	Southern Heat Exchanger Services Safety Program	Section:	3
		Initial Issue Date	3/11/09
LEAD SAFETY PROGRAM		Revision Date:	Initial Version
		Revision No.	0
		Page:	Page 1 of 5

Purpose

The purpose of this procedure is to identify the controls and actions necessary to prevent adverse health effects to employees from occupational exposure to lead, and to ensure that SHECO Services lead exposure management practices meet regulatory requirements.

Scope

This procedure applies to SHECO Services operations where employees may be exposed to lead while working with lead containing materials during routine maintenance or emergency situations. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Company employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.


Responsibilities

Managers and Supervisors

- In coordination with the HSE Manager, develop and implement written project/task specific lead exposure management procedures prior to the start of activities to reduce exposure to or below the permissible limits.
- Ensure personnel are aware of work that has the potential of exposure to lead.
- Ensure individuals responsible for monitoring areas of exposure are properly trained.
- Ensure personnel receive documented medical surveillance.
- Ensure that all affected employees receive initial and annual lead management training.
- Inform the HSE Manager of upcoming work involving lead-containing materials, allowing the HSE Manager to provide any necessary monitoring.
- Ensure employees have the appropriate personal protective equipment (PPE) and are properly trained in its use and care, including respiratory protection, full body disposable clothing and gloves, when the Action Level is expected to be met or exceeded.
- Ensure employees comply with the lead exposure management procedure.

HSE Manager shall:

- Coordinate air sampling and monitoring activities, ensuring monitoring equipment is in proper working order and, as necessary, modifying the lead exposure management procedures to reflect exposure monitoring data.
- Maintain the lead exposure management procedure, notifying management of any regulatory changes and ensuring compliance with federal and state requirements.
- Coordinate initial and annual refresher training activities.
- Coordinate the medical surveillance program for employees exposed to lead above the Action Level for more than 30 days per year.

	Southern Heat Exchanger Services Safety Program	Section:	3
		Initial Issue Date	3/11/09
LEAD SAFETY PROGRAM		Revision Date:	Initial Version
		Revision No.	0
		Page:	Page 2 of 5

- Coordinate waste management and disposal activities; ensuring waste with lead containing materials is disposed of only at an approved facility.

Affected Employees shall:

- Comply with the lead exposure management procedure, consulting with the supervisor or HSE Manager to ensure the proper PPE is used when required.
- Comply with the medical surveillance program.
- Attend initial and annual refresher training.
- Wear respiratory protection equipment and other specified PPE as required by the project/task specific control program.
- Maintain respiratory protection equipment in good working order, notifying the supervisor or HSE Manager of any problems prior to starting work.
- Review material safety data sheets or consult with the supervisor to identify any container with lead-containing material.
- Leave the work area to wash if skin irritation is noted or if PPE has been compromised.

Procedure

Written Compliance Program


- Each worksite shall develop and implement written project/task specific lead exposure management procedures prior to the start of activities to reduce exposure to or below the permissible limits if exposure is possible.
- The procedure shall include engineering controls, work practices, PPE, air sampling, a description of each lead related task and all employees shall be trained prior to work beginning.
- The compliance program shall be revised and updated annually.

Permissible Exposure Limits

- Per OSHA regulation, employees shall not be exposed to greater than 50 micrograms per cubic meter of air (50 µg/m³), time-weighted average, during an 8-hour workday. This permissible exposure limit (PEL) includes the use of respiratory protection. If an employee is exposed more than 8 hours in any one workday, the maximum PEL (µg/m³) shall be calculated by using the following formula:
- 400/hours worked in the day
- For example: 400/12 hours = 33.33 µg/m³
- If respirators are used to supplement engineering and/or work practice controls, the respirator's protection factor may be used to determine compliance with the PEL.

Exposure (Air) Monitoring

- Exposure is defined in this section to be any employee who is not wearing a respirator to meet the Action Level and monitoring requirements in this section
- Initial air samples shall be representative of the employee's regular, daily activities.
- Initial sampling results:

	Southern Heat Exchanger Services Safety Program	Section:	3
		Initial Issue Date	3/11/09
LEAD SAFETY PROGRAM		Revision Date:	Initial Version
		Revision No.	0
		Page:	Page 3 of 5

- If the initial monitoring is less than the Action Level, monitoring need not be repeated unless there has been a production, process, control, or personnel change which may result in new or additional exposure to lead
- If the initial determination or subsequent monitoring reveals employee exposure to be at or above the Action Level but below the PEL, monitoring must be performed at least every six (6) months, with the cycle continuing until two (2) samples taken at least seven (7) days apart are below the action level
- If the initial determination exceeds the PEL, monitoring will be performed quarterly until two (2) samples taken at least seven (7) days apart are below the PEL but above the Action Level, and the monitoring frequency described above will be used
- Within 15 working days after the receipt of the results of any monitoring SHECO Services shall notify each affected employee of these results either individually in writing or by posting the results in an appropriate location that is accessible to affected employees.
- Whenever the results indicate that the exposure, without regard to respirators, exceeds the permissible exposure limit, SHECO Services 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.

Control Measures

Engineering Controls


- If an employee is exposed to lead above the PEL for 30 or more days in a year, engineering controls, including administrative controls, will be implemented to reduce the exposure
- Respiratory protection will be used if engineering and administrative controls are not effective in reducing the exposure to or below the PEL
- If air is re-circulated back into the workplace, the system must be equipped with a HEPA (high efficiency particulate air) and backup filter, and a system to monitor the lead level will be installed
- When using mechanical means to remove lead-containing paints or coatings, use equipment which is equipped with a HEPA collection system
- Whenever possible, use a wet system to reduce airborne dust
- Whenever possible, substitute lead material with non-lead material

Administrative Controls

- Administrative controls will include job rotation schedules to reduce employee PEL exposure.
- When exposure to lead is at or above the PEL SHECO Services shall provide lunch rooms, changing, shower and hygiene facilities.
- Restricted access signs will demarcate the lead exposure work areas. The signs will read as follows:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

Personal Protective Equipment

	Southern Heat Exchanger Services Safety Program	Section:	3
		Initial Issue Date	3/11/09
LEAD SAFETY PROGRAM		Revision Date:	Initial Version
		Revision No.	0
		Page:	Page 4 of 5

- Respirators shall be used during the time period required to install or implement control if engineering and work practices are insufficient as well as for emergency use.
- PPE will be selected on the basis of its ability to prevent absorption, inhalation and ingestion and will be provided to employees at no cost.
- PPE will reflect the needs of the employee based on work conditions, amount and duration of exposure and other known environmental factors.
- If respirators are required, they will be NIOSH certified and all employees will follow the SHECO Services Respiratory Protection Program.
- Gloves, hats, vented goggles, shoes or disposable shoe covers shall be provided. Protective clothing shall be clean and dry. Protective clothing shall be cleaned, laundered, repair and replaced as necessary and disposable clothing shall be identified and handled properly.

Medical Surveillance


- Employees who are or may be exposed above the Action Level for more than 30 days per year will be included in a medical surveillance program which is performed by or under the supervision of a licensed physician at no cost to the employee.
- A baseline blood sample shall be obtained prior to any lead exposure.
- Blood sampling will occur at least every 6 months to each affected employee until two consecutive blood samples and analysis are acceptable.
- Employees shall be notified in writing within 5 days of blood sampling results.
- Blood sampling shall occur on a monthly during a removal period of each employee removed from exposure to lead due to an elevated blood lead level.
- Whenever the results of a blood lead level test indicate that an employee's blood lead level exceeds the level for medical removal SHECO Services shall provide a second (follow-up) blood sampling test within two weeks after the employer receives the results of the first blood sampling test.

Medical Removal

- Employees will be removed from exposure to lead when an exposure meets or exceeds the Action Level on each occasion that a periodic and follow-up blood sampling test indicates that blood lead level is at or above 60 µg/100 g of whole blood
- An employee will be removed from exposure to lead when the average of the last three (3) blood sampling tests indicates the employee's blood level is at or above 50 µg/100 g of whole blood (the employee need not be removed if the last blood sampling test shows blood lead level to be at or below 40 µg/100 g of whole blood)
- If the employee's blood lead level does not decline adequately with 18 months of removal, the employee will be offered a medical examination to determine if the employee may be returned to his or her former job status.

Recordkeeping

- Medical surveillance records shall be maintained for 30 years after termination of employment.
- Exposure monitoring records shall be maintained for 30 years after completion of the project.

	Southern Heat Exchanger Services Safety Program	Section:	3
		Initial Issue Date	3/11/09
LEAD SAFETY PROGRAM		Revision Date:	Initial Version
		Revision No.	0
		Page:	Page 5 of 5

- Exposure and medical monitoring records shall be made available to affected employees or their representatives and to regulatory agencies upon request.

Training

Training shall be provided to employees who have the potential to exposure of lead prior to the time of initial assignment and annually thereafter. Training will include the following:

- Distribute a copy of the content of the lead standard and its appendices and it's readily availability
- Content of any compliance plan in effect
- Access to information and training records
- Specific operations where lead exposure is above the action level
- Engineering controls and work practices associated with the job
- Purpose, proper selection, fitting, use, and limitations of respirators
- Purpose of the medical surveillance program, which will include potential health effects and medical removal program
- 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;

Training records shall be provided upon request all materials relating to the employee information and training program to regulatory agencies.