		L	LECTRIC POWER COOPERATIVE ARAMIE RIVER STATION K MANAGEMENT PROGRAM ELEMENT			
Origination Date: 07/05/2006	RMP	Procedure No.: SAF-EPB-020	Revision No.: 02	Date Revised: 03/05/2020	Page 1 of 15	
				00/00/2020		
Affected Area(s):			Originated By:			
PLANT WIDE			Reena McCoy			
			Revised By:	Date:		
			Reena McCoy 03/05/2020			
Subject:						
LEAD COMPLIANCE PROGRAM						

## 1.0 **PURPOSE/SCOPE**

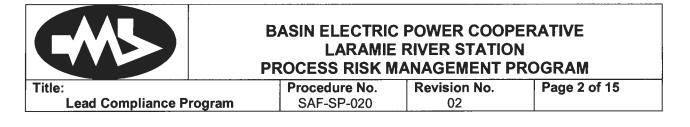
1.1 The purpose of the Lead Compliance Program is to protect our employees from lead contamination and to be in compliance with OSHA Standard 29 CFR 1910.1025 and 1926.62.

## 2.0 **DEFINITION OF TERMS**

- 2.1 <u>Action Level:</u> The employee exposure, without regard to the use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air (30ug/m<sup>3</sup>) averaged over an 8-hour period.
- 2.2 <u>Lead:</u> Refers to metallic lead, all inorganic lead compounds, and organic lead soaps. Excluded from this definition are all other organic lead compounds.
  - 2.2.1 Any paint or surface coating containing lead in concentrations greater than or equal to 1.0mg/cm<sup>2</sup> or greater than 0.5% by weight, is considered to be lead based.
- 2.3 <u>Permissible Exposure Limit (PEL)</u>: The employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air (50ug/m<sup>3</sup>) averaged over an 8-hour period.
  - 2.3.1 If an employee is exposed to lead for more than 8-hours in any work day, the employees allowable exposure, as a Time Weighted Average (TWA) for that day, shall be reduced by the following formula:
    Maximum permissible limit (in ug/m<sup>3</sup>) = 400 divided by hours worked in the day.
  - 2.3.2 When respirators are used to supplement engineering and work practice controls to comply with the PEL and all of the requirements for respiratory protection as outlined in OSHA 1910.1025 paragraph (f) are met, employee exposure, for the purpose of determining whether the employer 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.

## 3.0 **RESPONSIBILITY / APPLICABILITY**

- 3.1 <u>Supervisory Authority (Plant Manager)</u> is responsible for:
  - 3.1.1 Safe administration of the Lead Compliance Program.
  - 3.1.2 Enforcing the program and disciplinary action regarding violations of this program.



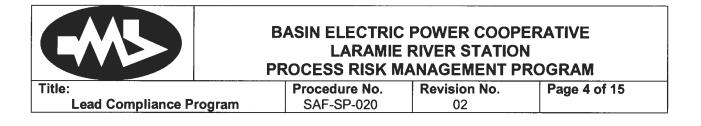
- 3.2 <u>The Safety and Training Supervisor</u> is responsible for:
  - 3.2.1 Reviewing, revising and/or updating the program at least annually.
  - 3.2.2 Ensuring training is provided on the program.
  - 3.2.3 Ensuring that LRS's respiratory protection plan is maintained, including written records or respirator training and respirator fit test results.
- 3.3 <u>LRS Supervisors</u> are responsible for:
  - 3.3.1 Ensuring members of their crew are familiar with the program and trained in safe work practices when working on lead-containing materials is required.
  - 3.3.2 Ensuring that housekeeping and other safe work practices as outlined in the program are followed to ensure that employees are not exposed to lead that may be present in dust.
  - 3.3.3 Ensuring that materials, tools, equipment, personal protective equipment (PPE) and other resources required to implement and maintain this program are in place and readily available as needed.
  - 3.3.4 Ensuring that work is conducted in a manner that minimizes and adequately controls the risk to employees and others. This includes ensuring that employees use appropriate engineering controls, work practices and/or wear the necessary PPE.
- 3.4 LRS Employees are responsible for:
  - 3.4.1 Following the Lead Compliance Program if required to work on lead containing materials.
  - 3.4.2 Following recognized work procedures, housekeeping and other safe work practices to limit their exposure to lead.
  - 3.4.3 Wearing all applicable PPE both when working on lead containing materials and at any other time they are knowingly going to be working in a highly dusty and/or dirty area.
  - 3.4.4 Participating in exposure monitoring and medical surveillance programs.
  - 3.4.5 Reporting any unsafe condition or act to your supervisor.

	BASIN ELECTRIC POWER COOPERATIVE LARAMIE RIVER STATION PROCESS RISK MANAGEMENT PROGRAM			
Title:	Procedure No.	Revision No.	Page 3 of 15	
Lead Compliance Program	SAF-SP-020	02		

- 3.5 LRS Planners and Schedulers are responsible for
  - 3.5.1 Ensuring that samples are taken and analyzed prior to any grinding, cutting, welding etc. on painted or coated surfaces.
  - 3.5.2 Marking work orders when lead abatement is to take place.
- 3.6 <u>LRS Field Coordinators, Contract Coordinators</u> (those overseeing contract work on LRS site) are responsible for:
  - 3.6.1 Informing Contractors if they are required to work on lead containing materials.
  - 3.6.2 For ensuring that all abatement work is done according to OSHA standards
  - 3.6.3 For ensuring that the Contractor receives a copy of the Lead Compliance Program and follows the procedure.
- 3.7 LRS Environmental Coordinator is responsible for:
  - 3.7.1 Ensuring the correct handling and disposal of lead-contaminated waste.
- 3.8 <u>Contractors</u> are responsible for:
  - 3.8.1 Following the guidelines and procedures outlined in this program as a minimum.
  - 3.8.2 Ensuring that their employees are trained appropriately for the work they will be doing.
  - 3.8.3 Ensuring they do not begin work on any painted or coated surface until they have confirmation (based on lab results) that the paint or coating material does not contain lead, or they will treat the material as if it were lead containing
  - 3.8.4 Following all Federal, State and Local regulations.

# 4.0 IDENTIFICATION OF LEAD

- 4.1 Painted and coated surfaces are the primary sources of lead at Laramie River Station.
- 4.2 Various sampling has been conducted and an initial determination has been made that no employee is exposed to airborne concentrations of lead at or above the action level during normal operating processes.
- 4.3 This does not include construction work as defined in OSHA 1926.62 including:
  - 4.3.1 Demolition or salvage of structures where lead or lead containing materials are present;
  - 4.3.2 Removal or encapsulation of materials containing lead;



- 4.3.3 New construction, alteration, repair or renovation of structures, substrates, or portions thereof, that contain lead, or materials containing lead;
- 4.3.4 Installation of products containing lead;
- 4.3.5 Lead contamination/emergency cleanup;
- 4.3.6 Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed, and;
- 4.3.7 Maintenance operations associated with construction activities described above.
- 4.4 An inventory list will be created and maintained that defines the location tested and the results of such testing. The list will be located in Altien: LRS/Safety/Administration/Program Documentation/Lead Compliance.
  - 4.4.1 The Safety and Training department will be notified any time a lead sample is taken and a copy of all results will be given to the safety department for filing.

## 5.0 **PROCEDURES/GUIDELINES**

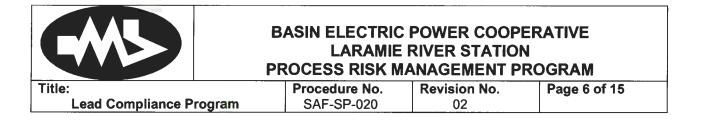
- 5.1 All painted/coated surfaces will be treated as if they are lead containing material until confirmed to be otherwise through lab analysis.
- 5.2 Coordinate with PIMM's / Mechanical Supervision to obtain paint chip samples. If you have questions on how many samples to collect please contact safety personnel.
- 5.3 Coordinate with safety personnel to have samples processed and sent to the lab for analysis.
- 5.4 XRF Instruments will not be relied upon for negative results. Negative results must be confirmed by lab analysis.
- 5.5 Unless required by specific work, all lead-containing materials will be left undisturbed.
- 5.6 General Safe Work Practices
  - 5.6.1 Although personal and area air sampling analysis has been below the action level and the PEL some dust wipe samples have come back higher than the OSHA Construction Lead Standard of 200ug/ft<sup>2</sup>.
  - 5.6.2 Following safe work practices is essential to protecting employees, irrespective of dust sampling results.
    - Good housekeeping practices are a must!



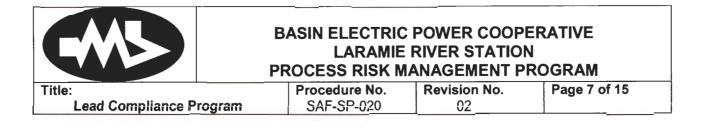
# BASIN ELECTRIC POWER COOPERATIVE LARAMIE RIVER STATION PROCESS RISK MANAGEMENT PROGRAM

	Procedure No.	Revision No.	Page 5 of 15
ad Compliance Program	SAF-SP-020	02	

- When sweeping use floor sweep to keep dust to a minimum.
- Wash down when and where able.
- Use a damp cloth or spray bottle of soapy water/towel to clean off areas you are going to be working on.
- Use HEPA vacuums on very dusty areas that cannot be washed down.
- Wash your hands and face before you eat, drink, smoke, or apply lip balms or cosmetics.
- Wear your PPE!
  - Respirators in dusty areas or if you are going to be creating/ disturbing dust.
  - Disposable coveralls, gloves etc. are in the free issue rooms and may be used anytime an employee wishes to protect their company furnished FR clothing.
  - o Gloves
- 5.7 For all work on lead containing material (OSHA 1910.1025 and OSHA 1926.62) the following procedures will be followed to prevent airborne lead dust.
  - 5.7.1 Mechanical removal (grinding, brushing, etc.) will not be used to remove lead-containing paint unless used with a dust shroud connected to a HEPA vacuum system.
  - 5.7.2 Chemical paint removers can be used to remove lead-containing paint.
  - 5.7.3 When removing lead based paint/coatings with chemical removers:
    - VOC (volatile organic compound) cartridges and full-face respirators are recommended during chemical removal processes. As are rubber gloves.
    - All materials used in the clean-up must be accounted for and disposed of appropriately.
    - Contaminated tools that cannot be cleaned need to be disposed of appropriately.
    - Clean-up must be a thought-out process that prevents the accumulation of leadcontaminated liquids.



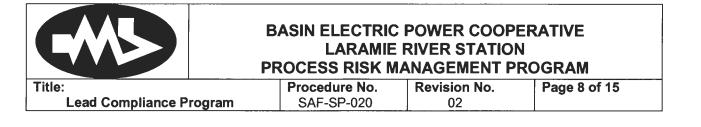
- Contaminated rags and tools should be placed in a sealed container and stored in the hazardous waste disposal building and brought to the attention of the Environmental Coordinator who will determine proper disposal methods based on applicable regulations and lab analysis requirements.
- 5.7.4 Removal of lead based paint/coatings will take place:
  - Where welding is to be done;
  - In areas that need to be cut, either with a torch or a saw.
  - Areas that may be exposed to abrasion due to installation area or techniques.
- 5.8 Controls to be followed during all work (OSHA 1910.1025 and OSHA 1926.62)
  - 5.8.1 If known lead containing materials are to be disturbed, the coordinator of the work will be given a copy of the regulations and its requirements, the lead program will be explained and the contractor will document receipt of the information.
  - 5.8.2 Contractors that awarded contracts for removal of lead containing materials shall be required to demonstrate or verify the following:
    - Complete familiarity with all regulatory rules and regulations.
    - Provide verification of current certification, licensing or previous experience references.
    - Provide all current monitoring and medical procedures including respirators, air filters, negative air machines, hygiene, etc.
    - Provide a list of qualified, trained employees.
    - Provide certified copies of insurance, bonding and indemnification.
  - 5.8.3 Contractors shall follow all rules and regulations as outlined in OSHA 1910.1025 and/or 1926.62
  - 5.8.4 The purchase, use or introduction of new lead-containing products with lead content over 600 ppm will take place only under special conditions, such as emergency or lack of replacement materials.
    - Selection of lead containing products shall require the approval of the Plant Manager or his representative.
  - 5.8.5 When work is required on lead containing materials that following process shall be followed:



- WR identified as "lead containing" submitted and prioritized.
- Select a trained work crew (PIMMs) or determine if work will be contracted out.
- Place warning barricade tape and signs around area perimeter.
- Signs shall be posted in lead work areas that state:

#### 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.

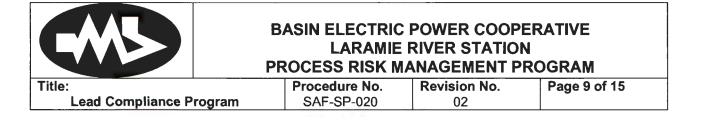
- Set up barriers/containment systems as necessary for work being conducted to prevent airborne dust and minimize exposure to other workers/areas.
- Respirators will be worn within the boundary established.
- Initiate air-monitoring as required by 1926.62
- Communicate area, length of project, and potential hazards to employees.
- Review all work procedures with crew doing work prior to start of work.
- Commence work project using all established controls and procedures.
- Once work is completed and prior to dismantling barriers/containments (if constructed) or removing barricade tape conduct post-wipe sampling.
- Once results have been obtained project may be completed. This includes any reporting that needs to be done, final area clean up and disposal and a final walk through of the area with sign off required from trained LRS Maintenance Supervision and/or Planner/Scheduler, Field Coordinators and Safety department personnel.
- Complete all documentation including monitoring records.
- 5.9 Exposure Monitoring
  - 5.9.1 The following program is established for monitoring the environment of all activities for LRS employees that may cause lead exposure. The monitoring shall include:



- Initial monitoring has been conducted to establish a base line record of airborne quantities of lead and an initial determination has been made that no employee is exposed to airborne concentrations of lead at or above the action level during normal operating processes.
- Additional monitoring will take place if there are production or process changes which could result in new or additional exposure to lead.
- LRS will continue to periodically measure routine work process at the plant to ensure that there is no change in the employee exposure limits.
- Air monitoring will take place during lead containing materials repair or abatement work as required by OSHA regulations.
- LRS will make results from monitoring available to all employees. Results will be posted in each affected area.
- LRS will notify each affected employee of the results of air monitoring within 5 working days after the receipt of the results.
- If results indicate that exposure exceeds the permissible exposure limit, the employer shall 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.

## 5.10 Personal Protective Equipment

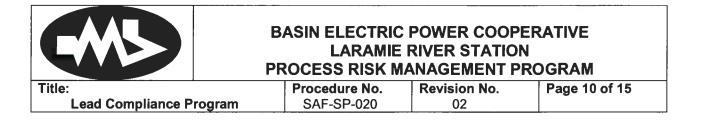
- 5.10.1 Respiratory Protection.
  - Respirators must be used during:
    - Periods when an employee's exposure to lead exceeds the PEL.
    - Work operations for which engineering and work-practice controls are not sufficient to reduce employee exposures to or below the PEL.
    - Periods when respirators are required to provide interim protection of employees while they perform work during exposure assessment testing, as required by 1926.62 paragraph (d)(2)
    - Work in any area that is posted as a respirator required area.
  - Respirators shall be provided anytime an employee requests to wear a respirator.



- Implementation of a respiratory protection program is required if employees are required to wear respirators. See SAF-EPB-006 LRS' written Respiratory Protection Program.
- Both full and ½ face respirators are available. HEPA filters shall be provided.
- Air supplied respirators or Powered air-purifying respirators will be worn anytime engineering and work practice controls cannot reduce the employee exposure to less than 2500ug/m<sup>3</sup>.

5.10.2 Protective Work Clothing and Equipment

- If an employee is exposed to lead above the PEL or if exposure is unknown, disposable coveralls, hats, gloves, shoes or disposable shoe covers will be provided.
- Employees must decontaminate prior to leaving the work area so as not to expose other employees to this hazard.
  - An example of this would be to remove disposable coveralls and place them in a lead waste bag prior to leaving the work area. The bag can then be placed in the lead disposal container located in Unit 1 Maintenance Shop.
  - Disposable coveralls, gloves etc. are in the free issue rooms and may be used anytime an employee wishes to protect their company furnished FR clothing.
  - Removal of lead from protective clothing or equipment by blowing, shaking, or any other means which disperses lead into the air is strictly prohibited.
  - Any time an employee works in an area that is exposed to lead at any concentration they must wash their hands and face prior to eating, drinking, smoking, or applying cosmetics.
- 5.11 Housekeeping practices when exposure limits are above the PEL
  - All surfaces shall be maintained as free as practicable of accumulations of dust.
  - Clean up of floors and other surfaces where lead accumulates shall, wherever possible, be by vacuuming or other methods that minimize the likelihood of lead becoming airborne.



- Shoveling, dry sweeping and brushing may be used only where vacuuming, wet sweeping or other equally effective methods have been tried and found not to be effective.
- Where vacuuming methods are selected, the vacuums shall be equipped with HEPA filters and used and emptied in a manner which minimizes the re-entry of lead into the workplace.
- Compressed air shall not be used to remove lead from any surface unless the compressed air is used in conjunction with a ventilation system designed to capture the airborne dust created by the compressed air.
- 5.12 Hygiene facilities and practices where employees are exposed to lead above the PEL
  - 5.12.1 The employer shall assure that in areas where employees are exposed to lead above the PEL food and/or beverages are not present or consumed, tobacco products are not present or used, and cosmetics/lip balms are not applied.
  - 5.12.2 Change areas and laundry:
    - The employer shall provide clean change areas for employees whose airborne exposure to lead is above the PEL.
    - The employer shall assure that change areas are equipped with separate storage facilities for protective work clothing and equipment and for street clothes which prevent cross-contamination.
    - The employer shall assure that employees do not leave the workplace wearing any protective clothing or equipment that is required to be worn during work within the area above the PEL.
    - The employer shall assure that contaminated protective clothing which is to be cleaned, laundered, or disposed of, is placed in closed containers in the change-room which prevents dispersion of lead outside the container.
    - The employer shall inform in writing any person who cleans or launders protective clothing of the potentially harmful effects of exposure to lead.
    - The employer shall assure that the containers of contaminated protective clothing and equipment are labeled as follows:

#### 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.



## BASIN ELECTRIC POWER COOPERATIVE LARAMIE RIVER STATION PROCESS RISK MANAGEMENT PROGRAM

Page 11 of 15

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

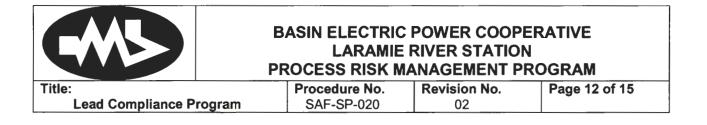
02

# 5.12.3 Showers

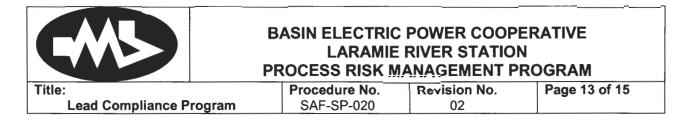
- The employer shall provide shower facilities, where feasible, for use by employees whose airborne exposure to lead is above the PEL.
- The employer shall assure, where shower facilities are available, that employees shower at the end of the work shift and shall provide an adequate supply of cleansing agents and towels for use by affected employees.
- 5.12.4 Eating Facilities
  - The employer shall provide lunchroom facilities or eating areas for employees whose airborne exposure to lead is above the PEL.
  - The employer shall assure that lunchroom facilities or eating areas are as free as practicable from lead contamination and are readily accessible to employees.
  - The employer shall assure that employees whose airborne exposure to lead is above the PEL wash their hands and face prior to eating, drinking, smoking or applying cosmetics/lip balms.
  - The employer shall assure that employees do not enter lunchroom facilities or eating areas with protective work clothing or equipment unless surface lead dust has been removed by vacuuming, downdraft booth, or other cleaning methods that limits dispersion of lead dust.
- 5.12.5 Hand Washing Facilities
  - The employer shall provide adequate hand washing facilities for use by employees.
  - If showers are not provided the employer shall assure that employees wash their hands and face at the end of the work-shift.

#### 5.13 Medical Surveillance

- 5.13.1 The employer shall make available initial medical surveillance to employees occupationally exposed on any day to lead at or above the action level.
- 5.13.2 The employer shall institute a medical surveillance program for all employees who are or may be exposed by the employer at or above the action level for more than 30 days in any consecutive 12 months.



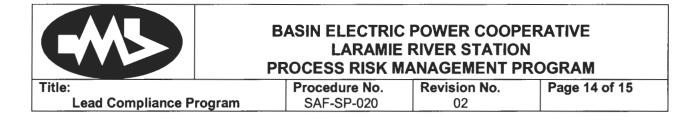
- 5.13.3 The employer shall assure that all medical examinations and procedures are performed by or under the supervision of a licensed physician.
- 5.13.4 The employer shall make available the required medical surveillance without cost to employees and at a reasonable time and place.
- 5.13.5 DGC Medical staff will notify, in writing, any employee whose blood lead is at or above 40ug/dl.
  - The employee may designate a second physician to review any findings, determinations or recommendations of the initial physician and to conduct such examinations, and laboratory tests as the second physician deems necessary to facilitate this review.
  - The employer will notify employees of the right to seek a second medical opinion.
  - The secondary medical review shall be conducted within 15 days after receipt of the initial physician's written opinion.
- 5.13.6 Any employee who exceeds this 50ug/dl will be temporarily removed from the job task that involves lead.
- 5.13.7 Blood lead tests will be conducted monthly until lead levels drop below 40ug/dl.
- 5.13.8 The employee will be allowed back to his normal work activities once his levels drop to 40ug/dl.
- 5.13.9 When an employee returns from temporary medical removal, blood lead level tests will be conducted annually.
  - All medical records will be kept by DGC, according to OSHA recordkeeping requirement.
- NOTE: In addition to the items listed above, all elements of 1926.62 and/or 1910.1025 paragraphs j and k regarding Medical Surveillance and Medical Removal shall be followed as required.
- 5.14 Disposal
  - 5.14.1 Small amounts of lead contaminated materials shall be disposed of in lead waste bags (available from the warehouse) and then in the approved lead disposal unit located in Unit 1 Maintenance Shop.



- 5.14.2 Disposal bags are available for any lead waste products and are located in the warehouse.
- 5.14.3 This includes waste from chemical paint removers.
- 5.14.4 For large amounts of lead contaminated waste that will not fit into the lead disposal unit in the Unit 1 Maintenance Shop, arrangements should be made through the Environmental Coordinator prior to commencing the job.
- 5.14.5 Dispose of lead contaminated wash water in accordance with all applicable local, state and/or federal regulations. Coordinate the efforts with the Environmental Coordinator.

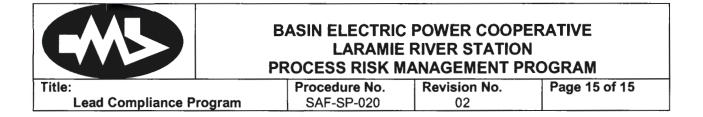
## 6.0 **TRAINING:**

- 6.1 Each employer who has a workplace in which there is a potential exposure to airborne lead at any level shall inform employees of the content of Appendices A and B of OSHA 1910.1025. (see attachments)
- 6.2 The employer shall train each employee who is subject to exposure to lead at or above the action level in accordance with the OSHA requirements. The employer shall ensure employee participation in the training program.
- 6.3 Training shall be repeated at least annually.
- 6.4 The employer shall assure that each employee is informed of the following:
  - 6.4.1 The content of the OSHA standards and Appendices;
  - 6.4.2 The specific nature of the operations which could result in exposure to lead above the action level;
  - 6.4.3 The purpose, proper selection, fitting, use and limitations of respirators;
  - 6.4.4 The purpose and a description of the medical surveillarice program and the medical removal program including information concerning the adverse health effects associated with excessive exposure to lead.
  - 6.4.5 The engineering controls and work practices associated with the employee's job assignment.
  - 6.4.6 Copies of the OSHA standard and Appendices will be made readily available to all affected employees.



## 7.0 **RECORDKEEPING:**

- 7.1 OSHA 1910.1025 requires that employer establish and maintain an accurate record of all monitoring. This record shall include:
  - 7.1.1 The date, 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.
  - 7.1.2 A description of the sampling and analytical methods used and evidence of their accuracy;
  - 7.1.3 The type of respiratory protection device worn, if any;
  - 7.1.4 Name, social security number, and job classification of the employee monitored and of all other employees whose exposure the measurement is intended to represent.
  - 7.1.5 The environmental variables that could affect the measurement of employee exposure, if any.
  - 7.1.6 The employer shall maintain these monitoring records in accordance with BEPC's record retention schedule.
- 7.2 A lead inventory list shall be maintained in Altien.
- 7.3 Employee training documentation will be kept in the employees training file.
- 7.4 All contract work done on lead containing materials (whether abatement or repair) needs to have all pertinent information filed with the contract. This includes insurance, indemnification records, employee training records, monitoring, etc.
- 7.5 All regular and abatement project monitoring records must be delivered to the Safety Department to be maintained in Altien.
- 7.6 All lead containing removal project reports, shipping bills of lading and all other documentation associated with disposal shall be delivered to the Environmental Coordinator and/or Safety and Training Supervisor and will be maintained in Altien.



## 8.0 ATTACHMENTS/LINKS:

- 8.1 Attachment 1: 1910.1025 Appendix A Substance data sheet for occupational exposure to lead
- 8.2 Attachment 2: 1910.1025 Appendix B Employee Standard Summary
- 8.3 Attachment 3: 1910.1025 Appendix C Medical Surveillance Guidelines
- 8.4 Attachment 4: 1910.1025 Appendix D Qualitative Fit Test Protocols

#### 9.0 **REFERENCES:**

- 9.1 OSHA 29 CFR 1910.1025 Lead Standard
- 9.2 OSHA 29 CFR 1926.62 Lead Standard

Approved By:	Reena MCCOY Reena McCoy (Mar 6, 2020)	Date:	Mar 6, 2020	
Approved By:	Troy Luceten	Date:	Mar 5, 2020	