



AOMA Report

DECEMBER, 1978

Doris Flournoy, Editor

AMERICAN OCCUPATIONAL MEDICAL ASSOCIATION

• 150 NORTH WACKER DRIVE

• CHICAGO, ILLINOIS 60606

OSHA ISSUES FINAL LEAD STANDARD REDUCING PERMISSIBLE LEVEL TO 50 $\mu\text{g}/\text{m}^3$

A final standard for occupational exposure to lead which reduces the permissible exposure level from 200 to 50 $\mu\text{g}/\text{m}^3$, based on an 8-hour time-weighted average concentration, was promulgated by the Occupational Safety and Health Administration on November 14. The principal industries affected by the new standard (primary lead production, secondary lead production, lead-acid battery manufacturing, non-ferrous foundries and lead pigment manufacturing) are given from one to three years to reach an interim 100 μg level and from one to ten years to reach the final 50 μg level. All other industries must attain the 50 μg level within one year of the effective date of the new standard.

The permissible exposure level proposed by OSHA in 1975 was 100 $\mu\text{g}/\text{m}^3$. The lower limit of the final standard was based on evidence collected during the public comment period and the extensive public hearings on lead held in 1977, which, according to Dr. Eula Bingham, OSHA Director, clearly demonstrates that the toxic effects of lead exposure are much more extensive than was previously recognized.

Blood lead levels also will be used to determine the extent to which workers have been exposed. Blood sampling for all employees who are exposed above the action level (30 $\mu\text{g}/\text{m}^3$) for more than 30 days per year must be done at least every six months. For employees whose last test showed levels above 40 $\mu\text{g}/100$ g blood, blood sampling must be done at least every two months until two consecutive samples show levels below 40 μg . Blood sampling is to be done monthly for each employee who has been removed from exposure owing to an elevated blood lead level.

Job and wage protection against removal for medical reasons is provided in the new lead standard, the first health standard issued by OSHA containing such provision. It specifies that workers with elevated blood levels must be placed in other unexposed jobs at no loss in pay, seniority, or other employment status and rights until blood lead levels fall to acceptable limits.

The content of medical examinations to be made available under the standard include the following: (1) A detailed work history and a medical history, with particular attention to past lead exposure (occupational and non-occupational), personal habits, and past gastrointestinal, hematologic, renal, cardiovascular, reproductive and neurological problems; (2) a thorough physical examination, with particular attention to teeth, gums, hematologic, gastrointestinal, renal, cardiovascular, and neurological systems, with pulmonary status being evaluated if respiratory protection is to be used; (3) a blood pressure measurement; (4) a blood sample and analysis which determines blood lead level, hemoglobin and hematocrit determinations, red cell indices, and examination of peripheral smear morphology, zinc protoporphyrin, blood urea nitrogen, and serum creatinine; (5) a routine urinalysis with microscopic examination; and (6) any laboratory or other test which the examining physician deems necessary by sound medical practice.

While the new standard is scheduled to become effective February 1, 1979, both labor and industry wasted no time in filing legal challenges to the regulation. The United Steelworkers of America filed

filed in New Orleans with the Fifth Circuit Court of Appeals. The Steelworkers say the standard is not strict enough, while LIA stresses that the new standard pays no heed to economic or technical reality or to the inflationary impact which it will have. LIA also condemns OSHA's insistence on retaining an environmental exposure limit which is based on the now discredited assumption that a worker's blood-lead level can be correlated with and predicted from particular occupational air-lead levels.

PANEL OF EXPERTS REPORTS ON REVIEW OF BERYLLIUM STUDIES

The panel of independent consultants convened by the Surgeon General Julius Richmond and William Foege, Director of the Center for Disease Control, to review data on the effects of beryllium exposure has concluded that animal studies are credible in showing beryllium carcinogenicity in at least two species. This was one of three questions the panel was asked to answer. However, commenting on the studies reported, the experts said that "many lack rigorous analysis, are often poorly controlled, suffer from inconsistent protocol and exposure periods, and frequently lack statistical justification." They strongly recommended that additional well controlled studies of the effects of inhalation of beryllium compounds and beryllium alloys in animals be performed in order to generate data relating to latency, particle size, the effects of copper alloys, clearance, and dose response.

There are insufficient data available to answer the second question, "Is beryllium copper alloy a carcinogen?" according to the consensus report of the panel. They recommend that appropriate studies be undertaken to determine the nature and extent of worker exposures to this alloy and that it be tested as a carcinogen.

Finally, the panel found that the epidemiological evidence is "suggestive" that beryllium is a carcinogen in man. They do not believe the evidence at this time is more than suggestive because alternative explanations for the positive findings have not been definitely excluded. "Likewise," they added, "the three reports (Wagoner, et al., 1978; Mancuso, 1978; and Infante, et al., 1978) showing a positive statistical association between beryllium exposure and human lung cancer are unpublished drafts, each of which is likely to require some revision after journal peer review prior to publication."

Based on their findings, the panel concluded that beryllium should be considered a suspect carcinogen for exposed workers. Based on this report, Secretary of Health, Education and Welfare, Joseph A. Califano, Jr., wrote Ray Marshall, Secretary of Labor on November 7 recommending that the Occupational Safety and Health Administration proceed to set standards that limit exposure to beryllium in the workplace.

OSHA REQUESTS INFORMATION ON REGULATION OF OCCUPATIONAL EXPOSURE TO PESTICIDES

Is the generic approach appropriate for regulation of employee exposure in pesticide manufacturing and formulating facilities? Should permissible exposure limits be developed for the substances not currently regulated? Are there any pesticides in widespread production that are not currently regulated? These and other questions have been raised by the Occupational Safety and Health Administration with regard to the recommendations contained in the 429-page pesticide criteria document recently transmitted to OSHA by the National Institute for Occupational Safety and Health. In the November 24 issue of the Federal Register, OSHA published a formal request for comments and information, posing many questions with regard to specific NIOSH recommendations.

In the recommended standard, NIOSH did not include environmental (workplace air) limits, since, according to NIOSH, it would take years to establish scientifically valid environmental limits for approximately 1,500 pesticides. Consequently, the Agency recommends reliance on engineering controls, work practices, medical examinations, and education of employers and employees as the first step in protec-