



**Berry Bros. General Contractors, Inc.
Corporate Policy Procedure**

**(HSE) Health, Safety & Environmental
Policies and Procedures Manual**

Section # 47

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LEAD SAFETY PROGRAM

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SUBPART A - PURPOSE

The purpose of the Berry Bros.' Lead Safety Program is to protect both our employees and the environment from lead contamination from any and all operations. The intent of our program is to ensure that no employee is exposed to lead at a concentration greater than fifty (50) micrograms per cubic meter of air averaged over an eight (8) hour period. Also for Berry Bros. to be in full, continuous compliance with OSHA Standard 29 CFR 1910.1025 and all other local, State and Federal requirements for our industry.

Training at Berry Bros. is performed on an awareness level only. If in the event that BBGCI should encounter lead on any work site, remediation will be handled by a third party. Employees requiring additional training and/or certification are sent to a certified third party training facility in our area.

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SUBPART B - RESPONSIBILITIES

Management will implement, maintain, and monitor the effectiveness of the:


1. The lead safety program, including semi-annual revisions and updates to reflect the current status of the program.
2. Engineering & administrative controls for lead exposure.
3. Employee training and awareness.
4. Medical surveillance program.
5. Respiratory protection program.
6. Lead disposal program.
7. Housekeeping program.
8. Protective clothing issue, storage and disposal.

Supervisors will:

1. Provide effective and continuous control of all lead operations.
2. Immediately inform management of any deficiencies in engineering or administrative controls.
3. Conduct routine assigned inspections and monitoring.
4. Immediately correct any deviation from operational safety requirements.
5. Provide immediate on-the-spot training for any employee who shows lack of knowledge or application of required operational lead safety requirements.
6. Ensure all employees are properly trained before commencing any operation that may contribute to lead exposure.

Employees will:

1. Follow all operational and lead safety procedures and warnings
2. Seek immediate supervisor guidance to resolve questions
3. Conduct operations in accordance with company provided training
4. Immediately report to a supervisor any deficiency in engineering or administrative controls.
5. Properly use, store and dispose of issued and assigned personal protective clothing.
6. Employees will wash hands and faces if they have come in contact with lead

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7. Maintain change and shower areas neat and orderly.
8. If lead is found or known to exist in an area employees will not disturb the lead containing material.

SUBPART C - HAZARDS


Pure lead (Pb) is a heavy metal at room temperature and pressure and is a basic chemical element. It can combine with various other substances to form numerous lead compounds. The Permissible Exposure Limit (PEL) set by OSHA is 50 micrograms of lead per cubic meter of air (50 ug/m (3)), averaged over an 8-hour workday.

Lead can be absorbed by inhalation (breathing) and ingestion (eating). 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 the lungs and upper respiratory tract. Lead can also be absorbed through the digestive system if swallowed. Handling food, cigarettes, chewing tobacco, or make-up, which have lead contamination or handling them with hands contaminated with lead, will contribute to ingestion.

A significant portion of inhaled or ingested lead goes into the blood stream. Once in the blood stream, lead is circulated throughout the body and stored in various organs and body tissues. Some of this lead is quickly filtered out of the body and excreted, but some remains in the blood and other tissues. As exposure to lead continues, the amount stored in the body will increase. Lead stored in body tissues can cause irreversible damage, first to individual cells, then to organs and whole body systems.

Short-term (acute) effects of overexposure to lead

Lead is a potent, systemic poison. Taken in large enough doses, lead can kill in a matter of days. A condition affecting the brain called acute encephalopathy may arise which develops quickly to seizures, coma, and death from cardio respiratory arrest. 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

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impairment and disease, which arise after periods of exposure as short as days or as long as several years.

Long-term (chronic) effective of overexposure to lead

Chronic overexposure to lead may result in severe damage to 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.

SUBPART D - MONITORING

Initial determination


The company has made an initial determination of lead work areas and exposure levels and will conduct subsequent "initial determinations" in the event of changes to hazard control methods or operational processes that affect employee or environmental exposure.

Initial determinations are conducted to determine if any employee may be exposed to lead at or above the action level of 30 micrograms per cubic meter of air (30 ug/m (3)) averaged over an 8-hour period.

Where a determination is made that no employee is exposed to airborne concentrations of lead at or above the action level, the company shall maintain a written record. The record shall include quantitative sampling data, date of determination, location within the worksite, and the name and social security number of each employee monitored.

Monitoring requirements

If monitoring is above the action level, engineering controls and PPE shall be employed to reduce exposure. Air monitoring and analysis methods shall have 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 ug/m(3).

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Where a determination shows the possibility of any employee exposure at or above the action level, the company shall conduct monitoring which is representative of the exposure for each employee in the workplace or process area who is exposed to lead.

For the purposes of monitoring requirements, employee exposure is that exposure which would occur if the employee were not using a respirator.

Monitoring and sample collection shall cover 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.

Full shift personal samples must be representative of the monitored employee's regular, daily exposure to lead.


Monitoring Frequency

If the initial determination or subsequent determinations as a result of monitoring reveals employee exposure to be above the action level but below the permissible exposure limit, Berry Bros. will repeat monitoring at least every six months. Berry Bros. will continue monitoring at the required frequency until at least two consecutive measurements, taken seven days apart, are below the action level at which time Berry Bros. may discontinue monitoring for that employee. Should it become apparent that continued lead exposures exist, the monitoring will be repeated.

In the event that the initial monitoring reveals that employee exposure is above the PEL, Berry Bros. will repeat monitoring quarterly. Berry Bros. will continue monitoring at the required frequency until at least two consecutive measurements, taken seven days apart, area below the PEL but at or above the action level at which time Berry Bros. shall repeat monitoring for that employee every six months, or if additional lead is known in the area.

At or Above Action Level and Below PEL

Every 6 months if the initial determination or subsequent monitoring reveals employee exposure to be at or above the action level but below the permissible exposure limit. This monitoring (6 month frequency) will continue until at least

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two consecutive measurements, taken at least 7 days apart, are below the action level.

Above PEL

If the initial monitoring reveals that employee exposure is above the permissible exposure limit the company will repeat monitoring quarterly. Quarterly monitoring will continue until at least two consecutive measurements, taken at least 7 days apart, are below the PEL but at or above the action level.

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 any other reason to suspect a change, which may result in new or additional exposures to lead, additional monitoring will be conducted.

Employee Notification of Monitoring Results


Within 15 working days after the receipt of monitoring results, each employee will be notified in writing of the results, which represent that employee's exposure. Whenever the results indicate that the representative employee exposure, without regard to respirators, exceeds the permissible exposure limit, the written notice will include 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.

Observation of Monitoring

The company provides affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to lead.

Observation procedures

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, the company will provide the observer with and assure the use of

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respirators, clothing and equipment required, and will require the observer to comply with all other applicable safety and health procedures.

Without interfering with the monitoring, observers are entitled to:


- Receive an explanation of the measurement procedures.
- Observe all steps related to the monitoring of lead performed at the place of exposure.
- Record the results obtained or receive copies of the results when returned by the laboratory.

SUBPART E - ENGINEERING CONTROLS

In the event that the lead permissible exposure limit (PEL) is exceeded for more than thirty days, the following steps must be taken:

- Whenever the results indicate that the employee exposure, without the use of respirators, exceeds the PEL, Berry Bros. will include a written notice statement that the PEL was exceeded, and a list of actions to reduce the hazard must be stated to take the PEL to acceptable limits within the OSHA guidelines.
- Engineering controls should also be in place to get the lead to acceptable levels. The engineering controls shall reduce the exposure to 200 ug/m³, but thereafter including administrative controls, and respiratory controls, the employee exposure should be at or below 50 ug/m³.
- In the event that there is a lead exposure area at Berry Bros., a barricade will be installed and proper signs will be posted to designate that this area is contaminated with lead.

Where any employee is exposed to lead above the permissible exposure limit for more than 30 days per year, the company will implement feasible engineering and work practice controls (including administrative controls) to reduce and maintain employee exposure to lead. Wherever the engineering and work practice controls which can be instituted are not sufficient to reduce employee exposure to or below the permissible exposure limit, the company will still use them to reduce exposures to the lowest feasible level and shall supplement them by the use of respiratory protection.

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Where any employee is exposed to lead above the permissible exposure limit, but for 30 days or less per year, the company will implement engineering controls to reduce exposures to 200 ug/m (3), but thereafter may implement any combination of engineering, work practice (including administrative controls), and respiratory controls to reduce and maintain employee exposure to lead to or below 50 ug/m (3).

SUBPART F - MECHANICAL VENTILATION

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.


Recalculation of Air

If air from exhaust ventilation is reticulated into the workplace, the system must include:

- A high efficiency filter with reliable back-up filter.
- 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.

SUBPART G - ADMINISTRATIVE CONTROLS

There are no known areas of lead contamination at Berry Bros. However, some examples of materials that may contain lead are: some paints, leaded solders, pipes, batteries, circuit boards, and demolition/salvage materials may contain some lead. In the event that such contamination should occur, a site-specific program will be prepared by the Berry Bros.' HSE Department. The program will be in compliance with OSHA standards and will have engineering controls and methods to reduce the PEL to acceptable limits. The air will be monitored and documented. The crew size and the names of the crew will also be included in

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the site-specific program. The operations and the machinery used during the job will also be documented, and the program will be revised and up-dated every six months.

If administrative controls are used as a means of reducing employees TWA exposure to lead, the company shall establish and implement a job rotation schedule, which includes:


- Name or identification number of each affected employee.
- Duration and exposure levels at each job or work station where each affected employee is located.
- Other information which may be useful in assessing the reliability of administrative controls to reduce exposure to lead.

Administrative control information and records will be maintained as an addendum to this written program.

If in the event that **BBGCI** employees are exposed to lead as a result of working in an area adjacent to a lead abatement area and become exposed, **BBGCI** will either remove the employees from the area until the exposure / breach is repaired or BBGCI will perform an initial exposure assessment.

SUBPART H - RESPIRATORS

When respirators are used to supplement engineering and work practice controls to comply with the PEL and all other requirements have been met, employee exposure, for the purpose of determining compliance 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. The respiratory protection program will be conducted in accordance with 29 CFR 1910.134 (b) through (d) (except (d) (1) (iii)), and (f) through (m). The company will provide a powered air-purifying respirator when an employee chooses to use this type of respirator and such a respirator provides adequate protection to the employee.

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Respirators must be used during:

- Periods necessary to install or implement engineering or work-practice controls.
- Work operations for which engineering and work-practice controls are not sufficient to reduce employee exposures to or below the permissible exposure limit.
- Periods when an employee requests a respirator.

In the event of a lead contamination problem, Berry Bros. will provide a NIOSH certified powered air-purifying respirator (PAPRs) to employee(s) requiring one free of charge.

- Periods necessary to install or implement engineering or work practice controls.
- Work operations for which engineering and work practice controls are not sufficient to reduce employee exposure to or below the PEL.
- Periods when an affected employee request a respirator.


SUBPART I - PROTECTIVE CLOTHING & EQUIPMENT

Should lead levels exceed PEL's, all necessary PPE shall be supplied to the employee at no cost. Such PPE and equipment may include such equipment as, but not limited to:

- Coveralls or similar full-body work clothing.
- Gloves, hats, and shoes or disposable shoe coverlets.
- Face shields, vented goggles, or other appropriate protective equipment.

Cleaning and Replacement

The company will:

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- Provide the protective clothing in a clean and dry condition at least weekly, and daily to employees whose exposure levels without regard to a respirator are over 200 ug/m(3) of lead as an 8-hour TWA.
- Provide for the cleaning, laundering, or disposal of protective clothing and equipment assure that all protective clothing is removed at the completion of a work shift only in change rooms provided for that purpose.
- Assure that contaminated protective clothing, which is to be cleaned, laundered, or disposed of, is placed in a closed container in the change-room, which prevents dispersion of lead outside the container.
- Inform in writing any person who cleans or launders protective clothing or equipment of the potentially harmful effects of exposure to lead.
- assure that the containers of contaminated protective clothing and equipment required by paragraph (g)(2)(v) are labeled as follows:

CAUTION: CLOTHING CONTAMINATED WITH LEAD. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.

- Prohibit the removal of lead from protective clothing or equipment by blowing, shaking, or any other means, which disperses lead into the air.

SUBPART J - HOUSEKEEPING

- All surfaces shall be maintained as free as practicable of accumulations of lead.
- Floors and other surfaces where lead accumulates may not be cleaned by the use of compressed air.
- 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.
- Where vacuuming methods are used, the vacuums shall be used and emptied in a manner, which minimizes the reentry of lead into the workplace.

SUBPART K - HYGIENE FACILITIES & PRACTICES



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In the event that Berry Bros.' employees are exposed to lead, the following blood sampling shall be provided at no cost to the employee: The blood sampling shall test for lead, zinc, and protoporphyrin levels. For all employees exposed to the lead action level for more than thirty days per year.

- At least every six months
- At least every two months for each employee whose last blood lead level was at or above 40 ug/100g of whole blood. This frequency shall continue until two consecutive good samples and analysis with blood levels below 40 ug/100g of whole blood.
- At least monthly during the removal period of each employee removed from exposure to lead due to an elevated blood level reading.

The following are requirements pertaining to all areas where employees are exposed to lead above the PEL, without regard to the use of respirators:


- No storage or consumption of food or beverages.
- No tobacco product storage or use.
- No cosmetics stored or used.
- No personal clothing or articles, except in authorized change areas.

CHANGE ROOMS

Clean change rooms are provided for employees who work in areas where their airborne exposure to lead is above the PEL. Change rooms are equipped with separate storage facilities for protective work clothing and equipment and for street clothes, which prevent cross-contamination. Employees who are required to shower after work shifts are not allowed to leave the workplace wearing any clothing or equipment worn during the work shift.

SHOWERS

Employees who work in areas where their airborne exposure to lead is above the PEL must shower and decontaminate at the end of the each work shift.

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LUNCHROOMS

Separate lunchroom facilities are provided for employees who work in areas where their airborne exposure to lead is above the PEL. These facilities are temperature controlled, have positive pressure and filtered air supply, and are readily accessible to employees. All affected employees must wash their hands and face prior to eating, drinking, smoking or applying cosmetics in the lunchroom area. Employees may not enter lunchroom facilities with protective work clothing or equipment unless surface lead dust has been removed by vacuuming, down draft booth, or other cleaning method.

LAVATORIES

An adequate number of separate lavatory facilities are maintained for employees who work in lead controlled process areas.

SUBPART L - SIGNS


Proper signs will be posted at the entrance and exits to all lead hazard areas. No other signs or statements may appear on or near any lead hazard sign which contradicts or detracts from the meaning of the required sign. All lead hazard signs will be kept illuminated and cleaned as necessary so that the legend is readily visible. The signs will contain the following or other appropriate wording/warning:

SUBPART M - EMPLOYEE TRAINING

All employees that have the potential for exposure will be informed of Appendices A & B and will participate in the company Lead Safety Training program. In addition, all employees that are required to participate in the program will receive Lead Awareness training at time of hire, during orientation, or prior to job assignment and annually thereafter.

All training will be documented with the dates of training, the trainer, and the employee name.

Training will consist of:

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- Specific OSHA requirements contained in
 - 1910.1025 - OSHA Lead Standard.
 - 1910.1025 App A - Substance data sheet for occupational exposure to lead.
 - 1910.1025 App B - Employee standard summary.
- Specific nature of the operations that could result in exposure to lead above the action level.
- Proper selection, fitting, use, and limitations of respirators.
- 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).
- Engineering controls and work practices associated with the employee's job assignment.
- Contents of the company compliance plan
- Instructions 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.
- Materials pertaining to the Occupational Safety and Health Act.

A copy of the OSHA standard 1910.1025 and its appendices will be readily available to all affected employees.

SUBPART N - MEDICAL SURVEILLANCE

The company has instituted a medical surveillance program for all employees who are or may be exposed above the action level for more than 30 days per year. This medical surveillance program and all medical examinations and procedures are performed by or under the supervision of a licensed physician. The program functions under the requirements of OSHA Standard 1910.1025. Elements of the program include:

- Biological monitoring (blood sampling)
- Employee monitoring and notification



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- Medical examinations and consultations
- Medical removal protection
- Medical removal protection benefits

The blood sampling and monitoring should be conducted every six (6) months until two consecutive blood samples and analysis are acceptable. The sampling and monitoring should be performed at least monthly during the removal period. Any employee with elevated blood levels should be temporarily removed. Employees should be notified in writing within five (5) days when lead levels are not acceptable. The standard requires temporary medical removal with Medical Removal Protection benefits.

In the event that employee(s) are exposed above the action level for more than thirty (30) days, medical examinations and procedures shall be performed by or under the supervision of a licensed physician. The medical surveillance is provided without cost to the employee(s).

SUBPART O - RECORDKEEPING

All records relating to the company lead safety program are to be maintained for at least 40 years or for the duration of employment plus 20 years, whichever is longer. The following records will be established and maintained:

- Exposure monitoring
- Medical Surveillance
- Medical Removals.

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