

H. C. Gaffney → J. F. Ealy KMD

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Lead Industry Newsletter

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Cooperative Assessment For Secondary Lead Smelters & Battery Manufacturers:

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E. F. LOFFELMAN

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For Many, The Answer to Compliance with the OSHA Lead Standard

The November 1983 Environmental Health Newsletter announced OSHA's new Cooperative Assessment Program as a method to assist companies in complying with the existing lead standard. This new approach to the lead standard was introduced to the lead industry by the Lead Industries Association at a meeting in June of 1983.

The attendees to the meeting represented various lead industry groups anxious to find out more about the ASARCO experience with Cooperative Assessment. There to explain the program were members of the Task Force responsible for developing the engineering compliance plan for ASARCO.

At this meeting the word tripartite was used synonymously with cooperative assessment because there was participation from OSHA, ASARCO, and the United Steelworkers Union. Today the program is formally known as Cooperative Assessment Program (CAP).

Under CAP, companies have the option of developing agreements tailored to the parties involved. For example a company with a union may enter into a tripartite agreement whereas a non-union plant may utilize temporary variances or a Petition for Modification of Abatement date (PMA).

OSHA Strategy for Secondaries, Battery Plants

Since there are relatively few primary smelters, OSHA can handle the development of compliance plans for those who wish to participate on a plant by plant basis. However, the secondary smelters and battery manufacturers are a different story. It would be impossible to visit the nearly forty secondary lead smelters and 200 battery manufacturers one by one in order to assess their engineering compliance needs.



Mel Cassidy, a member of the Task Force from OSHA, describes the CAP program to lead industry representatives at the LIA meeting in June 1983.

Therefore, a two-phase plan was initiated, affording every affected company the opportunity to participate in the development of a compliance manual or "Cook-book" of engineering control measures for their industry.

Phase I

Under Phase I, OSHA made contact with both the secondary and battery manufacturers through their trade associations. Once the presentation had been made to the industry, two task forces were selected. The secondary smelters Task Force included Melvin E. Cassidy, Senior Industrial Hygienist for OSHA; Michael

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L. Sappington, Executive Secretary for SLISA; Michael J. Wright, Industrial Hygienist for the United Steelworkers Union; and Suzanne Kossan, Industrial Hygienist for the Teamsters.

The Task Force for the battery manufacturers includes Bill Pallies of Exide, Tom Hatterschide of GNB, H.P. Blank of Standard Industries, Dave Koller of C & D Batteries, Frank Mirer of UAW, Frank Vondra of IBEW, and Richard Yonstrom of IUE.

It was the responsibility of the Task Force to develop the protocol for the Cooperative Assessment Program (CAP) with the assistance of a joint technical committee. Once the protocol was written, a letter delineating the merits of the program went out to the secondary smelters and the battery manufacturers inviting them to participate in the program. According to the letter, companies could contribute by either allowing the Task Force to visit their plant in order to review "in place" engineering control technology or provide the Task Force with relevant data.

Of those plants that have chosen to participate, the Task Force will assess current "in place" control technology along with previous studies for incorporation into a manual or "Cookbook" for that industry. The manual will contain a comprehensive evaluation of alternative control technology which has been ascertained to be economically and technologically feasible. The design of these engineering control measures will be such that exposures will be reduced to or below the PEL or the lowest feasible level.

The manual will also include a description of plant programs including medical, respiratory, training and hygiene.

Phase II

Phase II of the plan calls for the manual to be sent to all the affected companies. A company upon reviewing the manual, in light of existing plant installations, could use the manual to tailor their compliance plan to be cost effective and compatible with existing installations. The company would be afforded the opportunity to choose to design their company's plan from the manual, have consultants assist in developing control options, or design their own compliance plan. OSHA will then review the final compliance plan before approval. In addition, OSHA will review the respirator, training, and medical programs.

Chloride First to Try CAP

The LIA meeting in June which introduced the program to the secondary smelters and battery manufacturers sparked dubious interest among the attendees. Chloride Inc., realizing it was going to need extended relief from meeting the 50ug/m³ PEL, was one

of the first companies to plunge head first into the program. Used as a test case, Chloride provided OSHA with a unique opportunity to observe a variety of circumstances.

Chloride has both battery plants and two secondary smelters. Some of these plants have union representation and some do not. In addition, one of their plants is located in a state that has an approved OSHA program. The experience has provided the Task Force with more insight into the real-life problems associated with the program for secondary smelters and battery manufacturers. According to Dave Morris, Director of Human Relations for Chloride, the program has so far been worthwhile and finalized agreements incorporating engineering compliance plans are forthcoming.

According to OSHA, the advantages of participating in CAP far outweigh the disadvantages. Some industry analysts, however, would disagree with this, finding that the few disadvantages may cause serious problems in the long run. A discussion of the positive and the negative points relevant to industry concerns are provided below.

Advantages

- 1) OSHA decided not to initiate rulemaking on the lead standard because it brought to light fears of lengthy and expensive litigation which would not have served the purpose originally intended by such action. CAP has allowed unions, industry and OSHA the opportunity to work together to solve the problems associated with developing feasible engineering plans thereby preempting conflicts encountered during rulemaking.
- 2) Once an agreement has been reached the plant is no longer subject to compliance inspections for engineering and hygiene portions of the lead standard.
- 3) The schedule for complying with the PEL may be adjusted according to the time schedule needed to install the agreed upon control measures, and is based on other factors that may affect a company's ability to meet the 50ug/m³ PEL. It is the company's responsibility to be in compliance with its agreement. As long as that is accomplished a company is in compliance regardless of whether the 50ug/m³ PEL is achieved.
- 4) Since the company knows exactly how much time, and what engineering controls are required to be in compliance with the agreement, it can more effectively plan capital expenditures.
- 5) The agreement will, in most cases, eliminate litigation which previously may have resulted from an OSHA compliance inspection.

Since joining ILZRO I have been assigned the responsibility for developing new training materials, including the Environmental Health Newsletter, and would appreciate input from you, the readers, as to the subjects you would like to have covered in the newsletter, and what training materials may be needed. Suggestions for subjects for workshops or seminars are also invited. Please send any suggestions or questions to Giovina L. Leone, Assistant Manager of Environmental Regulations, ILZRO/LIA, 292 Madison Avenue, New York, NY 10017 or call (212) 532-2373.

ILZRO LIA LOCAL POINTS

Lead and Your Health series:

An OSHA approved slide tape presentation designed to explain to supervisory and hourly personnel alike the effects of exposure to lead on the body is now available. It is a five part series of five minute segments which describe lead effects on the body, blood, kidney, nervous and reproductive systems. The program is an excellent training and motivational tool available in both slides and videotape for \$100.00 per set.

Appendices A & B

Under the OSHA New Directions Grant this slide tape presentation was approved by OSHA as a training tool to assist you in fulfilling your training requirement under the OSHA lead standard. You are required to inform all employees potentially exposed to any airborne level of lead as to the contents of Appendices A & B of the lead standard. This slide presentation, also available in videotape, is a colorful, graphic presentation of Appendices A & B which will be easily understood by your employees. The program may also be obtained for \$100.00 per set.

Lead/Health

SCREENING FOR HIGH RISK LEAD WORKERS

An ILZRO research project, aimed at developing a method for screening lead workers in order to detect those with excessive risk from lead exposure, has proven successful. For many years, questions have been raised about why some lead workers exhibit symptoms at low levels of lead exposure while the

majority of workers do not show symptoms unless their lead exposure is much higher. Earlier research has suggested that the body has a natural protective mechanism, in the form of a low molecular weight protein, which binds to the lead inactivating it. The incidence of adverse effects from lead exposure are thought to be directly related to the amount of this low molecular weight binding protein found in the blood.

The research was aimed at isolating the lead binding protein and then developing a method to detect its presence in the blood samples of lead exposed workers. The method used is known as a radioimmunoassay because it takes advantage of the immune response created when the human red blood cell lead binding protein is injected into rabbits. Humans, as well as other animals, possess the ability to protect against any harm that may result from a foreign substance entering the body. This protective mechanism is known as an immune response. Simply put, for every foreign particle, known as an antigen (protein, virus, bacteria, etc.), the animal body will produce a protein, known as an antibody, which is chemically specific for that antigen. The body responds to the presence of an antigen by producing an antibody which then binds to that antigen, thereby effectively inactivating it. When the human red blood cell lead binding protein is injected into the rabbit, it is recognized by the rabbit immune system as a foreign protein, or antigen, and an antibody is produced that is specific for the lead binding protein. The antibodies produced by the rabbit are then used in the radioimmunoassay. The antibodies are introduced into a blood sample of a lead worker along with radioactively labeled lead binding protein. The concentration of the lead binding protein in the blood sample of the lead worker is evaluated by its capacity to compete with the fixed amount of labeled lead binding protein for binding sites on the antibodies produced by the rabbit earlier.

The significance of the development and use of the radioimmunoassay, as a screening method, is twofold. First, it will enable researchers to study the role of the lead binding protein among lead exposed workers. Secondly, once the role of this protein is better defined, physicians will be able to determine those employees who may be at a greater risk to lead exposure because they possess low levels of the lead binding protein, and recommend protective measures to reduce exposure, thereby eliminating the potential adverse health effects. //

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ILZRO NO LONGER GRANTED

OSHA NEW DIRECTIONS PROGRAM

After three years of participation under the OSHA New Directions Grant Program, ILZRO has decided to move toward self-sufficiency. The program's ultimate objective is to produce occupational safety and health training materials for industry. This is accomplished through government funds which the grantee must match. The idea behind self-sufficiency is that eventually, the grantee will no longer be dependent on government funds after the organization has developed a well-established program. ILZRO feels that this objective has been met and plans to continue producing training and education materials independently.

Both ILZRO and LIA have been involved with information gathering and publication of environmental and occupational health literature for many years. The OSHA grant enabled the environmental health staff to expand on this. In order to give you some idea of what was accomplished, here is a list of the audio-visual presentations and publications available.

Audio-Visuals Available

3/4", 1/2" VHS, 1/2" Beta or Slide Tapes

Supervisor's Training: geared toward the plant supervisor responsible for training employees about the OSHA lead standard \$100

Appendices A & B: describes appendices A & B of the lead standard in an interesting format which can be easily understood by every employee \$100

Lead and Your Health Series: five segments, five minutes each in length, which describes the potential health effects of lead on the body \$100

Respiratory Training: tailor-made training film which is taped at your plant using your own plant employees for both audio and visuals. Cost is variable.

Publications

Small Businessman's Guide to the OSHA Lead Standard: provides a comprehensive education of the requirements a plant must adhere to under the lead standard, including a chapter on legal rights and responsibilities under the standard. Easy to read.

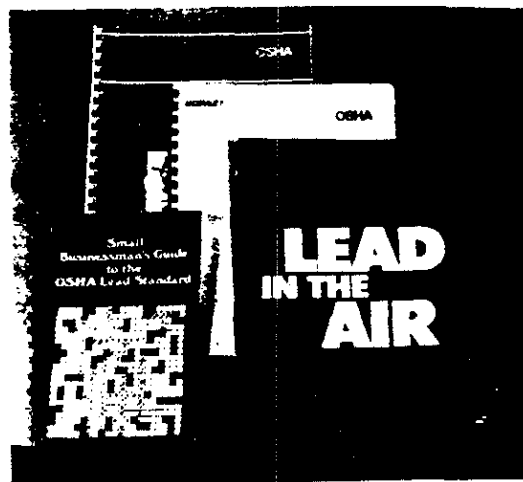
Employee Guide to the OSHA Lead Standard, Trainer's Manual and Instructor's Guide: the Employee Guide is a supplemental publication to be used during training, while the Instructor's Guide and Trainer's Manual act as companion publications for the person conducting the training session. The last two publications would provide excellent supplemental information for the Supervisor's Training film.

"Lead": in an effort to minimize third party liability, a small booklet was written for employees who work for lead industry customer companies.

Environmental Health Newsletter: published twice a year, the Newsletter provides an update of current regulatory events under the OSHA lead standard and features, in depth, articles on occupational health programs in the lead industry.

In addition to the audio-visuals and publications, the environmental health staff conducted speeches, seminars and training sessions for the lead industry. One such speech by Giovina Leone was given at the National Automotive Radiator Association's Annual Meeting in Hollywood, Florida and later written up in Motor Age Magazine. Four one-day regional seminars were given, aimed at the manager and small businessman. The seminars covered the potential health effects of lead exposure, employee training, an industrial hygiene program for the lead industry, and a discussion of the legal aspects of compliance with the standard.

The opportunity provided by the participation in the grant program has been an invaluable experience which we are grateful for. We thank OSHA for this opportunity and plan to continue the program in the future. Suggestions from the readers are always appreciated.



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