above the permissible exposure limit for more than 30 days per year, RCC will implement engineering and administrative controls to reduce and maintain employee exposure to lead, except to the extent that RCC can demonstrate that such controls are not feasible. Wherever the engineering and administrative controls which can be instituted are not sufficient to reduce employee exposure to or below the permissible exposure limit, RCC will nonetheless use them to reduce exposures to the lowest feasible level and shall supplement them by the use of respiratory protection.
    ii. Where any employee is exposed to lead above the permissible exposure limit, but for 30 days or less per year, RCC will implement engineering controls to reduce exposures to 200 µg/m3, but thereafter may

implement any combination of engineering, administrative controls and respiratory controls to reduce and maintain employee exposure to lead to or below 50 µg/m3.

b. Respiratory protection. Where engineering and administrative controls do not reduce employee exposure to or below the 50 µg/m3 permissible exposure limit, RCC will supplement these controls with respirators.

c. Compliance program.
    i. RCC will establish and implement a written compliance program to reduce exposures to or below the permissible exposure limit, and interim levels if applicable, solely by means of engineering and administrative controls.
    ii. Written plans for these compliance programs will include at least the following:
        B. A description of each operation in which lead is emitted; e.g. machinery used, material processed, controls in place, crew size, employee job responsibilities, operating procedures and maintenance practices;
        C. A description of the specific means that will be employed to achieve compliance, including engineering plans and studies used to determine methods selected for controlling exposure to lead;
        D. A report of the technology considered in meeting the permissible exposure limit;
        E. Air monitoring data which documents the source of lead emissions;
        F. A detailed schedule for implementation of the program, including documentation such as copies of purchase orders for equipment, construction contracts, etc.;
        G. A work practice program;
        H. An administrative control schedule if applicable;
        I. Other relevant information.
    iii. Written programs will be revised and updated at least annually to reflect the current status of the program.

d. Mechanical ventilation.
    i. When ventilation is used to control exposure, measurements which demonstrate the effectiveness of the system in controlling exposure, such as capture velocity, duct velocity, or static pressure shall be made at least every 3 months. Measurements of the system's effectiveness in controlling exposure shall be made within 5 days of any change in production, process, or control which might result in a change in employee exposure to lead.

ii. Recirculation of air. If air from exhaust ventilation is recirculated into the workplace, RCC will assure that:
    B. The system has a high efficiency filter with reliable back-up filter; and
    C. Controls to monitor the concentration of lead in the return air and to bypass the recirculation system automatically if it fails are installed, operating, and maintained.

e. Administrative controls.
    i. If administrative controls are used as a means of reducing employees TWA exposure to lead, RCC will establish and implement a job rotation schedule which includes:
        B. Name or identification number of each affected employee;
        C. Duration and exposure levels at each job or work station where each affected employee is located; and
        D. Any other information which may be useful in assessing the reliability of administrative controls to reduce exposure to lead.

f. Respiratory protection.
    i. For employees who use respirators required by this section, RCC will provide each employee an appropriate respirator. Respirators must be used during:
        B. Periods necessary to install or implement engineering or work-practice controls.
        C. Work operations for which engineering and work-practice controls are not sufficient to reduce employee exposures to or below the permissible exposure limit;
        D. Periods when an employee requests a respirator.

7. Lead Respiratory Protection

a. RCC will implement a respiratory protection program which covers each employee required by Division 2/Z, 1910.1025 Lead, to use a respirator. Note: This is in addition to other respiratory protection and medical surveillance requirements specified in these Lead rules.

b. If an employee has breathing difficulty during fit testing or respirator use, RCC will provide the employee with a medical examination in accordance to determine whether or not the employee can use a respirator while performing the required duty.

c. Respirator selection.
    i. RCC will:
        B. Select, and provide to employees, the appropriate respirators.

C. Provide employees with full facepiece respirators instead of half mask respirators for protection against lead aerosols that cause eye or skin irritation at the use concentrations.
D. Provide HEPA filters for powered and non-powered air-purifying respirators.
E. RCC will provide employees with a powered air-purifying respirator (PAPR) instead of a negative pressure respirator selected when an employee chooses to use a PAPR and it provides adequate protection to the employee.

8. PPE

a. If an employee is exposed to lead above the PEL, without regard to the use of respirators or where the possibility of skin or eye irritation exists, RCC will provide at no cost to the employee and assure that the employee uses appropriate protective work clothing and equipment such as, but not limited to:
    i. Coveralls or similar full-body work clothing;
    ii. Gloves, hats, and shoes or disposable shoe coverlets; and
    iii. Face shields, vented goggles, or other appropriate protective equipment

b. Cleaning and replacement.
    i. RCC will provide the protective clothing described above in a clean and dry condition at least weekly, and daily to employees whose exposure levels without regard to a respirator are over 200 µg/m3 of lead as an 8-hour TWA.
    ii. RCC will provide for the cleaning, laundering, or disposal of protective clothing and equipment described above.
    iii. RCC will repair or replace required protective clothing and equipment as needed to maintain their effectiveness.
    iv. RCC will assure that all protective clothing is removed at the completion of a work shift only in change rooms provided for that purpose.
    v. RCC will assure that contaminated protective clothing which is to be cleaned, laundered, or disposed of, is placed in a closed container in the changeroom which prevents dispersion of lead outside the container.
    vi. RCC will inform in writing any person who cleans or launders protective clothing or equipment of the potentially harmful effects of exposure to lead.
    vii. Labeling of contaminated protective clothing and equipment.
        B. RCC will ensure that labels of bags or containers of contaminated protective clothing and equipment include the following information:
            a. DANGER: CLOTHING AND EQUIPMENT CONTAMINATED WITH LEAD. MAY DAMAGE FERTILITY OR THE UNBORN CHILD. CAUSES DAMAGE TO THE CENTRAL NERVOUS

SYSTEM. DO NOT EAT, DRINK OR SMOKE WHEN HANDLING. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.

viii. RCC will prohibit the removal of lead from protective clothing or equipment by blowing, shaking, or any other means which disperses lead into the air.

9. Housekeeping and Hygiene Practices

a. All surfaces shall be maintained as free as practicable of accumulations of lead.

b. Floors and other surfaces where lead accumulates may not be cleaned by the use of compressed air.

c. Shoveling, dry or wet sweeping, and brushing may be used only where vacuuming or other equally effective methods have been tried and found not to be effective.

d. Vacuuming. Where vacuuming methods are selected, the vacuums shall be used and emptied in a manner which minimizes the reentry of lead into the workplace.

e. RCC will assure that in areas where employees are exposed to lead above the PEL, without regard to the use of respirators, food or beverage is not present or consumed, tobacco products are not present or used, and cosmetics are not applied.

f. RCC will provide clean change rooms for employees who work in areas where their airborne exposure to lead is above the PEL, without regard to the use of respirators.

g. RCC will assure that change rooms are equipped with separate storage facilities for protective work clothing and equipment and for street clothes which prevent cross-contamination.

h. RCC will assure that employees who work in areas where their airborne exposure to lead is above the PEL, without regard to the use of respirators, shower at the end of the work shift.

i. RCC will provide required shower facilities.

j. RCC will assure that employees who are required to shower, do not leave the workplace wearing any clothing or equipment worn during the work shift.

k. RCC will provide lunchroom facilities for employees who work in areas where their airborne exposure to lead is above the PEL, without regard to the use of respirators.

l. RCC will assure that lunchroom facilities have a temperature controlled, positive pressure, filtered air supply, and are readily accessible to employees.

m. RCC will assure that employees who work in areas where their airborne exposure to lead is above the PEL without regard to the use of a respirator wash their hands and face prior to eating, drinking, smoking or applying cosmetics.

n. RCC will assure that employees do not enter lunchroom facilities with protective work clothing or equipment unless surface lead dust has been removed by vacuuming, downdraft booth, or other cleaning method.

o. RCC will provide an adequate number of lavatory facilities.

10. Lead Shielding

a. Lead shielding protects individuals from exposure to radiation in medical and research settings. Since metallic lead itself can be toxic, lead shielding requires special handling. Lead particles can be transferred to hands or clothing, or accumulate as dust on floors and other laboratory surfaces. The following guidelines can help reduce exposure:
    i. Wear disposable gloves when handling metallic lead as well as a disposable lab coat and safety glasses.
    ii. Wash hands and area thoroughly after handling lead and before leaving the lab.
    iii. Cover lead with plastic sheeting to prevent lead contamination if working with unsealed radioactive material.
    iv. Purchase or prepare encapsulated lead whenever possible.
    v. Never use lead bricks or shielding as a doorstop.
    vi. Avoid putting labels or stickers on lead as they can make future reuse or recycling difficult.
    vii. Never dispose of lead in regular trash. Follow hazardous waste disposal procedures.
    viii. Contact Risk Management if you need to cut lead shielding since this activity can generate high levels of lead dust.

11. Lead Soldering

a. Individuals can be exposed to lead during soldering. If handled incorrectly, lead can pose chronic health effects, such as reproductive problems, digestive problems, memory and concentration problems, and muscle and joint pain.

b. Potential exposure routes:
    i. Ingestion
    ii. Inhalation

c. Soldering with lead (or other metals used in soldering) can produce dust and fumes that are hazardous. In addition, using flux containing rosin produces solder fumes that, if inhaled, can result in occupational asthma or worsen existing asthmatic conditions; as well as cause eye and upper respiratory tract irritation.

d. Many non-lead-based solder alloys are available and are equally effective. To reduce risk, please substitute lead use or non-lead-based products whenever possible.

e. Reduce Risk of Personal Exposure
    i. Follow manufacturer's instructions and read and understand the Safety Data Sheets (SDS) for all materials before beginning work.
    ii. Avoid ingestion of lead surface contamination by keeping soldering areas clean.
    iii. Wash hands after completing soldering work.
    iv. Do not eat or drink in soldering areas.
    v. Conduct work in a well-ventilated area. Avoid inhalation of soldering smoke/fumes.
    vi. Use the following Personal Protective Equipment (PPE) to prevent inadvertent contact:
        B. Protective Clothing – To prevent burns from splashes of hot solder, long sleeve shirts and pants that are made of natural fibers (cotton) and closed-toe shoes should be worn. Heat resistant gloves may also be prudent.
        C. Eye Protection – Safety glasses, goggles, or face shields should be used when soldering and clipping wires. Hold leads so when cutting, they do not fly away.
        D. Clean work surfaces by using wet wipe method or specialized lead cleaning wipes, avoid lead contamination by using common housekeeping brooms, mops, and/or any materials that are being reused. Discard lead contaminated materials as hazardous materials.

f. Waste Management
    i. Lead soldering waste is considered hazardous. Discard lead solder and dross in a container with a lid. Used solder sponges and contaminated rags must be disposed of as hazardous waste. The collection container should be metal and labeled. Contact Risk Management to disposes of hazardous waste.

12. Medical Surveillance

a. RCC will institute a medical surveillance program for all employees who are or may be exposed at or above the action level for more than 30 days per year.

b. RCC will assure that all medical examinations and procedures are performed by or under the supervision of a licensed physician.

c. RCC will provide the required medical surveillance including multiple physician review without cost to employees and at a reasonable time and place.

d. Biological monitoring.
    i. Blood lead and ZPP level sampling and analysis. RCC will make available biological monitoring in the form of blood sampling and analysis for lead and zinc protoporphyrin levels to each employee covered under this program on the following schedule:
        B. At least every 6 months to each employee who is or may be exposed at or above the actional level for more than 30 days per year.
        C. At least every two months for each employee whose last blood sampling and analysis indicated a blood lead level at or above 40 µg/100 g of whole blood. This frequency shall continue until two consecutive blood samples and analyses indicate a blood lead level below 40 µg/100 g of whole blood; and
        D. At least monthly during the removal period of each employee removed from exposure to lead due to an elevated blood lead level.
    ii. Follow-up blood sampling tests. Whenever the results of a blood lead level test indicate that an employee's blood lead level is at or above the numerical criterion for medical removal, RCC will provide a second (follow-up) blood sampling test within two weeks after RCC receives the results of the first blood sampling test.
    iii. Accuracy of blood lead level sampling and analysis. Blood lead level sampling and analysis provided pursuant to this section shall have an accuracy (to a confidence level of 95 percent) within plus or minus 15 percent or 6 µg/100ml, whichever is greater, and shall be conducted by a laboratory licensed by the Center for Disease Control, United States

Department of Health, Education and Welfare (CDC) or which has received a satisfactory grade in blood lead proficiency testing from CDC in the prior twelve months.

iv. Employee notification. Within five working days after the receipt of biological monitoring results, RCC will notify in writing each employee whose blood lead level is at or above 40 μg/100 g:
    B. Of that employee's blood lead level; and
    C. That the OSHA standard requires temporary medical removal with Medical Removal Protection benefits when an employee's blood lead level is at or above the numerical criterion for medical removal.

e. Medical examinations and consultations.
    i. Frequency. RCC will make available medical examinations and consultations to each employee covered under this program on the following schedule:
        B. At least annually for each employee for whom a blood sampling test conducted at any time during the preceding 12 months indicated a blood lead level at or above 40 μg/100 g;
        C. Prior to assignment for each employee being assigned for the first time to an area in which airborne concentrations of lead are at or above the action level;
        D. As soon as possible, upon notification by an employee either that the employee has developed signs or symptoms commonly associated with lead intoxication, that the employee desires medical advice concerning the effects of current or past exposure to lead on the employee's ability to procreate a healthy child, or that the employee has demonstrated difficulty in breathing during a respirator fitting test or during use; and
        E. As medically appropriate for each employee either removed from exposure to lead due to a risk of sustaining material impairment to health, or otherwise limited pursuant to a final medical determination.
    ii. Content. Medical examinations made available pursuant to this requirement will include the following elements:
        B. A detailed work history and a 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;
        C. A thorough physical examination, with particular attention to teeth, gums, hematologic, gastrointestinal, renal, cardiovascular, and neurological systems. Pulmonary status should be evaluated if respiratory protection will be used;

D. A blood pressure measurement;
E. A blood sample and analysis which determines:
    a. Blood lead level;
    b. Hemoglobin and hematocrit determinations, red cell indices, and examination of peripheral smear morphology;
    c. Zinc protoporphyrin;
    d. Blood urea nitrogen; and,
    e. Serum creatinine;
F. A routine urinalysis with microscopic examination; and
G. Any laboratory or other test which the examining physician deems necessary by sound medical practice.

iii. The content of medical examinations made available pursuant to this requirement shall be determined by an examining physician and, if requested by an employee, shall include pregnancy testing or laboratory evaluation of male fertility.

B. Multiple physician review mechanism.
    a. If RCC selects the initial physician who conducts any medical examination or consultation provided to an employee under this section, the employee may designate a second physician:
        i. To review any findings, determinations or recommendations of the initial physician; and
        ii. To conduct such examinations, consultations, and laboratory tests as the second physician deems necessary to facilitate this review.
    b. RCC will promptly notify an employee of the right to seek a second medical opinion after each occasion that an initial physician conducts a medical examination or consultation pursuant to this section. RCC may condition its participation in, and payment for, the multiple physician review mechanism upon the employee doing the following within fifteen (15) days after receipt of the foregoing notification, or receipt of the initial physician's written opinion, whichever is later:
        i. The employee informing RCC that he or she intends to seek a second medical opinion, and
        ii. The employee initiating steps to make an appointment with a second physician.
    c. If the findings, determinations or recommendations of the second physician differ from those of the initial physician, then RCC and the employee shall assure that efforts are made for the two physicians to resolve any disagreement.
    d. If the two physicians have been unable to quickly resolve their disagreement, then RCC and the employee through

their respective physicians shall designate a third physician:

i. To review any findings, determinations or recommendations of the prior physicians; and
ii. To conduct such examinations, consultations, laboratory tests and discussions with the prior physicians as the third physician deems necessary to resolve the disagreement of the prior physicians.

e. RCC will act consistent with the findings, determinations and recommendations of the third physician, unless RCC and the employee reach an agreement which is otherwise consistent with the recommendations of at least one of the three physicians.

iv. Information provided to examining and consulting physicians.

B. RCC will provide an initial physician conducting a medical examination or consultation under this section with the following information:

a. A copy of the OSHA standard for lead including all Appendices;
b. A description of the affected employee's duties as they relate to the employee's exposure;
c. The employee's exposure level or anticipated exposure level to lead and to any other toxic substance (if applicable);
d. A description of any personal protective equipment used or to be used;
e. Prior blood lead determinations; and
f. All prior written medical opinions concerning the employee in RCC's possession or control.

C. RCC will provide the foregoing information to a second or third physician conducting a medical examination or consultation under this section upon request either by the second or third physician, or by the employee.

v. Written medical opinions.

B. RCC will obtain and furnish the employee with a copy of a written medical opinion from each examining or consulting physician which contains the following information:

a. The physician's opinion as to whether the employee has any detected medical condition which would place the employee at increased risk of material impairment of the employee's health from exposure to lead;
b. Any recommended special protective measures to be provided to the employee, or limitations to be placed upon the employee's exposure to lead;

c. Any recommended limitation upon the employee's use of respirators, including a determination of whether the employee can wear a powered air purifying respirator if a physician determines that the employee cannot wear a negative pressure respirator; and
d. The results of the blood lead determinations.

C. RCC will instruct each examining and consulting physician to:
a. Not reveal either in the written opinion, or in any other means of communication with RCC, findings, including laboratory results, or diagnoses unrelated to an employee's occupational exposure to lead; and
b. Advise the employee of any medical condition, occupational or nonoccupational, which dictates further medical examination or treatment.

vi. Alternate Physician Determination Mechanisms. RCC and an employee or authorized employee representative may agree upon the use of any expeditious alternate physician determination mechanism in lieu of the multiple physician review mechanism so long as the alternate mechanism otherwise satisfies the requirements contained above.

f. Chelation.
i. RCC will assure that any person whom they retain, employs, supervises or controls does not engage in prophylactic chelation of any employee at any time.
ii. If therapeutic or diagnostic chelation is to be performed by any person, RCC will assure that it be done under the supervision of a licensed physician in a clinical setting with thorough and appropriate medical monitoring and that the employee is notified in writing prior to its occurrence.

g. Medical Removal Protection.
i. Temporary medical removal and return of an employee.
B. Temporary removal due to elevated blood lead levels.
a. RCC will remove an employee from work having an exposure to lead at or above the action level on each occasion that a periodic and a follow-up blood sampling test conducted pursuant to this section indicate that the employee's blood lead level is at or above 60 μg/100 g of whole blood; and,
b. RCC will remove an employee from work having an exposure to lead at or above the action level on each occasion that the average of the last three blood sampling tests conducted pursuant to this section (or the average of all blood sampling tests conducted over the previous six

(6) months, whichever is longer) indicates that the employee's blood lead level is at or above 50 µg/100 g of whole blood; provided, however, that an employee need not be removed if the last blood sampling test indicates a blood lead level at or below 40 µg/100 g of whole blood.

C. Temporary removal due to a final medical determination.
    a. RCC will remove an employee from work having an exposure to lead at or above the action level on each occasion that a final medical determination results in a medical finding, determination, or opinion that the employee has a detected medical condition which places the employee at increased risk of material impairment to health from exposure to lead.
    b. For the purposes of this section, the phrase "final medical determination" shall mean the outcome of the multiple physician review mechanism or alternate medical determination mechanism used pursuant to the medical surveillance provisions of this section.
    c. Where a final medical determination results in any recommended special protective measures for an employee, or limitations on an employee's exposure to lead, RCC will implement and act consistent with the recommendation.
D. Return of the employee to former job status.
    a. RCC will return an employee to their former job status:
        i. For an employee removed due to a blood lead level at or above 60 µg/ 100 g, or due to an average blood lead level at or above 50 µg/100 g, when two consecutive blood sampling tests indicate that the employee's blood lead level is at or below 40 µg/100 g of whole blood;
        ii. For an employee removed due to a final medical determination, when a subsequent final medical determination results in a medical finding, determination, or opinion that the employee no longer has a detected medical condition which places the employee at increased risk of material impairment to health from exposure to lead.
    b. For the purposes of this section, the requirement that RCC will return an employee to their former job status is not intended to expand upon or restrict any rights an employee has or would have had, absent temporary medical removal, to a specific job classification or position under the terms of a collective bargaining agreement.

E. Removal of other employee special protective measure or limitations. RCC will remove any limitations placed on an employee or end any special protective measures provided to an employee pursuant to a final medical determination when a subsequent final medical determination indicates that the limitations or special protective measures are no longer necessary.
F. Employer options pending a final medical determination. Where the multiple physician review mechanism, or alternate medical determination mechanism used pursuant to the medical surveillance provisions of this section, has not yet resulted in a final medical determination with respect to an employee, RCC will act as follows:
    a. Removal. RCC may remove the employee from exposure to lead, provide special protective measures to the employee, or place limitations upon the employee, consistent with the medical findings, determinations, or recommendations of any of the physicians who have reviewed the employee's health status.
    b. Return. RCC may return the employee to their former job status, end any special protective measures provided to the employee, and remove any limitations placed upon the employee, consistent with the medical findings, determinations, or recommendations of any of the physicians who have reviewed the employee's health status, with two exceptions. If
        i. the initial removal, special protection, or limitation of the employee resulted from a final medical determination which differed from the findings, determinations, or recommendations of the initial physician or
        ii. the employee has been on removal status for the preceding eighteen months due to an elevated blood lead level, then RCC will await a final medical determination.
G. Medical removal protection benefits.
    a. Provision of medical removal protection benefits. RCC will provide to an employee up to eighteen (18) months of medical removal protection benefits on each occasion that an employee is removed from exposure to lead or otherwise limited pursuant to this section.
    b. Definition of medical removal protection benefits. For the purposes of this section, the requirement that RCC provide medical removal protection benefits means that RCC will

maintain the earnings, seniority and other employment rights and benefits of an employee as though the employee had not been removed from normal exposure to lead or otherwise limited.

c. Follow-up medical surveillance during the period of employee removal or limitation. During the period of time that an employee is removed from normal exposure to lead or otherwise limited, RCC may condition the provision of medical removal protection benefits upon the employee's participation in follow-up medical surveillance made available pursuant to this section.
d. Workers' compensation claims. If a removed employee files a claim for workers' compensation payments for a lead-related disability, then RCC will continue to provide medical removal protection benefits pending disposition of the claim. To the extent that an award is made to the employee for earnings lost during the period of removal, RCC medical removal protection obligation shall be reduced by such amount. RCC will receive no credit for workers' compensation payments received by the employee for treatment related expenses.
e. Other credits. RCC's obligation to provide medical removal protection benefits to a removed employee shall be reduced to the extent that the employee receives compensation for earnings lost during the period of removal either from a publicly or employer-funded compensation program, or receives income from employment with another employer made possible by virtue of the employee's removal.
f. Employees whose blood lead levels do not adequately decline within 18 months of removal. RCC will take the following measures with respect to any employee removed from exposure to lead due to an elevated blood lead level whose blood lead level has not declined within the past eighteen (18) months of removal so that the employee has been returned to his or her former job status:
    i. RCC will make available to the employee a medical examination pursuant to this section to obtain a final medical determination with respect to the employee;
    ii. RCC will assure that the final medical determination obtained indicates whether or not the employee may be returned to his or her former

job status, and if not, what steps should be taken to protect the employee's health;

iii. Where the final medical determination has not yet been obtained, or once obtained indicates that the employee may not yet be returned to his or her former job status, RCC will continue to provide medical removal protection benefits to the employee until either the employee is returned to former job status, or a final medical determination is made that the employee is incapable of ever safely returning to his or her former job status.

iv. Where RCC acts pursuant to a final medical determination which permits the return of the employee to his or her former job status despite what would otherwise be an unacceptable blood lead level, later questions concerning removing the employee again shall be decided by a final medical determination. RCC need not automatically remove such an employee pursuant to the blood lead level removal criteria provided by this section.

g. Voluntary Removal or Restriction of An Employee. Where RCC, although not required by this section to do so, removes an employee from exposure to lead or otherwise places limitations on an employee due to the effects of lead exposure on the employee's medical condition, RCC will provide medical removal protection benefits to the employee.

13. Employee information and training.

a. Training program.

i. RCC will inform employees all employees under this program of the content of Appendices A and B of the OSHA standard.

ii. RCC will train each employee who is subject to exposure to lead at or above the action level, or for whom the possibility of skin or eye irritation exists, in accordance with the requirements of this section. RCC will institute a training program and ensure employee participation in the program.

iii. RCC will provide initial training by 180 days from the effective date for those employees covered under this program and prior to the time of initial job assignment for those employees subsequently covered.

iv. The training program shall be repeated at least annually for each employee.

v. RCC will assure that each employee is informed of the following:

B. The content of this program and all applicable OSHA standards appendices;
C. The specific nature of the operations which could result in exposure to lead above the action level;
D. The purpose, proper selection, fitting, use, and limitations of respirators;
E. The purpose and a description of the medical surveillance program, and the medical removal protection program including information concerning the adverse health effects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females);
F. The engineering controls and administrative controls associated with the employee's job assignment;
G. The contents of any compliance plan in effect; and
H. Instructions to employees that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician;

b. Access to information and training materials.
    i. RCC will make readily available to all affected employees a copy of this program and all applicable OSHA standards and appendices.

c. Communication of hazards.
    i. In classifying the hazards of lead at least the following hazards are to be addressed:
        B. Reproductive/developmental toxicity;
        C. central nervous system effects;
        D. kidney effects;
        E. blood effects;
        F. and acute toxicity effects.
    ii. RCC will include lead in the hazard communication program established to comply with the HCS (1910.1200). RCC will ensure that each employee has access to labels on containers of lead and to safety data sheets, and is trained in accordance with the requirements of HCS.

d. Signs
    i. RCC will post the following warning signs in each work area where the PEL is exceeded:
        B. DANGER
        LEAD
        MAY DAMAGE FERTILITY OR THE UNBORN CHILD
        CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM
        DO NOT EAT, DRINK OR SMOKE IN THIS AREA

ii. RCC will ensure that no statement appears on or near any sign required which contradicts or detracts from the meaning of the required sign.
iii. RCC will ensure that signs required by this program are illuminated and cleaned as necessary so that the legend is readily visible.
iv. RCC may use signs required by other statutes, regulations, or ordinances in addition to, or in combination with, signs required by this program.

e. Recordkeeping.
    i. Exposure monitoring.
        B. RCC will establish and maintain an accurate record of all monitoring required as part of this program.
        C. This record shall include:
            a. The date(s), number, duration, location and results of each of the samples taken, including a description of the sampling procedure used to determine representative employee exposure where applicable;
            b. A description of the sampling and analytical methods used and evidence of their accuracy;
            c. The type of respiratory protective devices worn, if any;
            d. Name and job classification of the employee monitored and of all other employees whose exposure the measurement is intended to represent; and
            e. The environmental variables that could affect the measurement of employee exposure.
        D. RCC will maintain these monitoring records for at least 40 years or for the duration of employment plus 20 years, whichever is longer.

f. Medical surveillance.
    i. RCC will establish and maintain an accurate record for each employee subject to medical surveillance.
    ii. This record shall include:
        B. The name and description of the duties of the employee;
        C. A copy of the physician's written opinions;
        D. Results of any airborne exposure monitoring done for that employee and the representative exposure levels supplied to the physician; and
        E. Any employee medical complaints related to exposure to lead.
    iii. RCC will keep, or assure that the examining physician keeps, the following medical records:
        B. A copy of the medical examination results including medical and work history;

C. A description of the laboratory procedures and a copy of any standards or guidelines used to interpret the test results or references to that information;
D. A copy of the results of biological monitoring.

iv. RCC will maintain or assure that the physician maintains those medical records for at least 40 years, or for the duration of employment plus 20 years, whichever is longer.

g. Medical removals.
   i. RCC will establish and maintain an accurate record for each employee removed from current exposure to lead.
   ii. Each record shall include:
      B. The name of the employee;
      C. The date on each occasion that the employee was removed from current exposure to lead as well as the corresponding date on which the employee was returned to his or her former job status;
      D. A brief explanation of how each removal was or is being accomplished; and
      E. A statement with respect to each removal indicating whether or not the reason for the removal was an elevated blood lead level.
   iii. RCC will maintain each medical removal record for at least the duration of an employee's employment.

h. Availability.
   i. RCC will make available upon request all records including but not limited to environmental monitoring, medical removal, and medical records required under this program to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1910.1020. Medical removal records shall be provided in the same manner as environmental monitoring records.

i. Transfer of records.
   i. Whenever RCC ceases to do business, the successor employer shall receive and retain all records required to be maintained by paragraph (n) of this section.
   ii. RCC will also comply with any additional requirements involving transfer of records set forth in 29 CFR 1910.1020(h).

j. Observation of monitoring.
   i. Employee observation. RCC will provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to lead conducted as part of this program.
   ii. Observation procedures.

B. Whenever observation of the monitoring of employee exposure to lead requires entry into an area where the use of respirators, protective clothing or equipment is required, RCC will provide the observer with and assure the use of such respirators, clothing and such equipment, and shall require the observer to comply with all other applicable safety and health procedures.
C. Without interfering with the monitoring, observers shall be entitled to:
    a. Receive an explanation of the measurement procedures;
    b. Observe all steps related to the monitoring of lead performed at the place of exposure; and
    c. Record the results obtained or receive copies of the results when returned by the laboratory.

14. Definitions

a. Action level means employee exposure, without regard to the use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air (30 µg/m3) averaged over an 8-hour period.

b. Lead means metallic lead, all inorganic lead compounds, and organic lead soaps. Excluded from this definition are all other organic lead compounds.