VOLUNTARY BLOOD LEAD CONTINUOUS IMPROVEMENT PROGRAM

Member Commitment: Member companies agree to continuous improvement in the management of employee lead exposures and striving to achieve blood lead levels as low as reasonably practicable respecting the application of the hierarchy of controls.

Member Continuous Improvement Goal: As the next milestone to the commitment, companies shall target having no worker with a blood lead level (BLL) above 20 µg/dL by no later than the end of 2025, and shall implement a Worker Biological Monitoring and Training Protocol utilizing the framework of the below Recommended Protocols.[1] Member companies intend to review this program every 2 years to determine whether new continuous improvement goals are appropriate.

[1] For entities subject to the EU's General Data Protection Regulation (GDPR) or any related data privacy legislation, measures triggered when a certain BLL is found to be exceeded should be passed as guidelines to the facility doctor who shall then request their implementation as minimum countermeasures.

RECOMMENDED WORKER BIOLOGICAL MONITORING AND TRAINING PROTOCOLS

Worker Blood Lead Level	Actions and Responses

New Workers or Unknown BLL	• All potential new employees whose intended job duties will include Lead-Exposed Work, or employees being assigned to Lead-Exposed Work for the first time, should be subject to pre-employment or pre-placement medical examinations to establish fitness for working with lead and to identify any pre-existing medical conditions that might make them more susceptible to effects of lead exposures.
	• All workers shall have blood lead levels tested prior to assignment to Lead-Exposed Work**.
	  ○ If a new worker's blood lead level is more than 5 µg/dL greater than typical new employees at the facility, specifically advise employee regarding potential sources of non-occupational lead exposures prior to assigning to Lead-Exposed Work.
	• Retest after 3 months in position, then at least once per year, or as otherwise designated in these Protocols.
	• If the position requires respiratory PPE, or the employee voluntarily elects to use a respirator, fit test respirator using Qualitative or Quantitative Fit Test Method prior to Lead-Exposed Work.
	
	• Provide worker training on lead safety, including at a minimum:
	  ○ sources of occupational lead exposure,
	  ○ sources of non-occupational lead exposure,
	  ○ health effects of lead on the human body,
	  ○ methods to reduce or prevent lead exposure,
	  ○ proper PPE and hygiene measures,
	  ○ Company blood lead policies and programs (including this Program), and
	  ○ local regulatory requirements.
	• Inform women of childbearing capacity about risks of occupational lead exposure to wellbeing of unborn child and breastfeeding newborns. Upon advice of medical department, offer the worker voluntary temporary assignment during period of pregnancy or breastfeeding to non-Lead-Exposed Work.

≤10 µg/dL	• If BLLs are maintained below 10 µg/dL, provide refresher lead safety training as part of regular EHS training schedule, at a minimum at least once per calendar year. • Retest blood lead levels at least once every 6 months if performing Lead-Exposed Work; otherwise retest annually.

> 10 to ≤ 15 µg/dL	• Enroll worker in company-managed BLL improvement program; develop worker-specific Blood Lead Level Response Plan*; provide guidance on continued improvement • Review with worker all potential sources of lead exposure, occupational and non-occupational • Evaluate effectiveness of engineering controls, PPE and individual work practices • Document worker-specific blood lead level response measures or training
> 15 to < 20 µg/dL	• Reconfirm prior fit test or re-fit respirator using Qualitative or Quantitative Fit Test Method • Consider mandatory respiratory PPE usage • Plant supervisory and EHS personnel to meet regularly with worker to review exposure, engineering controls, PPE use and work practices • Evaluate potential additional hygiene measures • Retest at least every 3 to 4 months, or until levels are reduced below 15 µg/dL
≥ 20 to < 30 µg/dL	• Conduct remedial personal coaching and counseling with worker and supervisory and EHS personnel and develop exposure reduction plan for worker to follow – track actions to reduce lead exposures and blood lead levels • Evaluate additional work practice and hygiene measures • Mandatory respiratory PPE usage (unless prohibited by local law) • Retest every month, or until levels are reduced below 15 µg/dL • If worker maintains an average blood lead level over 20 µg/dL over a six-month period, consider moving temporarily to a work area with reduced lead exposure until such time as the worker's blood lead level is reduced to below 15 µg/dL
≥ 30 µg/dL	• After a single blood lead test, confirmed with follow-up test less than one week later, consider moving the worker from the current work environment to a work area with reduced lead exposure until such time as the worker's blood lead level is reduced to below 15 µg/dL. • Within 7 days of receipt of confirmatory test result, refer employee to medical professional for consultation, unless the worker has been referred within the last twelve months and/or is already under medical supervision. Recommend medical professional conduct medical examination and consider undertaking biological effect monitoring (e.g haematological profiling, kidney function testing etc), to identify any pre-clinical indicators of work related health effects • Implement other measures described for ≥ 20 µg/dL

Key Performance Indicators (KPI)

BLL Key Performance Indicator: When implementing appropriate response measures for workers above the blood lead level target, an employee shall be deemed to have achieved the blood lead target when their blood lead level remains below the established target, as measured as a six month average or over the last two blood lead tests.

External Reporting: All participating companies agree to at least annually submit blood lead data for all workers covered by this program to at least one representative association to demonstrate a commitment to continuous improvement.

Blood Lead Test Results: Workers should be provided a copy of their BLL test results in a timely manner, and should be provided an opportunity to request additional information from the employer's EHS staff, unless applicable data privacy legislation specifies that only the facility doctor is authorized to process BLL data. Individual blood lead test results should be communicated to the employee respecting prevailing medical confidentiality rules and must not be disclosed to third-parties without the permission of the employee, unless required by law.

***Blood Lead Level Response Plan:**

Employer will review exposures, work practices and controls and document action plans to control blood lead levels when workers are found to have blood lead levels above 10 µg/dL. Workers should be provided a blood lead level reduction plan per the schedule above, or upon individual request. For entities subject to the EU's General Data Protection Regulation (GDPR) or any applicable data privacy legislation, these measures should be passed as guidelines to the facility doctor who shall then request their implementation as minimum countermeasures.

****Workers Covered by This Program**

This program applies to all workers that meet one or more of the below thresholds:

1. Workers subject to medical surveillance for lead under applicable national or local law or regulation, or Company policy;
2. Workers undertaking Lead-Exposed Work (see definition below) for more than 10 days per year who are not otherwise covered under (1); or
3. Any worker with a known blood lead level exceeding 5 µg/dL, regardless of the source of exposure.

Under this program, Lead-Exposed Work includes, at a minimum, those tasks which meet the thresholds described below, and any other tasks which the employer determines are appropriate. Temporary workers over whom the employer exercise direct control should be covered by this program.

Companies should provide any contractor, vendor, or other employers of personnel in the same location with information regarding known or reasonably anticipated lead exposure risks relevant to anticipated work, and make available upon request a copy of this program.

Lead-Exposed Work includes:

1. Any work conducted in an area known, or reasonably determined by the employer, to expose the worker to concentrations of lead in air of 5.0 µg/m^3 or greater measured as an 8 hour time-weighted average
    a. Area air lead concentrations may be determined by personal sampling of an individual employee, representative data from personal sampling conducted of other employees conducting the same or similar tasks in the work area, or area monitoring equipment.
2. In the absence of a representative air lead measurement, performing any "**Lead-Exposed Work**" tasks for more than 30 minutes in a single day which consist of:
    a. Altering or disturbing a material that:
        i. Is known to contain lead at a concentration equal to or greater than 0.5% by weight, as a result of material testing, or as content listed in a safety data sheet or similar specification sheet; or
        ii. Is reasonably anticipated to contain lead at a concentration equal to or greater than 0.5% by weight. Such materials include, but are not limited to, materials purchased as scrap lead, lead solder, lead bullet fragments and dust, lead sheeting, lead cable housing, and lead billets.
    b. Torch cutting any scrap metal with an unknown level of lead
    c. Touching or handling materials which are reasonably likely to have lead dust or other lead bearing surfaces which could present an ingestion hazard.
3. **Altering or disturbing** means subjecting to a process that may result in the release of lead dust, lead mist, lead fume, or other lead particles. Such processes include, but are not limited to, welding, torch cutting, brazing, torch soldering, melting, pouring, spraying, cutting, shredding, crushing, baling, grinding, polishing, machining, drilling, scraping, sanding, abrading, sweeping, raking, and shoveling.