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### 1. Purpose

To establish a procedure for lead exposure.


Reference: 29 FR 1926.62

### 2. Policy

Techniques that minimize the exposure to personnel and the environment must be employed by Buckeye or contractor personnel when removing paint or coating systems that contain lead at Company facilities.

2.1 All paint found at Company facilities will be assumed to contain lead unless it can be proven otherwise. Documentation such as the product's Material Safety Data Sheet, Product Information Sheet, or Sampling and Testing are ways that can prove a material does not contain lead. Sampling and testing procedures for determining the lead content in paint are found in [paragraph 6](#).

2.2 All lead paint removal activities are covered by these procedures and require the personal hygiene and environmental protection practices outlined herein unless on-site monitoring or


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past data from similar operations can show that lead exposure will be below the action level of 30 µg/m<sup>3</sup>.


- 2.3 When needed to facilitate maintenance activities, incidental removal of paint covering small areas may be conducted without prior approval by following the “Incidental Removal of Lead Paint” procedures in [paragraph 4](#).
- 2.4 All other lead paint removal activities are conducted in accordance with the “Other than Incidental Removal of Lead Paint” procedures in [paragraph 4](#) and require a site-specific safety/environmental compliance plan. These projects must be referred to a Regional Health and Safety Specialist so that regulated work area requirements may be determined; and to the Environmental Affairs department for waste disposal planning and a determination that the proposed containment will meet federal, state, and local environmental emission requirements.
- 2.5 Laboratory Test Results for lead content should be requested in parts per million.

### 3. Definitions

- 3.1 **Abatement** - The process of removal or painting over (topcoating) an existing lead paint surface.
- 3.2 **Action Level** - When personal exposure levels to lead are 30 µg/m<sup>3</sup> or more, all of the requirements of [paragraph 4](#) of this procedure must be adhered to. If there is no data available to show that exposures will be below this level when a proposed work activity is being performed on material containing lead, an exposure above the action level must be assumed until monitoring can determine the exact level of exposure.
- 3.3 **Ambient Air Quality Monitoring** - This monitoring may be required at an abrasive blasting site to determine whether or not the public's health, safety, or welfare and the environment are being endangered by the lead particulate matter discharged during the operation. Acceptable air monitoring equipment includes, but is not limited to, visual monitoring, a PM-10 High Volume Sampler, a TSP Lead High Volume Sampler, or a personal monitor filter cassette and pump with an air flow up to 10-15 liters per minute.

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- 3.4 **Changing Facilities** - A facility must be provided where personnel working in the regulated area can change from their street clothes into their work clothes prior to donning their personal protective clothing. There must be separate changing areas so as to prevent contamination of the employee's street clothing.
- 3.5 **Compliance Plan** - This is a written plan that is site-specific. The plan will contain the actions that will be taken to reduce the exposures of personnel and the environment within the regulated work area and to prevent emissions outside of the regulated work area.
- 3.6 **Containment** - A system designed to keep emissions generated by work activities from escaping to the outside environment and past the boundaries of the regulated work area. The class of containment used is dependent on the activity and federal, state and local requirements. A Regional Health and Safety Specialist must be consulted to determine the type of containment needed for that specific work site.
- 3.7 **HEPA** - A high-efficiency particulate mechanical filter used in air-purifying respirators and vacuum systems. HEPA cartridges are color coded magenta for identification.
- 3.8 **Hygiene Facilities** - A facility must be available so personnel may wash their hands and face prior to leaving the work area for breaks and at the end of their shift. A shower facility may be required at work sites where it is feasible.
- 3.9 **Employee Safety and Health Monitoring** - Two types of monitoring must be conducted: Breathing Zone Monitoring which is mechanical air monitoring taken from outside the respiratory protection worn by the employees to determine the ambient exposure levels present and Biological Monitoring (Blood Test) which is used to determine an employee's actual exposure to lead. Breathing Zone Monitoring must be done task by task in order to determine the specific ambient exposure level for that activity. Biological Monitoring must be performed if an employee is exposed to an ambient concentration above the Action Level for more than thirty days per year.
- 3.10 **Permissible Exposure Limit (PEL)** - Ambient air level concentration of contaminants above which some form of respiratory protection is required. Lead's PEL is 50 µg/m<sup>3</sup>.

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3.11 **Person in Charge** - a responsible individual who has received training in the Company's hazardous work safety procedures and the conduct of lead abatement projects. This person is responsible for conducting or verifying the completion of the required hazardous work safety procedures and conducting the lead removal project to ensure the safety of workers and compliance with environmental emissions and disposal guidelines. This person must be present at the job site while work is being conducted. This person may be a contractor employee if approved by the Manager for the facility in which the removal project is being conducted.

3.12 **Removal Level** - If Biological Monitoring determines that an employee's actual exposure to lead has exceeded 50 µg/dl of blood, the employee must be removed from any activity with potential lead exposure. Employees will retain their status and benefits in accordance with OSHA 29 CFR 1926.62. The employee can be returned to the job by having a blood lead level of less than 40 µg/dl or the task is complete and re-assignment would have occurred as a normal business practice. Employees may choose to remove themselves from a job if their blood lead level exceeds 40 µg/dl.


3.13 **Regulated Work Area** - Area around actual work site where the requirements of this procedure are in effect and from which no visible emission of contaminants is allowed to travel. For tank projects, this area shall be limited to the space inside the tank dike. For all other projects, the area shall be limited to 50 feet from where the surface preparation work is being performed or the facility's property line, whichever is less.

## 4. Work Practices and Controls

### 4.1 Incidental Removal of Lead Paint

When incidental paint removal to facilitate maintenance activities can be accomplish with chemical strippers and hand scraping, the following procedure may be used without prior preparation of a written compliance plan or employee safety and health monitoring.


4.1.1 A disposable plastic sheet for containment must be placed under the area to be cleaned.

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- 4.1.2 The MSDS and label instructions for the chemical stripper must be reviewed and the required Personal Protective Equipment (PPE) and ventilation equipment must be obtained prior to the start of any activities.
- 4.1.3 Apply the stripper and allow the required time for it to soften the paint.
- 4.1.4 Hand scrape and wash the area using as small an amount of washwater or solvent as practical. Power tool use is not permitted.
- 4.1.5 Wash equipment as required and place all debris, containment plastic, disposable PPE, and cleaning solution in the proper receptacles and dispose of it as outlined in [paragraph 5](#).
- 4.1.6 Wash hands and face prior to eating, smoking, or leaving the work site. Where practical, use waterless hand cleaner to minimize contaminated wash water disposal requirements.
- 4.1.7 **Welding, flame heating, and powered mechanical cleaning are allowed only after paint removal is complete.**

## 4.2 Other Than Incidental Removal of Lead Paint

- 4.2.1 Prior to any bidding or activity at the work site, a survey must be performed by a Regional Health and Safety Specialist, Local Manager, or designee to determine the scope of the work and the boundaries of the regulated area ([Form A](#) - Lead Abatement Safety Evaluation Form). When the survey is complete, the Person in Charge or successful contractor will prepare a written compliance program which will remain at the work site. The written compliance program will contain the following information:
- A description of the methods to be used for removal, crew size, and job responsibilities.
  - A description and supporting documentation of engineering or technological controls used to meet the PEL.
  - Air monitoring method or historical data to support the choice of personal protective equipment such as respiratory protection.


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- The work practices that will be followed to prevent contamination outside the regulated area. These work practices should include, but are not limited to, protective work clothing and equipment, housekeeping, and hygiene facilities and practices.
- The procedures that will be used to prevent the contamination of the environment (air, soil and water) and proper disposal of waste materials generated during the operation. Environmental Affairs should be consulted as necessary.
- Administrative controls that may be used to limit employee exposure such as a work rotation schedule.
- Documentation of any arrangements made between employers at multi-employer sites

4.3 The Person in Charge will assume the responsibility of ensuring that all requirements of the written compliance plan, government regulations, and Company policy are adhered to by the contractor and resolve any problems that may arise at the site. [Form B](#) - Lead Abatement Safety Compliance Evaluation Form must be completed by the Person in Charge for each worksite. Part A of the form should be completed by the Person in Charge or Health and Safety Specialist prior to starting work. An inspection of the worksite should be performed by the Person in Charge using Part B of the form when work begins.

4.4 Before the actual work begins, all Company employees assigned to the project will receive an initial blood test for lead and zinc protoporphyrin to determine base levels for comparison over the length of the project. As the project continues, blood tests shall be conducted every two months or at the end of the project if less than two months to determine an employee's actual exposure level. If at any time during the project an employee's exposure level exceeds the removal level of 50 µg/dl, that employee will be removed from all lead removal projects until a blood test shows that the employee's lead levels are below 40 µ/dl and medical approval is given. Blood tests are not required for operating and maintenance employees who occasionally enter the regulated area, but not the containment area, in performance of required operating and maintenance duties.


4.5 The containment system must meet the requirements for no visible emissions beyond the regulated work area. If ventilation is used, the exhaust will be run through a dust collection system equipped with HEPA filters.

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- 4.6 Arrangements must be made to collect any debris or run-off of material that may be contaminated with lead.
- 4.7 The boundaries of the regulated work area must be posted. The signs must be legible with letters at least three inches high and must read as follows:

**WARNING**  
**LEAD WORK AREA**  
**POISON**  
**NO SMOKING OR EATING**

- 4.8 All personnel entering the regulated work area while work is in progress must use appropriate PPE as determined by monitoring. Operating and maintenance employees who need to enter the regulated area, but not the containment, at times when active work is not in progress are not required to use special PPE, but should wash their hands and face upon leaving the regulated area.
- 4.9 Breathing Zone Air Monitoring will be conducted at the work site when removal tasks begin. Monitoring will be done continuously in the containment during work activity and periodically during inspections. Monitoring should also be done periodically outside the containment and inside of the regulated area to establish levels of employee exposure in this area. This will determine the level of personal protection for each job function within the regulated work area and can be used as historical data for similar projects in the future. Breathing zone monitoring should be conducted until each task being performed in the removal process has been monitored for eight hours.
- 4.10 Ambient air monitoring may be required at the boundaries of the regulated area where there is the potential for off-site migration of particulate and the contamination of nearby properties is possible. The monitoring devices will be set up at either the nearest area of public access or the facility's property line.
- 4.11 Prior to entering the containment, some form of respiratory protection must be worn. Respiratory selection is dictated by the actual contaminant levels which is determined by either the Breathing Zone Monitoring, historical data, or the task being performed. Refer to this table to choose the proper respiratory protection. Respiratory protection is required until breathing zone monitoring results indicate it is not necessary.


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- 4.12 All personnel that enter the containment must put on hooded disposable coveralls. These coveralls must be removed when leaving the containment structure. A changing area adjacent to the containment must be available for this purpose and equipped with a HEPA vacuum cleaner to clean the floor and areas on the employee's person that may have been contacted with contaminants prior to leaving the changing area.
- 4.13 Hand-washing facilities must be available for use adjacent to the regulated work area. Employees must thoroughly wash their hands and face upon leaving the regulated work area. Where practical, use waterless hand cleaner to minimize contaminated wash water disposal requirements.
- 4.14 An eating facility separate from the regulated work area must be available for use by employees. Air quality should be such that personnel protective equipment is unnecessary. This area should be kept free of contaminants. Employees must not enter the eating facility wearing any personnel protective gear unless it has been thoroughly vacuumed or washed.
- 4.15 At the end of the workday, employees will remove their work clothes and wash their hands and face prior to changing into their street clothes. If feasible, a shower facility will be made available in the changing area and employees will be required to shower before leaving the area. If not available, employees should be instructed to shower at the earliest possible convenience to remove any possible contamination. The changing facility must have separate areas for storing work clothes and street clothes to avoid contamination of the employee's street clothes.
- 4.16 Employees work clothes will be collected at a pre-arranged time and sent to a commercial laundry. This is done to prevent the contamination of their vehicle, home, and family members. The laundry that is selected will be informed that the clothes may be contaminated with lead so the proper precautions can be followed.

## 5. Cleanup, Collection and Transportation of Waste

- 5.1 Pressurized air will not be used for any cleanup activity. Brooms and vacuum cleaners equipped with HEPA filters should be used unless an engineered system is in place.
- 5.2 All contaminated material such as coveralls, abrasive, tarps, water, and debris will be collected and placed in proper containers for transport at the end of each workday.



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- 5.3 All containers must be labeled properly for shipment as required in Section 6 of Environmental Manual. If there are any questions, a representative from the Environmental Affairs department should be contacted.
- 5.4 Only transporters and disposal facilities approved by Environmental Affairs may be used for the disposal of lead contaminated waste materials generated during the project.

## 6. Contractor's Requirements

- 6.1 A contractor should be hired to perform lead paint or coating removal when the work is outside the scope of normal maintenance activities. Contractors must adhere to the requirements of this policy.

**NOTE:** In New Jersey, the contractor must be certified by the Department of Community Affairs (609-292-7899).

- 6.2 Contractors shall, as part of their bid proposal, complete and submit a compliance questionnaire for review by Buckeye's Environmental Affairs and Operations Services Departments.
- 6.3 Prior to beginning work, the contractor will provide the Company with the following:
- A copy of the written compliance plan.
  - Copies of the work crew members' initial blood tests.
  - In New Jersey, a copy of the state certification.
  - Copies of contractor's employee's training records verifying that they are in compliance with governmental requirements regarding lead, respiratory protection, and hazardous waste.
  - A copy of the MSDS for any chemical (paints, thinners, solvents, etc) that will be brought on to Company property and used by the contractor's employees.
- 6.4 Upon completing work, the contractor must provide the company with the work crew members' blood test results.


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## 7. Sampling Procedure for Determining Lead Content in Paint

- 7.1 With the assistance of the Environmental Affairs department, identify and make arrangements with a laboratory that can perform a Total Lead Analysis in accordance with either ASTM D-3335, Method 7000 of EPA SW-846, or a similar approved methodology.
- 7.2 Place a clear plastic bag to collect chips beneath or close to the area to be sampled. Keep in mind that different structures may require the use of specialized paints so more than one sample may be needed from a single structure. Tanks, for example, usually require three different types of paint so a minimum of three samples will be needed; one each from the shell, stairs, and roof.
- 7.3 Cut a 1/2 inch square through the coating to the substrate or bare metal. Free the coating from the substrate and place it into the plastic bag. It is important that the sample represent the entire range of coating thicknesses found on the structure as well as the number of coats. If this is not done, or if rust scale is attached to the sample, the test may be invalid.

**NOTE:** If the entire sample chip cannot be detached cleanly, the coating can be removed by using closely spaced parallel cuts to dislodge ribbons of the coating. The exposed substrate can then be scraped with a sharp tool such as a chisel to remove any remaining residue. Care should be taken to avoid any portions of the substrate itself.

- 7.4 Seal the plastic bag and identify it with the following information:
  - Identification of the project site (Station Name and Unit Number).
  - Date Sample was taken.
  - Location on the unit where the sample was taken (North side of tank shell).
  - Name of individual taking the sample.
  - Signature of the individual taking the sample.
- 7.5 Overnight mail or transport the sample to the laboratory.
- 7.6 Upon the receipt of the results, mail a copy to the Environmental Affairs department.

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**NOTE:** Paint or coating systems which contain less than 600 ppm of lead are considered non-lead paint or non-lead systems. This is the currently accepted standard based on the Consumer Product Safety Act (16 CFR 1303.2).

**8. Other Manual References**

Not applicable.

**9. Appendices**

Not applicable.

**10. Forms**

[Form A](#)

Lead Abatement - Safety Evaluation (SA C-11 Form A)

[Form B](#)

Lead Abatement - Safety Compliance Evaluation (SA C-11 Form B)

**11. Exhibits**

[Exhibit A](#)

Required Respiratory Protection Chart (SA C-11 Ex A)

**12. Change Log**

For an overview of the manual revision process, please refer to [1.01 – Introduction to Using and Revising Manuals](#).

For a log of all revisions to this manual, please refer to [1.04 – Log of Revisions](#).

Rev #	Date	Prepared by (Name/Title)	Reviewed by (Name/Title)	Approved by (Name/Title)	Summary of Change(s)
4	10/8/21	Michael Detweiler			New template applied