

U.S. Department of Labor



SEP 14 2001

Dear Dr. Cartter:

Thank you for your July 20, 2001, letter to Secretary of Labor, Elaine Chao in which you request that the U.S. Department of Labor partner with the Council of State and Territorial Epidemiologists, and other affiliated agencies to review the need to update worker protection standards that address occupational exposure to lead. Your letter was forwarded to the Occupational Safety and Health Administration (OSHA) for response.

OSHA is currently developing its regulatory priorities, and appreciates your suggestions and input to the process. I thank you for your interest in occupational safety and health.

RECEIVED SEP 21 2001

CSTE POSITION STATEMENT: # 01-OCC-01

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

Statement of the Problem(s)

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:

OSHA STANDARDS ARE BASED ON OUTDATED TOXICITY INFORMATION.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.

Statement of 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, update the Criteria Document for Occupational Exposure to Inorganic Lead.

3 CSTE shall send copies of the petition request to the following organizations:

Adult Blood Lead Epidemiology & Surveillance (ABLES) State Programs
US Environmental Protection Agency
US Department of Housing and Urban Development
US Department of Transportation
American Federation of Labor – Congress of Industrial Organizations (AFL-CIO)
Lead Industries Association
American Public Health Association – Occupational Health Section
American Industrial Hygiene Association
American Conference of Governmental Industrial Hygienists
American Conference of Occupational and Environmental Medicine
American Association of Occupational Health Nurses
Association of Occupational and Environmental Clinics

Public Health Impact:

The desired impact of this resolution is for Federal OSHA to initiate rule making 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 renal, nervous and reproductive systems.

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

CDC Comments:

CDC reviewers address the 5 key issues raised in the position statement below.

1. OSHA Standards are based on outdated toxicity information. CDC agrees that more recent information is available. In addition the documents referenced in the position statement, other supporting information should include: Sussell A, Ashley K, Burr G, Gittleman J, Mickelsen L, Nagy H, Piacitelli G, Roscoe R, Whalen E. Protecting Workers Exposed to Lead-Based Paint

Hazards: A NIOSH Report to Congress. DHHS (NIOSH) Publication No. 98-112, January 1997. ATSDR Case Studies in Lead--www.atsdr.cdc.gov/HEC/CSEM/lead/who's_at_risk.html.

2. Technology to control airborne lead exposures has improved. Recent data from the lead smelter industry suggest that it may be possible to maintain worker blood-lead levels below 25 mg/dl through rigorous application of good work practices and engineering controls. However, there is little published information regarding control of blood-lead levels in industries where workers are typically exposed to low airborne lead concentrations. Specifically, lead exposures which occur in the construction industry pose a significant problem with respect to their reduction and control. Worker exposure to lead can occur at many job tasks (e.g., removing lead-based paints, fumes from torch cutting and welding) and can be highly variable and unpredictable due to changing environmental conditions and the manner in which the job task is performed. The use of engineering controls to reduce exposures may not be feasible for many job tasks and thus necessitates other types of preventive measures (e.g., PPE, respirators) to maintain low blood lead levels.

3. OSHA standards are not consistent with national public health goals. We agree that the OSHA Lead Standards are not consistent with the national public health goal--Healthy People 2010:

Healthy People 2010, Objective 20-7, Reduce the number of persons who have elevated blood lead concentrations from work exposures, pp. B20-18,19 in Tracking Healthy People 2010, U.S. Department of Health and Human Services, Washington DC: U.S. Government Printing Office, November 2000. Also at www.cdc.gov/nchs/hphome.htm.

The standards are also not consistent with the actions of other relevant authorities

Lead Industries Association, Incorporated--LIA has entered a voluntary agreement with OSHA to lower the blood lead level for medical removal from 50 to 40 mcg/dl and the blood lead level for return to work from 40 to 35 mcg/dl over a five year period. In the 4/15/2001 report from LIA to OSHA it was noted that 49 companies had joined the agreement and that the number of workers with blood lead levels of 40 mcg/dl or greater had fallen from 303 in 1996 to 103 in 2000.

American Council of Government Industrial Hygienists--ACGIH has recommended a blood lead exposure limit of 30 mcg/dl for lead-exposed workers.

Council of State and Territorial Epidemiologists--CSTE has adopted a Surveillance Case Definition for Adult Blood Lead Levels to be Reported to the National Public Health Surveillance System. Council of State and Territorial Epidemiologists (CSTE) Position Statement 99ENV-2, 1999. Published on the CSTE website: www.cste.org/position_statements.htm.

4. Worker protections based only on air lead levels are inadequate. Agree without specific comments.

5. Construction and general industry workers deserve equal protection. Agree without specific comments.

Regarding the Desired Action(s) to be Taken: Update the NIOSH Criteria Document for Occupational Exposure to Inorganic Lead. CDC is receptive to this request and will consider this recommendation as it assesses the most appropriate vehicle for providing updated information on lead.