

Title: Improved Protection for Lead-Exposed Workers: Updating the OSHA Lead Standards for General Industry and Construction

Statement of the Problem:

This resolution is aimed at petitioning the Federal Occupational Safety and Health Administration (OSHA) to update its standards for the protection of workers exposed to inorganic lead, 29 CFR 1910.1025 (general industry) and 29 CFR 1926.62 (construction).

Since the late 1980s a growing number of states have conducted surveillance of occupational lead poisoning, coordinated by the National Institute of Occupational Safety and Health (NIOSH) under the Adult Blood Lead Epidemiology and Surveillance (ABLES) Program. To date, 27 states report surveillance data quarterly to NIOSH for publication in the Morbidity and Mortality Weekly Report. In addition to collecting and analyzing blood lead data, ABLES state programs conduct follow-up investigations of lead poisoning cases to identify failures in prevention, target educational interventions, and in some cases refer specific employers to OSHA for enforcement action.

Based on the experience of the ABLES Program, state-based health professionals have become keenly aware of needed improvements in OSHA's lead standards that should be addressed by initiating a rulemaking process to update them. Individuals or organizations may petition OSHA for new rulemaking under section 6(b)(1) of the Occupational Safety and Health Act of 1970.

The primary reasons for taking this action are described below:

1. OSHA STANDARDS ARE BASED ON OUTDATED TOXICITY INFORMATION. The existing lead standards are based on the level of scientific knowledge about lead toxicity that was available in the late 1970s, and significant new toxicity information is now available. Even the 1993 construction standard was modeled after the 1978 general industry standard and did not consider new information about the health damage caused by lead. Under the current standards, workers can legally be exposed to lead when their blood lead levels (BLLs) are as high as 49 micrograms per deciliter (ug/dl), and higher in some instances (see below). Studies published during the 1980s and 1990s show that health effects such as male and female reproductive damage, hypertension, and decrements in reaction time, visual-motor coordination and mood can occur when BLLs are well below 49 ug/dl. Attached is a listing of key literature references on the toxicity of lead (Attachment 1).

2. TECHNOLOGY TO CONTROL AIRBORNE LEAD EXPOSURES HAS IMPROVED. When the 1978 lead standard was passed, OSHA noted that it may

not be technically and/or economically feasible to maintain BLLs at or below 40 ug/dl for all exposed employees. In over 20 years, technology has improved and it is far more feasible for employers in lead industries to provide better control of airborne lead levels. In addition, because the average BLL among the general population has dropped dramatically since the 1970s due to the removal of lead from gasoline, it should be feasible to reduce OSHA's maximum allowable BLL for workers by 15-20 ug/dl without major technological change.

3. OSHA STANDARDS ARE NOT CONSISTENT WITH NATIONAL PUBLIC HEALTH GOALS. The Centers for Disease Control and Prevention's "Healthy People 2010" aims to maintain the BLLs of all lead-exposed workers below 25 ug/dl, with a long-term target to reduce exposures that result in workers having BLLs greater than 10 ug/dl. (Note that the mean adult BLL for the U.S. population has been reported to be 2 ug/dl). The OSHA lead standards allow a worker's BLL to be as high as 49 ug/dl for construction workers, or 62 ug/dl (equivalent to 59 micrograms lead per 100 grams blood, ug/100g) for general industry workers, without mandating that employers take any action to decrease BLLs.

4. WORKER PROTECTIONS BASED ONLY ON AIR LEAD LEVELS ARE INADEQUATE. The OSHA lead standards are structured so that air lead levels must exceed specified levels before the majority of protective measures (e.g., blood lead testing, protective clothing, respiratory protection, comprehensive training) are required. This approach is not adequate because 1) most employers do not conduct air monitoring frequently enough to correctly evaluate exposure levels; and 2) dangerous exposures can occur through ingestion of lead, despite relatively low air lead levels. The OSHA standards should include language which requires routine blood lead and zinc protoporphyrin testing for all lead-exposed workers, so that workers poisoned through inhalation and/or ingestion are identified and protected. OSHA should also consider requiring surface wipe sampling to identify lead contamination in order to provide additional protection from ingestion of lead.

5. CONSTRUCTION AND GENERAL INDUSTRY WORKERS DESERVE EQUAL PROTECTION. Under the current standards, construction workers are eligible for removal from lead exposure with full pay (i.e., Medical Removal Protection or MRP) at a BLL of 50 ug/dl, while for general industry workers a level of 60 ug/100 g is required (if only one test is available). The general industry MRP level, expressed in the outdated units of ug lead/100 g blood, is equivalent to 63.4 ug/dl. There is no justification for providing a higher level of protection for lead-exposed construction workers than for workers in general industry.

Desired Action(s) to be Taken:

1. CSTE shall submit a petition request to the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), requesting initiation of a rulemaking to update the OSHA lead standards for general industry (29 CFR 1910.1025) and construction (29 CFR 1926.62).
2. CSTE shall send a letter to the Director, Centers for Disease Control and Prevention, requesting that the National Institute for Safety and Health (NIOSH), under its mandate to provide scientifically valid recommendations to OSHA for protecting workers, participate with OSHA in updating the OSHA lead standards.

Fiscal or Impact Statement:

The estimated cost for CSTE to prepare and send two letters is \$84.

Probable Impact on Public Health:

The desired impact of this resolution is for Federal OSHA to initiate rulemaking to update the lead standards, enabling development and adoption of more protective regulations that will better ensure the health of lead-exposed workers nationwide. A key aspect of updating the standards is to lower the blood lead level that triggers a period whereby a worker is removed from significant lead exposure and allowed to recover from excessive exposure while still maintaining full salary and benefits (i.e., Medical Removal Protection). In light of more recent lead toxicity information that indicates health effects at lower blood lead levels, preventing continued exposure at high levels will reduce the risk of workers experiencing adverse health effects such as damage to the kidneys, nervous and reproductive systems.

Attachment 1 – Important References on Lead Toxicity Published Since the 1978 OSHA Lead Standard

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Agencies for Response:**Agencies for Information:**