THE DESIGN OF THE LEAD STANDARD - FOCUS OF MORE ATTENTION ON WORKER NEEDS

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A B S T R A C T

The labor movement represents a large number of workers in industries associated with lead hazards, including auto battery workers, workers in brass foundries, cable makers, workers in the electronic industry, welders and cutters, scrap metal workers and others. The major concern of representatives is the problems of health hazards in the lead industry and the need for a swift solution to these problems in order to protect the workers' health.

My reaction to TLV's is that they are job related and not worker related, meaning that they are based upon time weighted averages that assume an 8-hour work day. You do not need to check very far into the Bureau of Labor Statistic's data to find that the average worker does not work 8-hours a day; he works more like 41 or 42 hours a week (at least he did before this depression). In many industries using lead, the replacement auto battery industry, particularly, there is a work period during the year of high overtime usually in the fall. The workers put in a great deal of overtime during this high demand period. Yet, when air lead samples are taken, the assumption is made that exposure will be for an 8-hour work day. The fact is it very often is a 10 or 12 hour day for many workers.

Another assumption that indicates that OSHA standards are not worker related, is that the standards are based on males. Reviewing the literature on lead exposure indicates that, yet today, we have a number of females working in the battery industry.

One employer, whose employees are union members, has two separate divisions. One deals with electronics and the other makes replacement auto batteries. The employer, because of the rules of the equal employment opportunities commission, encouraged the transfer of women from the electronics division to the better paying jobs in the battery division. The result is that we have an increased number of females exposed to lead hazards. Yet, the OSHA lead standard is based on the male exposure and the proposed NIOSH standard does the same. These standards must consider the effect of lead on the female workers, not just males to realistically meet the needs of workers. We learned today that women can have very serious health problems stemming from lead exposure and that such exposure can effect their offspring. This needs to be reflected in

the new standard to allow females the opportunity to hold these jobs without peril to their health.

The lead standard must be worker based, not job based, and to do this other sources of lead exposure must be recognized. There should be a substantial margin of safety for the worker exposed to lead, to allow for off the job exposure and diseases that attack the same part of the body in the same way as lead. This happens if a worker gets a large dosage of lead and also has some other ailment that affects the kidneys. The lead may not be the first cause, but could contribute to a workers illness. What about people in lead work who have a second job and lives in urban areas, both of which can contribute to body burden of lead? Does the proposed lead standard offer these workers a margin of safety necessary for total lead exposure? This is doubtful. The standard is related to the job, not the workers as a total person with possible additional ailment living in a total environment that includes non-occupationally related lead exposures.

The standards rely too heavily on biological monitoring rather than environmental control. A standard that truly considered workers' health would give much more weight to controlling exposure so that biological monitoring can be reduced. A worker should not be used as a test instrument for the work environment, rather the emphasis must be on testing the environment to benefit the worker. Another problem with biological monitoring is that workers simply do not like to be stuck with needles, to draw blood samples, so they avoid it. Additionally, all workers know that if they have high blood lead levels they will be removed from the job. It may be a high paying job or a relatively pleasant job and they could be moved to a job that does not pay as well and is not as desirable, so they avoid taking biological tests. In organized plants workers wages are protected, it is doubtful if non-union workers are this fortunate. A worker will stay home to avoid or postpone a biological test in order to keep his position. The safety standard must recognize the true industrial facts of life and protect the workers economic interest as well as protecting health.

The environmental monitoring proposed by NIOSH and used by OSHA does a poor job of sampling worker exposure. Let us assume that in a battery plant with approximately 200 workers that a sample will be taken of approximately 30 workers once every three months, based on the NIOSH proposed standard. These samples run about 50 minutes each. The sample would be about 100 hours of exposure during a year. That same 200 workers will work at least 400,000 hours during that period, probably more. Thus, the proposed sample will be one hour in every 4000 hours of worker exposure. I do not believe this is adequate. There must be better environmental sampling or a continuous monitoring device used in these shops to protect workers.

One must also consider the type of samples being taken and when and where they are being taken. In other words, how random are the samples? They probably will be taken during the day shift when supervision and controls are at their very best. What happens during the night shift when supervision sometimes is more lax?

The proposed standard for lead and present enforcement relies too heavily on personal protective equipment. This has the effect of transferring the burden of protection to the worker and away from environmental controls. Personal protective devices present a lot of problems for workers. A brief bizarre example concerns a factory producing auto batteries in an old building. The EPA told the employer to close the windows because they were emitting lead oxide into the environment. At about the same time, the employer had moved the lead casting operations next to the pasting machines. The result was that the heat producing casting operation was near the pasting operation which produces most of the airborne lead in such an operation. With the windows closed, it was too hot, so the employer installed fans. The result was lead dust blown all over the plant. OSHA inspected the plant and required that the fans be shut off and that the employees wear respirators. During July, August, and September of 1973, workers in this area had to wear respirators; the plant windows were closed; and the operations produced additional heat. Working conditions were so bad that perspiration collected under the respirators until it was above the workers' chins. The workers had to take the repirator off to wipe the perspiration from their faces. Obviously, this resulted in the ingestion of more lead from their soiled hands. There is no easy answer to this set of conditions, but an abatement period from OSHA did nothing to help the workers involved. Two and a half years of wearing a respirator in a hot environment is not a worker oriented means of dealing with such a problem.

The primary reason for opposing biological monitoring is it is after the fact of excessive lead exposure. The worker's body has already acquired a large dose of lead by the time test results are tabulated. The standards propose the use of the worker as a testing device.

From what has been presented today, it is very possible that some of these men and women may already be sick by the time it shows up as excessive blood lead. I wonder just how many of those who are proposing the use of the biological monitoring would opt to work in this kind of situation. We, in the Allied Industrial Workers Union suggest that NIOSH rewrite its proposed lead standard and reduce the work place lead exposure to much less than the .150 mg/cu m they are now proposing.

NIOSH should look at the standard for lead of other industrialized countries. The Soviet Union has a standard of .010 mg/cu m. Perhaps the USSR does not enforce the standard, but I suggest to you that OSHA in

giving three year abatement periods, is also pretty casual in their enforcement. TLV's from some of the other countries should also be noted. Japan has a TLV of .050 mg/cu m.

NIOSH is recommending that OSHA adopt a TLV of .150 mg/cu m -- the same used in the U.S. prior to 1958. Yet, the American worker comes to the job today from an environment with much higher exposure than the levels in 1958; also higher than workers in other industrialized countries. It seems that we should base the lead standard on worker needs and improve on the example being set by other industrial countries in the world.

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PUBLIC HEALTH SERVICE CENTER FOR DISEASE CONTROL
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

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Contract Number 210-75-0026

Chicago, Illinois
February 24-25, 1975

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Center for Disease Control
National Institute for Occupational Safety and Health
Division of Surveillance, Hazard Evaluations and Field Studies

February 1976

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

SPONSORED BY: Society for Occupational and Environmental Health
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HEW PUBLICATION NO. (NIOSH) 76-134

The Editor or his staff prepared abstracts of the presentation when they did not accompany the author's manuscript.