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| <b>CH2M HILL Hanford Group, Inc.</b> | <b>Manual</b>         | <b>ESHQ</b>                      |
| <b>LEAD CONTROL PROGRAM</b>          | <b>Document</b>       | <b>TFC-ESHQ-IH-STD-08, REV B</b> |
|                                      | <b>Page</b>           | <b>1 of 14</b>                   |
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[Ownership matrix](#)

**TABLE OF CONTENTS**

|      |   |    |
|------|---|----|
| 1.0  | PURPOSE AND SCOPE .....                           | 2  |
| 2.0  | IMPLEMENTATION .....                              | 2  |
| 3.0  | STANDARD .....                                    | 2  |
| 3.1  | General Requirements and Hazard Information ..... | 2  |
| 3.2  | Exposure Assessment.....                          | 3  |
| 3.3  | Methods of Compliance.....                        | 6  |
| 3.4  | Respiratory Protection .....                      | 7  |
| 3.5  | Protective Work Clothing and Equipment.....       | 8  |
| 3.6  | Housekeeping.....                                 | 9  |
| 3.7  | Hygiene Facilities and Practices .....            | 9  |
| 3.8  | Medical Surveillance. ....                        | 10 |
| 3.9  | Medical Removal Protection.....                   | 11 |
| 3.10 | Information and Training.....                     | 11 |
| 3.11 | Signs .....                                       | 13 |
| 3.12 | Recordkeeping .....                               | 13 |
| 3.13 | Observation of Monitoring .....                   | 13 |
| 4.0  | DEFINITIONS .....                                 | 13 |
| 5.0  | SOURCES.....                                      | 14 |
| 5.1  | Requirements .....                                | 14 |
| 5.2  | References.....                                   | 14 |

**TABLE OF TABLES**

|          |  |    |
|----------|--|----|
| Table 1. | Activities That Require Respiratory Protection as an Interim Protective Measure <sup>1</sup> ..... | 8  |
| Table 2. | Lead Training Requirements.....  | 12 |

## 1.0 PURPOSE AND SCOPE

(5.1.1, 5.1.4, 5.1.5)

This Lead Control Program is based on requirements of the OSHA standards 29 CFR 1910.1025, "Lead" for general industry operations and 29 CFR 1926.62, "Lead" for construction projects and serves as the required written compliance program. Compliance with these standards is required by 10 CFR 851 "Worker Safety and Health Program." This program provides the requirements to identify, evaluate, and control lead hazards, achieve regulatory compliance, and ensure worker protection against lead exposure. This program is to be followed by the Tank Farm Contractor (TFC) and TFC subcontractors and represents the standardized approach for compliance with regulatory requirements for lead. The TFC strives to limit employee lead exposures to less than the action level without the use of respiratory protection.

The Lead Control Program applies to all TFC managed facilities and/or operations where work activities may result in employee or subcontractor exposure to inorganic lead or lead containing materials.

## 2.0 IMPLEMENTATION

This standard is effective in accordance with the date shown in the header.

## 3.0 STANDARD

### 3.1 General Requirements and Hazard Information

When present in air as a dust, fume or mist, lead can be inhaled and absorbed through the lungs and upper respiratory tract. Lead exposure, both acute and chronic, can adversely affect numerous body systems. An acute lead exposure can cause acute encephalopathy. Chronic lead exposures can affect the blood forming systems, the central nervous system and both men's and women's reproductive systems.

This program focuses on managing airborne levels of lead dusts, fumes and mists. While the primary lead exposure concerns are with lead shielding, renovation and demolition of facilities with lead-containing coating, other tasks may involve lead hazards. Other tasks could include repair and maintenance of existing plumbing and other lead sources or uses of lead. The OSHA lead standards have been compared and the most conservative standard (i.e., construction versus general industry) for each segment (e.g., training) of the lead program is used.

Identifying lead-containing coatings or other lead-containing material shall be incorporated into the work hazard analysis program in accordance with [TFC-ESHQ-S SAF-C-02](#). When lead is identified, work shall be done in accordance with the requirements of this program and the work control instructions shall direct the work in accordance with [TFC-OPS-MAINT-C-01](#).

#### 3.1.1 Permissible Exposure Limit (PEL)

Employees shall not be exposed to concentrations greater than 50 ug/m<sup>3</sup> of lead in air averaged over an 8-hour period. When exposures are expected to be greater than 50 ug/m<sup>3</sup> of lead in air averaged over an 8-hour period, appropriate respiratory protection is required.

For exposure to lead for more than 8 hours in any workday, the PEL as a time-weighted average (TWA) for that day shall be reduced according to the following formula:

Maximum Permissible Limit ( $\text{ug}/\text{m}^3$ ) =  $400 \text{ ug}/\text{m}^3$  / hours worked in the day.

When respirators are used to limit employee exposure as a supplement to required engineering and work practice controls, the employee exposure 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.

### 3.1.2 Action Level

The action level is the level at which Industrial Hygiene must begin certain compliance activities. The action level, regardless of respirator use, is an airborne concentration of  $30 \text{ ug}/\text{m}^3$  of lead calculated as an 8-hour TWA.

## 3.2 Exposure Assessment

Prior to starting any work that disturbs lead-containing coatings an exposure assessment of the risks involved with the work shall be performed in accordance with [TFC-PLN-34](#). This includes work tasks such as penetrations through lead-containing coatings, removal of lead-containing material and use of lead-containing products.

### 3.2.1 Initial Determination

Industrial Hygiene shall initially determine if any employee may be exposed to lead at or above the action level. The initial determination shall be based on the employee exposure monitoring results and any of the following relevant considerations:

- Any information, observations, or calculations which would indicate employee exposure to lead;
- Any previous measurements of airborne lead; and
- Any employee complaints of symptoms which may be attributable to exposure to lead.

Monitoring for the initial determination where performed may be limited to a representative sample of the exposed employees who reasonably may be exposed to the greatest airborne concentrations of lead in the workplace. Earlier monitoring results can be used to satisfy the initial determination requirement if previous monitoring for lead exposures has been done within the past 12 months during work operations conducted under workplace conditions closely resembling the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the current operations.

Where Industrial Hygiene has objective data demonstrating that a particular product or material containing lead or a specific process, operation, or activity involving lead cannot result in employee exposure to lead at or above the action level during processing, use, or handling, such data may be relied upon instead of implementing initial monitoring. Objective data can be obtained from an industry-wide study or from laboratory product test results from manufacturers of lead containing products or materials. The data from an industry-wide survey must be obtained under workplace conditions closely resembling the processes, types of material, control methods, work practices, and environmental conditions in the current operations. Industrial Hygiene shall establish and maintain, for at least 30 years, an accurate record documenting the nature and relevancy of the objective data relied upon. Objective data is not permitted to be

used for exposure assessment in connection with determining appropriate protection of employees during the assessment of exposure of listed tasks in section 3.2.4.

### 3.2.2 Negative Initial Determination

If the initial determination is made that no employee is exposed to airborne concentrations of lead at or above the action level Industrial Hygiene shall make a written record of the determination. The record shall, at a minimum, include:

- Employee exposure monitoring results;
- Any information, observations, or calculations which would indicate employee exposure to lead;
- Any previous measurements of airborne lead;
- Any employee complaints of symptoms which may be attributable to exposure to lead;
- The information from the date of determination;
- Location within the worksite, and
- The name and unique identifier for each employee monitored.

For negative initial determinations, it isn't necessary to repeat further exposure determinations, except if there has been a change. Whenever there has been a change of equipment, process, control, personnel, or a new task has been initiated that may result in additional employees being exposed at or above the action level or the PEL, additional exposure assessment monitoring shall be performed.

### 3.2.3 Positive Initial Determination

If the initial determination shows the possibility of any employee exposure at or above the action level, then monitoring which is representative of the exposure for each employee in the workplace who is exposed to lead shall be conducted. Monitoring from the previous 12 months can be used to satisfy this requirement if conditions closely resemble the current operations as stated earlier.

Where initial employee exposure monitoring measures airborne lead at or above the action level but at or below the PEL, regardless of respirator use, personal air sampling shall be performed at least every 6 months. Samples must be representative of a full work shift, including at least one sample for each shift or for the shift with the highest exposure level for each job classification in each work area, shall be collected. Samples shall be representative of the monitored employee's regular, daily exposure to lead. Monitoring shall continue at the required frequency until at least two consecutive measurements, taken at least 7 days apart, are below the action level at which time monitoring for that employee can be discontinued except if there is a change of equipment, process, control, or a new task has been initiated that may result in exposures at or above the action level or PEL.

Where the initial determination reveals that employee exposure is above the PEL, regardless of respirator use, monitoring shall be performed quarterly. Samples must be representative of a full work shift, including at least one sample for each shift or for the shift with the highest exposure level for each job classification in each work area, shall be collected. Samples shall be representative of the monitored employee's regular, daily exposure to lead. Monitoring shall continue at the required frequency until at least two consecutive measurements, taken at least 7 days apart, are at or below the PEL but at or above the action level at which time monitoring for that employee shall be changed to at least every 6 months (as described earlier).

### 3.2.4 Protection of Employees during Assessment of Exposure

Until an exposure assessment is performed and documented that the employee performing any of the listed tasks is not exposed above the PEL, supervision must treat employees as if they were exposed above the PEL while performing the listed lead related tasks, where lead is present. This means providing interim protection including appropriate respiratory protection, protective work clothing and equipment, change areas, hand washing facilities, biological monitoring, and training.

The tasks to be initially considered having exposure greater than the PEL include:

- Where leadcontaining coatings or paint are present:
  - Manual demolition of structures (e.g., dry wall), manual scraping, manual sanding, heat gun applications, and power tool cleaning with dust collection systems;
  - Spray painting with lead paint
  - Any tasks where the employer has any reason to believe exposure could be in excess of the PEL.

The tasks to be initially considered having exposure greater than the 10 times the PEL include:

- Where leadcontaining coatings or paint are present:
  - Rivet busting; power tool cleaning without dust collection systems; cleanup activities where dry expendable abrasives are used; and abrasive blasting enclosure movement and removal.
  - Using lead-containing mortar.
  - Lead burning.

The tasks to be initially considered having exposure greater than the 50 times the PEL include:

- Where leadcontaining coatings or paint are present:
  - Abrasive blasting,
  - Welding,
  - Cutting, and
  - Torch burning.

### 3.2.5 Employee Notification

Employee notification must be made as soon as possible but no later than 5 working days after the receipt of the results of any monitoring performed. Each affected employee must be notified either individually in writing or by posting the results in an appropriate location that is accessible to employees. Whenever the results indicate that the representative employee exposure, without regard to respirators, is at or above the PEL then the written notice shall include a statement that the employees exposure was at or above that level and a description of the corrective action taken or to be taken to reduce exposure to below that level.

### 3.2.6 Accuracy of Measurement

All exposure sampling and analytical methods must have an accuracy (confidence level of 95%) of not less than plus or minus 20% for airborne concentrations of lead equal to or greater than 30 ug/m<sup>3</sup>.

## 3.3 Methods of Compliance

### 3.3.1 Engineering and Work Practice Controls

Engineering and work practice controls shall be implemented, including administrative controls, to reduce and maintain employee exposure to lead to or below the PEL to the extent that such controls are feasible. Wherever all feasible engineering and work practice controls that can be instituted are not sufficient to reduce employee exposure to or below the PEL, they shall nonetheless be implemented to reduce employee exposure to the lowest feasible level. Appropriate respirators shall be used to supplement engineering and work practice controls.

### 3.3.2 Compliance Program

This standard serves as the required written compliance program. Frequent and regular inspection of job sites, materials, and equipment shall be performed by a competent person. This program shall be available upon request to any affected employee or authorized employee representatives. This program shall be reviewed and revised at least annually to reflect the current status of the program.

A written plan for the compliance program is required prior to commencement of jobs where the PEL is or is likely to be exceeded including tasks listed in section 3.2.4. The plan shall include at least the following:

- A description of each activity in which lead is emitted (e.g., equipment used, material involved, controls in place, crew size, employee job responsibilities, operating procedures and maintenance practices);
- A description of the specific means that will be employed to achieve compliance and, where engineering controls are required engineering plans and studies used to determine methods selected for controlling exposure to lead;
- A report of the technology considered in meeting the PEL;
- Air monitoring data which documents the source of lead emissions;
- A detailed schedule for implementation of the compliance plan, including documentation (i.e., copies of purchase orders for equipment, construction contracts, etc...)
- A work practice program which includes protective work clothing and equipment, housekeeping, hygiene facilities and other relevant practices;
- An administrative control schedule, if applicable;
- A description of arrangements made among contractors on multi-contractor sites with respect to informing affected employees of potential exposure to lead and with respect to responsibilities for compliance with the standard
- Other relevant information.

### 3.3.3 Mechanical Ventilation

When ventilation is used to control lead exposure, the designated organization shall evaluate the mechanical performance of the system in controlling exposure as necessary to maintain its effectiveness.

### 3.3.4 Administrative Controls

Work planning and the job hazard analysis process will evaluate potential lead exposure and prescribe appropriate controls. Supervision shall ensure that employees follow good work practices. Job rotation shall not be used as a means of reducing exposure to lead.

## 3.4 Respiratory Protection

(5.1.3)

Appropriate respirators and HEPA cartridges are selected and provided when required in accordance with [TFC-ESHQ-S IH-C-05](#) which complies with 29 CFR 1910.134. Respirators must be used during:

- Periods when lead exposures exceed 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 an employee requests a respirator;
- Periods when respirators are required to provide interim protection of employees while they perform the operations specified in section 3.2.4.

Table 1 provides the minimum respiratory protection required as an interim protective measure. A full face piece respirator shall be used instead of half mask respirator for protection against lead aerosols that may cause eye or skin irritation at the use concentrations. PAPRs must be provided when an employee chooses to use such a respirator and it will provide adequate protection to the employee.

**Table 1. Activities That Require Respiratory Protection as an Interim Protective Measure<sup>1</sup>.**

| Activity   | Minimum Respiratory Protection Required <sup>2</sup>   |
|--|--|
| Lead containing coatings or paints - manual demolition (e.g., dry walls), manual scraping, manual sanding, heat gun applications, power tool cleaning with dust collection system.<br><br>Spray painting with lead paint.<br><br>Others with possibility of exposures at or above PEL. | Respirator with Protection Factor (PF) of at least 10, such as half face piece Air Purifying Respirator (APR).   |
| Using lead containing mortar or lead burning.<br><br>Lead containing coatings or paints - rivet busting, power tool cleaning without dust collection system, cleanup activities where dry expendable abrasives were used, movement/removal of enclosures used for abrasive blasting    | Respirator with PF of at least 25 such as hooded/helmeted powered air purifying respirator (PAPR); or with PF of 50 such as full face piece APR or tight fitting full face piece PAPR. |
| Abrasive blasting, welding, cutting, torch burning on surfaces with lead containing coatings, or paints <sup>3</sup> .   | Respirator with PF of at least 1,000 or appropriate supplied air respirator with tight fitting facepiece operated in pressure demand mode or other positive pressure mode.             |

<sup>1</sup>Other interim protective measures are also required for these activities including PPE, change areas, handwashing facilities, biological monitoring, and certain training. Such measures must remain in place until exposure assessment demonstrates that they may be eliminated or relaxed.

<sup>2</sup>All APRs and PAPRs must be fitted with HEPA filters. Note that Protection Factors assigned to respirators for lead exposure may be different than those assigned for radiological protection, the asbestos standard, and the ANSI respiratory protection standard (e.g., a full facepiece APR or PAPR has a PF of only 50 for lead). Also refer to Table 1, Respiratory Protection for Lead Aerosols in 29 CFR 1926.62.

<sup>3</sup>Also see 29 CFR 1926.353 and 1926.354, regarding requirements for welding, cutting, and heating of metals with lead-bearing materials.

### 3.5 Protective Work Clothing and Equipment

(5.1.2)

Appropriate protective work clothing and equipment that prevents contamination of the employee and their personal clothing will be provided where:

- Exposures are above the PEL, without regard to the use of respirators;
- There are exposures to lead compounds which may cause skin or eye irritation (e.g. lead arsenate, lead azide); and
- Tasks are performed requiring interim protection of employees.

Protective clothing and equipment include, but are not limited to:

- Coveralls or similar full-body work clothing;
- Gloves, hats, and shoes or disposable shoe coverlets; and
- Face shields, vented goggles, or other appropriate protective equipment in accordance with [TFC-ESHQ S-IS-C-02](#), which complies with 1910.133.

Required clean and dry protective clothing will be provided at least weekly and daily to employees whose exposure levels without regard to a respirator are over 200 ug/m<sup>3</sup> of lead as an 8-hour TWA. Supervision shall assure that all protective clothing is doffed at the completion of a work shift only in prescribed change areas and placed in a closed container in the prescribed change area which prevents dispersion of lead outside the container. The containers of lead contaminated clothing and equipment shall be 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.”

Cleaning, laundering and disposal of protective clothing and equipment shall be provided to employees. Replacements shall be provided as needed to maintain control effectiveness. It is prohibited to remove lead from protective clothing or equipment by blowing, shaking, or any other means which disperses lead into the air. Any person who cleans or launders protective clothing or equipment shall be informed by their employer about the potentially harmful effects of exposure to lead.

### 3.6 Housekeeping

All surfaces shall be maintained as free as practicable of accumulations of lead. Vacuuming or other methods that minimize the likelihood of lead becoming airborne shall be used wherever possible for cleaning of floors and other surfaces. 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. Vacuums shall be equipped with HEPA filters and used and emptied in a manner which minimizes the reentry 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.

### 3.7 Hygiene Facilities and Practices

In areas where employees are exposed to lead above the PEL without regard to the use of respirators, food or beverage shall not be present or consumed, tobacco products shall not be present or used, and cosmetics shall not be applied.

Clean change areas shall be provided for employees whose airborne exposure to lead is above the PEL, and as interim protection for employees performing tasks specified in section 3.2.4, without regard to the use of respirators. Change areas shall be equipped with separate storage facilities for protective work clothing and equipment and for street clothes which prevent cross-contamination. Supervision shall ensure that employees do not leave the workplace wearing any protective clothing or equipment that is required to be worn during the work shift.

Shower facilities shall be provided, where feasible, for use by employees whose exposure is above the PEL. Where shower facilities are available, supervision shall ensure 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.

Lunchroom facilities or eating areas for employees shall be provided for employees whose exposure is above the PEL, without regard to the use of respirators. The lunchroom facilities or eating areas shall be kept as free as practicable from lead contamination and shall be readily accessible to employees. Supervision shall ensure that employees whose exposure 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. Supervision shall ensure 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 method that limits dispersion of lead dust.

Adequate handwashing facilities for use by employees exposed to lead shall be provided in accordance with [TFC-ESHQ-S-STD-27](#) which complies with 29 CFR 1926.51(f). Where showers are not provided, supervision shall ensure that employees wash their hands and face at the end of the work-shift.

### 3.8 Medical Surveillance.

Supervision shall make available initial medical surveillance to employees occupationally exposed on any day to lead at or above the action level. This consists of biological monitoring in the form of blood sampling and/or analysis for lead and zinc protoporphyrin (ZPP) levels as deemed appropriate by medical. A medical surveillance program shall be instituted for all employees who are or may be exposed at or above the action level for more than 30 days in any consecutive 12 months. This medical surveillance shall be made available at least every 2 months for the first 6 months and every 6 months thereafter. For employees whose last blood sampling and analysis indicated a blood level at or above 40 micrograms per deciliters (ug/dl), surveillance shall be conducted at least every 2 months. This frequency shall continue until two consecutive blood samples and analyses indicate a blood lead level below 40 ug/dl. For each employee who is removed from exposure to lead due to an elevated blood lead level, surveillance shall be conducted at least monthly during the removal period.

Whenever the results of a blood lead level test indicate that an employee's blood lead level exceeds 50 ug/dl, the criterion for medical removal, a second blood sampling test shall be provided within 2 weeks after the supervisor receives the results of the first blood sampling test.

The medical exams and procedures shall be performed by or under the supervision of a licensed physician. The required medical surveillance including multiple physician review shall be made available without cost to employees and at a reasonable time and place.

Blood lead level sampling and analysis shall have an accuracy (to a confidence level of 95%) within plus or minus 15% or 6 ug/dl, whichever is greater, and shall be conducted by an OSHA approved laboratory.

Employees shall be notified in writing of their blood lead level within 5 working days after the receipt of biological monitoring results. A notification shall be made to each employee whose blood lead level exceeds 40 ug/dl that the standard requires temporary medical removal with Medical Removal Protection benefits when an employee's blood lead level exceeds 50 ug/dl.

Medical examinations and consultation shall be made available to each employee covered on the following schedule:

- At least annually for each employee with a blood lead level at or above 40 ug/dl from a test any time during the preceding 12 months;
- 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, that the employee is pregnant, or that the employee has demonstrated difficulty in breathing during a respirator fitting test or during use; and
- 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.

The content of the medical examination shall be compliant with 29 CFR 1926.62 and as determined by the Site Occupational Medicine Director (SOMD) and if requested by an employee, shall include pregnancy testing or laboratory evaluation of male fertility. An employee may designate a second physician review as identified in 29 CFR 1926.62.

Prophylactic chelation is prohibited.

### 3.9 Medical Removal Protection

Employees shall be removed from lead related operations that are at or above the action level each time:

- A periodic and follow-up blood sampling test indicates a blood lead level at or above 50 ug/dl, and
- A final medical determination indicates a detected medical condition that increases health risks from lead exposure.

Employees shall only be authorized to receive medical removal benefits and return to work in accordance with 29 CFR 1926.62.

### 3.10 Information and Training

(5.1.6)

Initial training shall be provided prior to the time of job assignment and at least annually for each employee who is subject to lead exposure at or above the action level on any day. Table 2 provides a summary of the training requirements. Information concerning lead hazards shall be communicated in accordance with [TFC-ESHQ S-IH-C-02](#). This includes, but is not limited to the requirements concerning warning signs and labels, material safety data sheets, and employee information and training.

Employees who are subject to any lead exposure, in accordance with 29 CFR 1910.1025, shall be informed on Appendix A and B or the standard. The lead briefing in the Tank Farm Orientation training fulfill this requirement and the following:

- The content of the substance data sheet for occupational exposure to lead including compounds covered, uses, PEL, action level and health hazard data,
- The content of the OSHA employee lead standard summary including requirements for meeting the PEL, performing exposure assessments and observation, methods of

compliance, respiratory protection, protective clothing and equipment, housekeeping, hygiene, medical surveillance and removal, training, signs, and recordkeeping.

Employees who are subject to lead exposure at or above the action level or who are subject to exposure to lead compounds which may cause skin or eye irritation shall attend "Lead Worker" training course #020150. In addition, a job specific briefing shall be conducted prior to the start of work covered by this section of the requirement. The course covers the required topics:

- The contents of the OSHA Lead Standard and its appendices;
- The specific nature of the operations that could result in exposure above the action level;
- The purpose, proper selection, fitting, use and limitations of assigned respiratory protective equipment;
- The purpose and description of the medical surveillance and medical removal programs including information concerning the adverse health effects associated with excessive lead exposure with particular attention to the adverse reproductive effects, hazards to the fetus and additional precaution for employees who are pregnant;
- Specific engineering controls and work practices associated with work assignments with a lead hazard;
- The contents of the lead compliance program or lead control work place in effect;
- Instruction on the dangers of prophylactic use of chelating agents and the requirement that they be administered only under the direction of a licensed physician if warranted;
- The employee's rights under 29 CFR 1910.1020, "Access to Employees Exposure and Medical Records."

**Table 2. Lead Training Requirements.**

| Circumstance  | Action  |
|---|---|
| 1. Potential exposure to lead at any level.                                 | Lead Hazard Communication Training comprised of information found in Appendices A and B of 29 CFR 1910.1025.                            |
| 2. Exposure at or above action level, or potential for skin/eye irritation. | Lead Worker Training prior to job assignment and annually.  |
| 3. As an interim protective measure for activities in section 3.2.4.        | Hazard Communication Training (29 CFR 1926.59), Respiratory Protection Training, General Construction Safety Training (29 CFR 1926.21). |
| 4. If respirators are used.   | Respiratory Protection Training (can be included in lead worker training).  |

Affected employees and their designated representatives shall have access to the OSHA lead standard and its appendices and all materials relating to information and training programs upon request.

### 3.11 Signs

The following warning sign shall be placed in each work area where an employee exposure to lead is above the PEL

WARNING  
LEAD WORK AREA  
POISON  
NO SMOKING OR EATING

Supervision shall ensure contradictory information does not appear on or near any sign. Supervision shall ensure that required signs are illuminated and cleaned as necessary to be readily visible.

### 3.12 Recordkeeping

All records shall be kept in accordance with requirements in 29 CFR 1926.62, 29 CFR 1926.33, 29 CFR 1910.1025 and 29 CFR 1910.1020. Exposure assessment and objective data records will be maintained in accordance with TFC-ESHQ-IH-STD-03 which complies with OSHA recordkeeping requirements. The SOMD shall maintain medical surveillance records for each employee. Accurate records will be maintained for each employee who experienced a medical removal. Upon request records shall be made available to affected employees, former employees, and their designated representatives for examination and copying. Transfer of records shall be conducted in accordance with 29 CFR 1926.62 and 29 CFR 1910.1020.

### 3.13 Observation of Monitoring

Affected employee or their designated representative shall have the opportunity to observe any monitoring of employee exposure to lead. Observers must comply with all safety and health procedures and shall be provided required protective clothing and equipment. Observers are entitled to receive an explanation for eh measurement procedures, observe all steps related to the monitoring performed at the place of exposure and record the result obtained or receive copies of the results when returned the laboratory.

## 4.0 DEFINITIONS

Action level. An employee exposure, without regard to the use of a respirator, to an airborne concentration of lead of 30 ug/m<sup>3</sup>, as calculated over an 8-hour time-weighted average.

Competent person. An individual who is capable of identifying existing and predictable lead hazards in the surroundings or working conditions and who has authorization to take prompt corrective measures to eliminate them.

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

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|-----------------------------|-----------------------|----------------------------------|
| <b>ESHQ</b>                 | <b>Document</b>       | <b>TFC-ESHQ-IH-STD-08, REV B</b> |
|                             | <b>Page</b>           | <b>14 of 14</b>                  |
| <b>LEAD CONTROL PROGRAM</b> | <b>Effective Date</b> | <b>July 11, 2007</b>             |

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## **5.0 SOURCES**

### **5.1 Requirements**

1. 10 CFR 851, "Worker Safety and Health Program."
2. 29 CFR 1910.133, "Eye and Face Protection."
3. 29 CFR 1910.134, "Respiratory Protection."
4. 29 CFR 1910.1025, "Lead (General industry)."
5. 29 CFR 1926.62, "Lead Exposure (Construction)."
6. 29 CFR 1926.1020 "Access to Employees Exposure and Medical Records."

### **5.2 References**

1. TFC-ESHQ-IH-STD-03, "Exposure Monitoring, Reporting, and Records Management,"
2. TFC-ESHQ\_S-IH-C-02, "Hazard Communication."
3. TFC-ESHQ\_S-IS-C-02, "Personal Protective Equipment,"
4. TFC-ESHQ-S\_IH-C-05, "Respiratory Protection."
5. TFC-ESHQ-S\_SAF-C-02, "Job Hazard Analysis."
6. TFC-ESHQ-S-STD-27, "Housekeeping Sanitation."
7. TFC-OPS-MAINT-C-01, "Tank Farm Contractor Work Control."
8. TFC-PLN-34, "Industrial Hygiene Exposure Assessment Strategy."