

In 1976:

The Secretary of Labor finally promulgated a standard for coke oven emissions.

Some 5,000 new substances were introduced into the workplace (without standards)

Ballot proposals to regulate nuclear power plants were turned down in all 5 states including California

In 1977:

Will a lead standard be passed protecting all workers?
Will any other of the long-delayed standards finally be promulgated?

Will polluters of human beings be held as accountable as polluters of rivers?

Will a new administration make a difference in workplace conditions?

**WE HOPE SO;
HAPPY NEW YEAR.**

LABOR OCCUPATIONAL HEALTH PROGRAM

• MONITOR •

VOL. 3, NUMBER 10, NOV/DEC 1976



IN THIS ISSUE:

- OSHA STANDARDS "PROGRESS" REPORT
- NEW NIOSH RECOMMENDATIONS
- LOHP APPRENTICESHIP PROGRAM WRAP UP
- "SPORTS REPORT"
- RECENT EVENTS
- KEPONE UPDATE
- CLEARINGHOUSE
- HEALTH HAZARD ALERTS

APPRENTICESHIP PROGRAM WRAP-UP

LOHP has completed a one-year contract with OSHA to develop occupational health and safety training materials and methods to be used in apprenticeship training. The materials will be incorporated into ongoing classroom training for apprentices.

During the year floor covering apprentices were given 28 hours of health and safety training in such areas as health and safety law; potential chemical, physical, and safety hazards in the trade; recognition of actual workplace hazards; and principles of monitoring, medical screening, and hazard control. Materials were developed in close association with the California Joint Apprenticeship Training Committee, extensive site visits, and technical research. Students were quizzed throughout the training; a final test helped LOHP evaluate the teaching's impact.

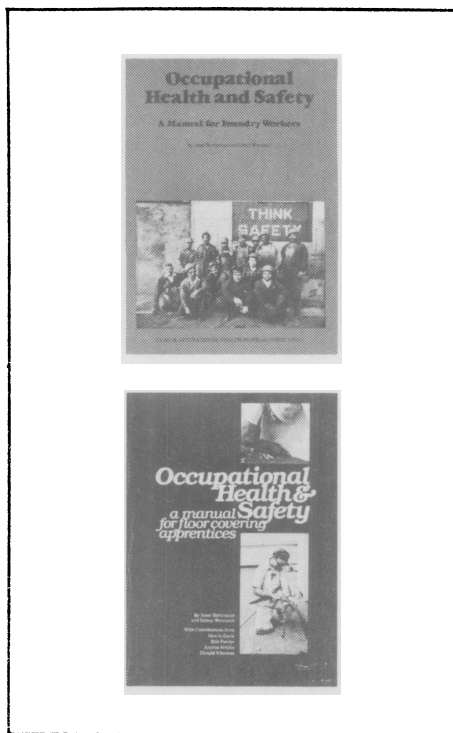
LOHP also developed and administered a questionnaire to find out the apprentices' reactions to the training, and how they felt about their workplaces as a result. Most said they were much more at ease now that they knew the kinds of hazards to expect, and how to identify and control them.

TRAINING

In conjunction with the apprentices' training, members of the California Joint Apprenticeship Training Committee (including instructors, coordinators, and manufacturers' representatives) took part in a two-day workshop on materials and methods for teaching health and safety. Participants examined and evaluated the materials, then used them to teach sample topics to the rest of the group. The group's suggestions were incorporated into final changes in the materials.

After being revised, the materials used for apprenticeship classes and the instructors' workshop were compiled into two publications—*Occupational Health and Safety—A Manual for Floor Coverers*, and *Occupational Health and Safety for Floor Covering Apprentices—An Instructors' Guide*. In addition to general information, the manual covers trade-specific chemical, physical, and safety hazards, and how to identify and control actual hazards in the workplace. Of particular interest is the "Dear Doctor" letter at the end of the medical screening chapter. The letter summarizes potential chemical hazards of the trade and associated health risks. The instructor's guide contains lesson plans, suggested teaching methods, and study questions and answers. It is designed to be used with the manual.

Slide shows including scripts were also developed to accompany the materials. They cover "Lifting," "Adhesives and Solvents," "Power Tools," "Hand Tools," and "Occupational Safety and Health Legislation." Except for the latter, all are trade specific.



MATERIALS

Two additional sets of materials were developed for foundry workers during the second half of the grant period. *Occupational Health and Safety—A Manual for Foundry Workers* and *Occupational Health and Safety for Foundry Workers—An Instructor's Guide* follow the same format as the floor covering publications. The foundry manual includes trade-specific chapters on potential safety, physical, and chemical hazards (gases, vapors, dusts, and fumes), how these hazards can affect the body, and how to identify and correct them.

The foundry workers manual and instructors' guide are the culmination of nearly nine months technical research. Before publication of these materials, the following groups were asked to review them: the United Auto Workers; the Molders and Allied Trades International Union; the national and Region 9 offices of OSHA; Cal-OSHA Divisions of Apprenticeship Standards and Industrial Safety (DAS and DIS); and the California Metal Trades Association.

The materials developed for floor covering and foundry workers will be distributed in California by two state agencies—the Division of Industrial Safety (DIS) and the Division of Apprenticeship Standards (DAS). DIS will add the manuals, instructors' guides, and slide shows to its permanent library; DAS will distribute them to the appropriate Joint Apprenticeship Training Committee. All materials are also available directly from LOHP.

Janet Bertinuson and Sidney Weinstein, the two LOHP staff persons most responsible for the Apprenticeship Project, would appreciate any comments on these materials.

RECENT EVENTS

LONGSHOREMEN REFUSE TO WORK WITH ASBESTOS

Recently in San Francisco, Local 10 gang stewards aboard the SS Manual Nejia won an important health and safety arbitration, "setting the stage for forcing the employers and shipowners to eliminate deadly asbestos fiber from our workplace."

After identifying the heavy dust permeating their work area as asbestos fiber, two gangs of longshoremen aboard the SS Manual Nejia refused to continue working. They continued to refuse to work even after it had been proven that the respirators were supplied with the proper filter. The business agent was called. The men still refused to work because they didn't believe respirators provided sufficient protection from asbestos.

An arbitrator ruled the men had acted in good faith and therefore would be paid for standby time. Before the work could proceed, the hatch had to be cleaned in accordance with regulations and an atmospheric test made to guarantee the absence of asbestos fiber.

MORAL: When in doubt—check it out!! (In this case the company was bound by contract to provide a safe and healthful work place, and had to prove so if there was any reason to believe otherwise).

The Dispatcher

AUTO WORKERS NEGOTIATE HEALTH AND SAFETY

A longtime leader in health and safety protections for workers, United Auto Workers (UAW) contract negotiations since 1970 illustrate a pattern of increasing worker concern over health and safety, and their desire to control hazards. This trend has culminated in recent contract negotiations including settlement of Local 588's month-long Chicago Heights strike against Ford Motor Company over noise and ventilation. Settled on October 18, the strike involved 3600 workers. It was a major strike fought over health and safety issues.

NOISE NUMBER ONE ISSUE

Noise was the number one issue in negotiations. In 1975 hearing tests given to a random sampling of 100 plant workers, then computer-compared to previous tests, showed a definite relationship between hearing loss and the number of years worked at the Chicago Heights plant. In the random sample, 20 percent had compensable hearing losses, 60 percent had losses approaching compensable, and only 20 percent had normal hearing.

UAW's more recent national contracts with several U.S. farm equipment and automobile manufacturers including Ford and Chrysler further stress workers' increasing concern over unsafe and unhealthy work conditions, and their conviction that workers have the right to know about

RECENT EVENTS

these hazards and participate in solutions.

Many new contracts include such provisions as:

- Added monitoring and survey equipment including cameras and chemical detector tubes.
- Annual company-provided training for shop safety and health committee members.
- Plans to reduce noise approved by shop committee members (Local 588's settlement included specifications for machinery modification, special curtains, acoustical ceilings, equipment maintenance, and monitoring of the results).
- Written notification to union and affected individuals of exposures to hazards when above legal limits.
- Medical test results given to examined individuals on request.
- Annual lung function tests, particularly for foundry workers.
- Each department posting lists of chemicals used in the department.
- The company sending written lists of all known toxic materials used in each plant to union health and safety representatives.

HEALTH HAZARD ALERT

If you work with cutting fluids . . .

NIOSH has issued an alert on commercial cutting fluids which may contain nitrosamines formed by nitrates and amines present in the fluids or present as a contaminant of certain amines.

Nitrosamines are one of the most potent animal carcinogens (cancer causers). Their ability to cause cancer in humans, while not yet proven, is strongly suspected. NIOSH estimates that 780,000 workers are exposed in the manufacture and use of these particular cutting fluids, specifically synthetic cutting fluids, semisynthetic cutting oils, and soluble cutting oils. These fluids may be used for lubricating or cooling metal being drilled, ground, milled, cut, or lathed, or for removing scrap chips or filings. NIOSH recommended industrial hygiene practices to limit skin and lung exposure to cutting fluids include: engineering controls; substitution of products known to be free of nitrates and amines or nitrosamine-contaminated amines; protective clothing; or isolation of operations where these fluids are used.

A further NIOSH study is planned to include workplace monitoring, exposed worker followup, and animal tests on the cutting fluids' cancer-causing ability.

SPORTS REPORT

by Janet Bertinuson, Industrial Hygienist

Workers make the tennis rackets we use to lob a ball, the skis on which we glide down slopes, the shoes in which we pound the track, and countless other types of athletic and recreational equipment. In the process of manufacturing these articles workers are often exposed to chemical, physical, and safety hazards. MONITOR will now devote a regular bimonthly column to the subject, and welcomes letters from readers exposed to these hazards. The Sports Report will alternate with the Dear Doctor column.



Dear Sports Reporter:

I am a health and safety committee person for a local union whose members are involved in the manufacture and resoling of athletic shoes. A number of solvent-containing glues are used in the various processes. Recently, at our committee's request, the company hired a consultant to measure solvent vapor levels around gluing operations. We were given copies of the industrial hygienist's report and would like help interpreting it.

According to the report, the hygienist used charcoal tubes attached to a pump to do the sampling. Charcoal tubes are small glass cylinders containing two charcoal chambers separated by a urethane foam layer. When a sample is to be taken, the tube ends are broken, inserted into a tube attached to a pump, and clipped or held in an upright position as close to the worker's breathing zone (mouth and nose) as possible. As the pump pulls air through the tube (at a known flow rate) the charcoal picks up the chemical vapors. The tubes are then sent to a laboratory which measures the solvent levels. The use of charcoal tubes and pumps (at specific flow rates) follows NIOSH-recommended sampling procedures for solvents.

The lab analysis of the charcoal indicated that workers were exposed to three potentially toxic substances. The chart below, taken from the industrial hygienist's report, lists these solvents, the concentrations (in parts of the substance per million parts of air—ppm) to which a single worker was exposed, the California exposure standard (in ppm), and the fraction value. All federal and state standards for 8-hour average exposures to chemical substances such as solvents are written in either ppm—parts of a substance per million parts of air—or mg/M³—milligrams of a substance per cubic meter of air.

Exposures for an individual worker:

Substance	1 Concentration p.p.m.	2 California Standard p.p.m.	3 Fraction
Toluene	75	100*	.75
Hexane	20	500**	.04
Acetone	150	1000	.15
			.94

*—The Federal Standard is 200 ppm. However the National Institute for Occupational Safety and Health (NIOSH) recommends 100 ppm.

**—The American Conference of Government Industrial Hygienists recommends a new level of 100 ppm.

The concentration of each substance (column 1) was determined from the total air sampled (found by multiplying the total sampling time in minutes by the pump's flow rate in liters per minute) and from the total amounts of each solvent present (found by lab analysis of the charcoal tubes).

The fraction values in column 3 indicate how close the actual measured exposure values come to the average exposures allowed by the standard. To figure these fraction values, the concentrations (column 1) are divided by the standards (column 2). If a fraction value is close to or greater than 1 (100 percent), the standard may be exceeded and a hazardous condition might exist for that substance.

When workers are exposed to a mixture of substances, as in this case, the fraction values are added together. As with single exposures, a total greater than 1 means the standards are being exceeded and a health hazard probably exists. That the total here is close to, while not equal to 1 should alert the committee to investigate the situation further. Standard values are only approximate guides, and *not* fine lines between safe and dangerous concentrations.

You will also notice that the 75 ppm concentration of toluene is fairly high, although less than the California standard of 100 ppm. Because this level is close to the California Standard, I agree with the industrial hygienist's recommendation that management consider further sampling. The committee may want to discuss with management the possibility of setting up a routine sampling program to insure that workers aren't being overexposed to this or other solvents.

Requests for information on your work problems should be addressed to either: Dr. Donald Whorton or Janet Bertinuson, LOHP, 2521 Channing Way, Berkeley, CA 94720.

NIOSH recently asked OSHA to set emergency standards for three substances—benzene, hexavalent chromium, and MOCA. The agency is concerned that all three may cause cancer in humans. This is the *first* (and hopefully not the last) time that NIOSH has requested an emergency standard. In the past, such standards as the 14 carcinogens (cancer-causing substances) were set when the Oil, Chemical and Atomic Workers Union and the Health Research Group (HRG) successfully sued OSHA.

BENZENE

Emergency Recommendation
1 ppm in air*
Existing Standard
10 ppm 8-hour time-weighted average
25 ppm ceiling limit

NIOSH bases its belief that benzene is a human leukemia-causing agent on clinical and epidemiological (studies of disease patterns among population groups) information gathered since its 1974 Criteria Document. According to NIOSH's new recommendations, "it is not possible at the present time to establish an exposure level at which benzene may be regarded without danger." Although many scientists have long believed that benzene can cause leukemia, this is the first time a major governmental agency has stated so. Leukemia is a fatal blood cancer.

HEXAVALENT CHROMIUM (VI)

Emergency Recommendation:
1 µg/M³* for all chromium (VI) compounds.
Existing Standard:
5 µg/M³ ceiling limit; 100 µg/M³ for chromium oxide.

NIOSH bases its request for emergency standard on known and new information available on this substance's ability to cause lung cancer, and the impracticability of distinguishing between carcinogenic and non-carcinogenic chromium (VI) compounds. Data from a Dry Color Manufacturers' Association study, also transmitted to OSHA in December 1975, showed an increase in lung cancer among lead chromate workers.

NIOSH estimates that 175,000 workers are potentially exposed to this substance from such diverse operations as pigment production, plating and anodizing operations, match and battery manufacturing, and as an antioxidant. Exposure to any form of chromium (VI) can also cause skin disorders.

MOCA

Emergency Recommendation:
None
Existing Standard:
None

NIOSH has requested an emergency standard be set based on preliminary information received from DuPont indicating dogs exposed to MOCA show development of bladder cancer. Most scientists feel NIOSH

(Continued on page 6)

NIOSH has recently transmitted Criteria Documents (new standards recommendations) to OSHA for three substances—cyanide, methyl parathion, and carbaryl. These suggested standards apply to the processing, manufacture, handling, and use of these substances. The Documents include the following key points.

CYANIDE

RECOMMENDED STANDARD:
5 mg/M³ ceiling limit
based on a 10-minute sample

NIOSH estimates 1,000 workers are potentially exposed to hydrogen cyanide, and 20,000 to potassium and sodium salts. Hydrogen cyanide is used primarily to produce chemical intermediates and in fumigation. It can also be produced by electroplating, coke ovens, resin production, metallurgy, photographic development, and other operations. Sodium and potassium cyanide are used primarily to extract ores, and in manufacturing processes such as electroplating and metal treatment.

Because cyanide can prevent oxygen from reaching internal organs and body cells, victims of cyanide poisoning can suffer from oxygen starvation. Vital organs such as heart and brain are particularly affected. Extreme cyanide exposures can lead to death. Low-level exposures to cyanide over long periods can cause skin irritation, throat irritation (especially from aerosols), headache, weakness, taste and smell changes, vomiting, and nervous instability.

NIOSH recommends annual and preplacement medical examinations and the installment of engineering controls whenever feasible. Respirators should be used only in certain nonroutine or emergency situations.

METHYL PARATHION

RECOMMENDED STANDARD:
0.2 mg/M³* 10-hour
time-weighted average

NIOSH estimates that approximately 150,000 workers in the U.S. are potentially exposed to this organophosphate pesticide. Symptoms of methyl parathion poisoning, similar to those of other organophosphate pesticides, include: nausea; vomiting; abdominal cramps, diarrhea; blurred vision; muscle twitching; and difficulty breathing. In extreme cases, death can occur. Effects of milder exposures cause flu-like or cold-like symptoms. Since this substance can be absorbed through the skin, NIOSH recommends as little direct skin contact as possible.

NIOSH also recommends: pre-employment and periodic medical examinations; biological monitoring (blood and/or urine tests); engineering controls whenever feasible; protective clothing and equipment; and respirators in emergency situations.

CARBARYL

RECOMMENDED STANDARD:
5 mg/M³* 10-hour time-weighted average

(the existing federal standard for this substance is the same, except averaged over 8 hours)

NIOSH estimates that approximately 100,000 workers in the U.S. are potentially exposed to this substance. Most carbaryl used in the U.S. is manufactured synthetically and used primarily as an insecticide.

Though not an organophosphate pesticide, carbaryl affects the body similarly to methyl parathion. Carbaryl poisoning can result in many of the symptoms listed for methyl parathion, and is also absorbed through the skin.

NIOSH recommends the same precautions for carbaryl as for methyl parathion. In addition, it suggests agricultural workers wear respirators while applying the pesticide in certain situations.

*Most air contaminants enter the body through the respiratory system—mouth, nose, air passages, lungs. Some, such as benzene, methyl parathion, and carbaryl, can also enter through the skin. Exposure limits are usually given in ppm—Parts of a substance Per million parts of air—or mg/M³—milligrams of a substance per cubic meter (M³) of air. A cubic meter is approximately equal to a cubic yard. Sometimes exposure limits may also be given as µg/M³—the number of micrograms (µg) of a substance per cubic meter of air. One milligram (mg) equals 1/28,000 of an ounce; one microgram (µg) equals 1/28,000,000 of an ounce.

More than 500,000 potentially toxic substances are used in U.S. workplaces today. And an estimated 5,000 new substances are introduced each year, without any kind of exposure limits. At present, OSHA has exposure standards for only about 500 of these substances.

The OSHA standards-setting process is long and drawn out, including multiple hearings and inflationary impact studies. Since passage of the OSHA Act in 1970, only four new standards have been promulgated (set). Three—asbestos, vinyl chloride, and 14 carcinogens—were emergency standards. The fourth—coke oven emissions—took more than four and a half years to adopt, even with evidence that it was a carcinogen.

Even after a standard has been promulgated, it can be challenged in court. For example, the Farmworkers' Emergency Re-entry Standard for pesticide exposure was thrown out almost as soon as it was passed. The Coke Oven Emissions Standard, promulgated in October 1976, is already being challenged in court.

Under OSHA's usual standards-setting process, recommendations for an exposure limit are usually first developed by NIOSH based on its assessment of the best available scientific information. The Secretary of Labor may also appoint a Standards Advisory Committee to make a recommendation. Once OSHA has proposed a standard by publishing it in the *Federal Register* for comment, the process continues with: written comments from interested parties; hearings; inflationary and economic impact statements; and hearings on those statements. Only then can OSHA set a final standard.

Under Section 6(c) of the OSHA Act, the Secretary of Labor may also set emergency standards if he "determines (A) that employees are exposed to grave danger from exposure to substances or agents determined to be toxic or physically harmful or from new hazards, or (B) that such emergency standard is necessary to protect employees from such danger." Although emergency standards bypass OSHA's usual procedure, they must be followed within six months of their effective date by a permanent standard proposal. At that point the normal OSHA standards-setting procedures are resumed, with comments, inflationary impact statements, and hearings.

OSHA has so far this year promulgated only one regular health standard—for coke oven emissions. Others are still pending, for example, noise (below) and lead (page 6).

NIOSH has transmitted Criteria Documents (recommendations for standards) to OSHA on a number of other substances, including: ammonia; inorganic arsenic; carbon monoxide; carbon tetrachloride; chloroform; chlorine; kepone; crystalline silica; sulfur dioxide; tetrachloroethylene; and toluene. Some of these, such as carbon tetrachloride, are so dangerous that NIOSH recommends substituting other, less hazardous substances. Some, such as kepone, have been shown to cause cancer in laboratory animals.

The currently promulgated coke oven emission standard and the proposals for lead and noise raise key questions about the standards-setting process. How can OSHA standards protect workers if they take 5 years to promulgate? In particular, the noise standard controversy raises a question about the legality of inflationary impact statements.

NOISE

Proposed Standard:

90 dB (decibels) 8-hour time-weighted average

More than three years have passed since OSHA proposed a noise standard. Still, nothing is final and labor and industry have drawn clearly opposed battle lines. The issues—how to achieve compliance, and whether the standard should be 90 dB, as OSHA and industry maintain, or 85 dB, as labor and the Environmental Protection Agency (EPA) demand. OSHA and labor say compliance should be through engineering controls and equipment retrofitting, with personal ear protection only an interim measure. Most of industry says through personal ear protection and regular hearing (audiometric) tests. Also in question is the legality of the inflationary impact statements now included in OSHA's standards-setting process.

OSHA first issued its proposed noise standard in October 1974. The proposal called for: (1) an 8-hour time-weighted average exposure limit (TLV) of 90 dB, and (2) establishment of hearing conservation programs for workers exposed to TLVs greater than 85 dB. The hearing conservation programs were to consist mainly of personal ear protection and hearing tests. OSHA held hearings on these provisions throughout the summer of 1975.

In June 1976, in keeping with President Ford's Executive Order requiring all subsequent federal agency regulatory actions (such as OSHA standards) to be accompanied by inflationary impact statements, the first statement on noise came out. (Editor's note: the purpose of this Order, actually issued three months after OSHA's noise proposal, was to determine costs to industry of meeting the proposed standard.)

In September a second inflationary impact statement estimated that to reach 90 dB compliance would cost industry \$10.5 billion, and to reach 85 dB would cost \$18.5 billion.

LABOR AND INDUSTRY CRITICAL

Both labor and industry have strongly criticized the noise inflationary impact statement. Industry, feeling the analysis didn't adequately compare the costs of engineering controls vs. a hearing conservation program, insists that reaching compliance would cost much more than the statement estimates. Labor strongly questions the legality of the statement itself.

Recently, United Auto Workers of America President Leonard Woodcock wrote Morton Corn, Assistant Secretary of Labor for OSHA: "we believe these statements are illegal and their intended effect is to delay the adoption of health standards which American workers so desperately need. The tactics we have seen in this regard have all the earmarks of a political ploy designed to delay decision-making and to satisfy employers. My understanding of the law is that it is to protect workers."

Meanwhile the already lengthy standards-setting process has been further delayed by inflationary impact statement preparation, hearings, and the still-to-come posthearing briefs and comments. When all this is accomplished, the Secretary of Labor still has up to 60 more days to issue a final standard.

We too wonder how inflationary impact statements can help "assure every working man and woman in this country a safe and healthful workplace." Still pending is a lawsuit filed by the Oil, Chemical and Atomic Workers Union (OCAW) to challenge inflationary impact statements. OCAW alleges *there is no congressional authority to consider inflationary impact statements when setting standards; nor is there any congressional authority to delay issuing such standards because of inflationary impact statements.*

(Report continues on page 6)

COKE OVEN EMISSIONS

The Department of Labor finally** set an 8-hour time-weighted average standard for coke oven emissions. Exposure to coke-oven emissions can cause cancer of the lungs and genito-urinary tract. The standard (150 micrograms of benzene-soluble particulates per cubic meter of air) becomes effective January 20, 1977, although employers have until January, 1980 to reach full compliance, particularly with engineering controls.

ENGINEERING AND WORK PRACTICE CONTROLS

The standard, the first to specify engineering and work practice controls, will affect approximately 22,000 workers in 65 plants throughout the United States. Provisions include:

- Specific engineering controls for charging and coking operations in already-existing ovens. If these mandated controls don't reduce emissions to 150 micrograms, employers must develop and install additional controls. New ovens may install any effective engineering controls to meet the standard.
- A requirement for detailed written compliance programs specifying dates for installing engineering and work practice controls, and for monitoring.
- A requirement that "regulated areas" be established surrounding coke ovens with access limited to authorized persons.
- A requirement for employer-provided annual medical surveillance programs of all employees working in regulated areas at least 30 days each year. This requirement also includes semi-annual medical exams for employees 45 years or older or with five or more years employment in a regulated area.
- A requirement for health and safety training of all workers in regulated areas.
- Prohibition of eating in regulated areas.
- Requires measurement of coke-oven emissions every three months or whenever production, processes, or controls are changed. Employees must be notified in writing of the results within five days.

Before the standard's final release, the American Iron and Steel Institute and six companies filed a petition with the U.S. Third Circuit Court of Appeals in Pennsylvania to review the Labor Department's action. Their appeal challenges the legality of "a number of provisions and elements" of the standard. They object to industry's having to meet standards "for which there is no technology currently available." However, one coke oven does currently meet the standard, even though at times it may exceed the limit, and OSHA is confident that the standard is technically and economically feasible.

The United Steelworkers of America have filed a motion with the same Court supporting the Labor Department. However, this doesn't

(Continued on page 7)

LEAD

Proposed Standard:

100 ug/M³ for airborne lead
60 ug/100 grams of whole blood
for blood lead levels

On October 3, 1976 the U.S. Department of Labor proposed a standard for occupational exposure to lead. This standard calls for a maximum exposure limit of 100 micrograms of lead per cubic meter of air (100 ug/M³), with additional provisions for biological (urine and/or blood tests) monitoring and engineering controls.

The proposed standard includes the following:

- Employers are to initially determine worker exposures to airborne lead. If exposure is above 50 ug/M³ employers must establish a program to bring the workplace into compliance. (*The initial determination, however, does not have to include measurements of airborne lead.*)
- If airborne lead levels are above 100ug/M³ employers are to use all possible engineering controls to reduce exposures.
- Respirators are acceptable *only* if engineering controls and work practices fail to adequately reduce exposures.
- Employers are to monitor workers' urine and/or blood lead levels. The allowable limit would be 60 ug/100 grams of whole blood.

So far the standard has raised a number of unique issues. First is the question of whether the blood level limit prescribed is safe. Until recently a blood lead level of 80 ug/100 gr. whole blood was considered the cut-off between safe and dangerous. Now research findings strongly indicate that much lower blood lead levels can cause disease. The proposed standard's 60 ug/100 grams whole blood, while lower, still may not adequately protect workers.

REPRODUCTION HAZARD

Second is whether the standard should consider a substance's possible effects on human reproductive (child-bearing) abilities. Many physicians and scientists feel the lead standard should include special provisions to protect women of childbearing age; others argue that to do so would invite job discrimination against women.

That too much lead exposure causes increased miscarriages and other reproduction problems has been well-documented in the U.S. and elsewhere. Some companies have already made pregnancy tests a condition of employment. In some cases women have had hysterectomies to insure their jobs. But substantial Rumanian research has shown that lead also affects men's reproductive functions and ability to conceive healthy, normal children. Including a special provision to protect women would obviously *not* protect the health of children born to male lead workers.

So far comments on this standard have come from labor groups such as the Oil, Chemical and Atomic Workers Union (OCAW), the United Steelworkers of America (Steelworkers), and the United Auto Workers (UAW).

OCAW criticized the standard for:

- *Not* requiring employers to monitor the airborne lead levels as part of their initial exposure determination.

- *Not* requiring employers to post warning signs in potential lead exposure areas.
- *Not* giving employees access to the employer's written compliance program.

The Steelworkers maintain the exposure limit prescribed by the new standard is too high, and that companies have no right to make women take pregnancy tests, that this is an invasion of personal privacy. The Steelworkers feel the standard should:

- *Limit* airborne lead exposures to correspond to a maximum blood lead level of 40 ug/100 gr whole blood.
- *Prohibit* administration of oral chelating agents. (These drugs, frequently given to reduce exposed workers' blood lead levels, may have more serious side effects than the lead itself.)
- *Protect* the seniority and pay rate of employees reaching maximum exposure limits and requiring transfer.

UAW FEARS DISCRIMINATION

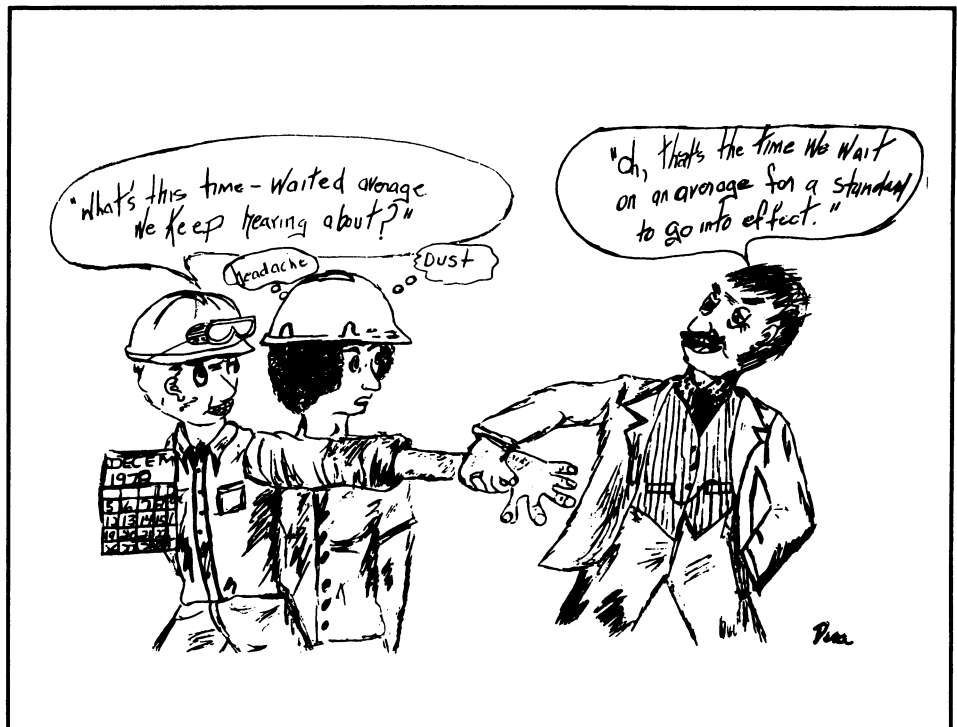
UAW suggests that setting different standards for men and women will result in discrimination against women, not protection. It calls discriminatory a General Motors Company (GMC) policy of forbidding women of child-bearing age to work at jobs with

potential lead exposure because such a policy does not eliminate any hazards.

In conclusion we believe there is sufficient evidence to show that a 100 ug/M³ standard for airborne lead exposures will not prevent low-level biological effects in all workers. To more adequately protect workers, we believe a lead standard should provide that:

- Employers monitor airborne lead levels as part of their initial exposure determination.
- Blood tests be the standard biological measurement.
- Pregnancy tests, while they may be provided free of charge to employees, ***should not be a condition of employment, must be totally voluntary, and cannot be used in any way to discriminate against female workers.***
- Warning signs be posted in exposure areas to: (1) alert employees of possible lead exposure and associated hazards, and (2) warn employees not to smoke, eat, or store food in the area.
- Pregnant women be given the opportunity to transfer to another job at equal pay for the duration of their pregnancy without loss of seniority, pension, or other benefits.

Lead exposure can seriously damage both male and female reproductive functions. We would like to see a standard that adequately protects every fetus as well as every working man and woman.



MOCA

acted appropriately in requesting strict regulation of MOCA without waiting for human cases to occur.

OSHA publication #2202, *Carcinogens*, estimates that between 800 and 1,800 workplaces in the U.S. use MOCA, mainly as a curing agent in the production of certain liquid-castable polyurethane elastomer resins.

MOCA (also called 4,4'-Methylene bis(2-

chloroaniline)) was originally one of the 14 carcinogens for which OSHA issued emergency standards on January 29, 1974. However, the entire MOCA standard was withdrawn during court proceedings. The withdrawal was apparently for procedural not substantive reasons. NIOSH's recommendation is basically the same as the version thrown out in court.

COKE OVENS

Continued from page 5

mean the Steelworkers aren't critical of the final standard. They are annoyed it doesn't contain a "rate retention" provision. Such a provision would have insured that workers becoming ill from coke oven exposures and transferred to lower-paying jobs would keep their higher pay rate until retirement.

"Rate retention" was dropped because it "properly belongs in the realm of collective bargaining." According to Morton Corn, Assistant Secretary of Labor of OSHA, this issue goes beyond the immediate problem of coke oven emissions. Steelworker officials still feel the final standard should have included pay guarantees.

** A Little Chronology

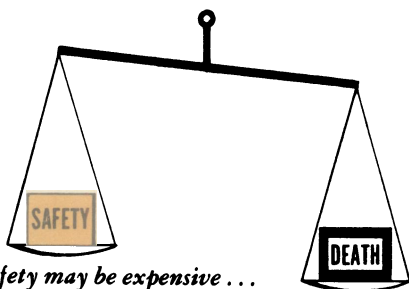
1970-71 Steelworkers publish study results indicating coke oven workers suffer increased death rate due to cancer of lungs and genito-urinary system (genitals, liver, kidneys).

1971 Steelworkers press Labor Department for a coke oven emission standard, maintaining the then-existing ANSI standard was too high.

February 1973 OSHA establishes Standards Advisory Committee to recommend a standard.

July 1975 OSHA publishes the proposed standard (see description of standards-setting procedure).

October 1976 Coke Oven Standard finally promulgated.



*Safety may be expensive . . .
but death is permanent*

Published monthly by the Labor Occupational Health Program, Institute of Industrial Relations, University of California, 2521 Channing Way, Berkeley, California 94720, (415) 642-5507.

EDITORIAL STAFF

Janet Bertinuson Paul Chown
Gene Darling Morris Davis
Andrea Hricko Madelyn O'Brien
Sidney Weinstein Donald Whorton, *Director*

Annual subscription rates: Organizations and Institutions—\$10.00, Individuals—\$5.00. Quantity shipments are also available to union locals or other groups at a cost of 10¢ per copy per issue, with an annual subscription.

The opinions expressed in the MONITOR represent the views of the authors, and not necessarily those of the Institute of Industrial Relations.

All material may be reprinted without permission. Please credit LOHP Monitor.

THE GOVERNMENT ARENA

AT THE STATE LEVEL

● **Brown signs Carcinogens Bill.** Governor Brown finally signed the Carcinogens Bill (SB 1678) sponsored by Sen. Arlen Gregorio (D-Menlo Park). (Carcinogens are substances that can cause cancer).

The Bill, effective January 1, 1977, appropriates \$1 million to the Department of Industrial Safety (DIS) for the Department of Health to perform inspections, initiate a six-month statewide media campaign to inform employees and employers about carcinogens, and provide consultation to users. Even before this bill, Cal/OSHA had required the state to monitor 16 carcinogens including asbestos and vinyl chloride. According to Gregorio, the State failed to implement that law.

Of an estimated several thousand carcinogen users (the figure 4,000 was estimated by a study conducted for the state by Jeffrey Hahn), only about 20 employers have complied with the reporting law. The new bill provides for increased civil penalties for failure to report and for violations of the health and safety standards. Penalties are to commence after the information campaign concludes.

● **Cal/OSHA seeks to improve job health enforcement.** Cal/OSHA seems to be placing a greater emphasis on health lately. These efforts include: amendment proposals to clarify the job safety and health enabling act; and an initiative to involve local environmental health agencies in some aspects of job health standards enforcement. The proposed enabling act amendments are now circulating among DIS leaders before being finalized. They will make it easier for DIS to justify "yellow tagging" imminent-danger-creating machines, devices, means, or procedures in cases of health hazards.

These amendments establish three health hazard categories—(1) contaminants that are deadly when present in sufficient concentrations, such as carbon monoxide, (2) contaminants that, though seldom deadly, can cause serious health damage with long-term exposures, such as lead, and (3) car-

cinogens for which the relationship between disease and exposure is not precisely known. The amendments also improve DIS's ability to "yellow tag" by shifting the burden of proof from DIS to the employer where carcinogens are present, or where the legal exposure limits for contaminants or noise have been exceeded.

AT THE FEDERAL LEVEL

● **President Ford signs Toxic Substances Bill.** In October Ford signed the Toxic Substances Control Act which, according to a press release, will minimize adverse regulatory impacts on the chemical industry by "allowing early and selective regulation of only those uses that are likely to be hazardous."

The Act makes mandatory the registration of all new substances a manufacturer plans to introduce into workplaces. Such a law might have helped prevent the Kepone disaster from occurring.

● **Congress exempt from OSHA.** In a statement released October 11, 1976 Rep. Larry Pressler (R-S.D.) said his office has so many violations of the OSHA that he would have been subject to substantial fines. If he weren't a Congressman, that is. Congress voted itself an exemption from OSHA. Pressler's violations would have included: cramped work space; too narrow passageways; dirty vents; rags in vent grills; protruding carpets; light bulbs and heating elements in small closets; etc.

Pressler said the office of the architect of the Capitol is going to correct the faults in his office, anyway.

● **A small announcement.** Appearing in the October 20, 1976 Wall Street Journal was the following brief announcement: "States won't get federal funds for enforcing state job-safety rules stiffer than those recently passed by Congress, the Labor Department decides. The federal changes exempt many farms from inspections and bar monetary penalties when inspectors find fewer than 10 minor safety violations at a business."

Please enter a subscription to the

Labor Occupational Health Program **MONITOR**.

Check one: ☐ Organization (\$10.00) ☐ Individual (\$5.00)

Quantity shipment of _____ extra copies per issue (\$1.00 per year for each extra bulk order with annual subscription)

Name _____

Organization (if any) _____

Address _____

City _____ State _____ Zip _____

Please prepay. Make checks payable to: Regents of U.C.

KEPONE UPDATE

The Kepone saga continues. In early October, 1976, concluding the EPA-filed suits against Allied Chemical Corporation, Life Science Products Company, the City of Hopewell, Virginia, and several implicated individuals, a Federal Court fined Allied Chemical a record \$13.5 million. The chemical giant had pleaded no contest to 940 counts of polluting the Hopewell sewage system and the James River. An additional 153 counts of conspiracy to pollute these bodies of water were dropped.

Also indicted and fined in the case were: the City of Hopewell for \$10,000 on 10 pollution counts; Life Science Products Company, now closed, for \$3.8 million; and each of the co-owners of Life Science for \$25,000 each, to be paid within a 5-year probationary period. Life Science is not expected to pay since it no longer exists; an additional \$25,000 fine each was suspended for Life Science's co-owners.

Characterized by an Allied representative as a *moderately* toxic pesticide, Kepone was developed, manufactured, and marketed by Allied's Hopewell plant until January, 1974. At that time production was turned over to Life Science Products Company. Allied remained the pesticide's sole distributor. In July, 1975, the Virginia State Health Department closed down the Life Science plant; it had found employee complaints of sickness were related to plant Kepone exposures.

Still pending are perhaps \$100 million in civil damage suits filed against Allied by former Life Science employees and Virginia fishermen. Also pending is a \$61.4 million damage claim filed by Life Science employees against OSHA. The suit charges that OSHA's failure to inspect the Life Science plant following a September 1974 employee complaint resulted in workers' Kepone exposures and disabling illnesses.

VICTIMS' FUTURES BLEAK

The futures of Kepone-poisoned victims and Kepone-contaminated wastes still pose serious problems. To be disposed of are: 1.5 million gallons of liquids and sludges in the Hopewell sewage treatment plant's "Kepone Lagoon;" approximately 100,000 pounds of Kepone and Kepone products

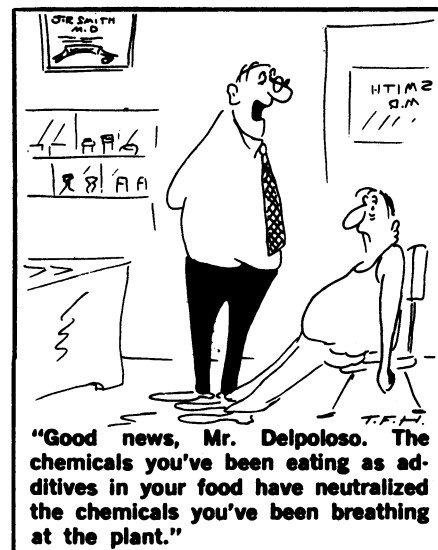
stored in Hopewell and elsewhere; and Kepone-contaminated soil and sludges resulting from the Life Science plant clean-up. Earlier this year, EPA-funded research demonstrated that Kepone could be destroyed by first evaporating it, then exposing its vapors to 1,000 degrees Centigrade (approximately 1832 degrees Fahrenheit) for one second. EPA has funded the State of Virginia to conduct further test burns. If they are successful, an Ohio firm will build moveable units to get rid of all the Kepone wastes.

Decontaminating Kepone-poisoned victims is another story. Stored in fat tissues including the brain, Kepone is eliminated from the body very slowly. Physicians have feared Kepone poisoning and symptoms are irreversible. Symptoms include "shakes," nerve damage, blurred vision, and aches and pains. Kepone had also produced sterility and was shown to be embedded in the brain. During the past year, NIOSH studies have proven that Kepone causes liver cancer in laboratory animals. Scientists and physicians fear it may also cause cancer in humans.

There is one hopeful note, however. Preliminary Medical Center of Virginia (MCV) experiments with the drug Cholestyramine suggest it may increase the amount of Kepone eliminated by the body. Cholestyramine is usually used to reduce high cholesterol levels. Unfortunately no one knows whether Cholestyramine therapy can permanently alter either the Kepone symptoms or the course of future events such as cancer. Nor does anyone know what the side effects in this situation might be. Only time and experience can tell.

ALLIED EAGER TO AMEND

Now that Allied has been exposed, the company seems eager to apologize and demonstrate its "good will" to the public. In a recent full-page paid "Open Letter" advertisement published in most Virginia daily newspapers, the Washington Post, and the New York Times, Allied expressed "its regrets to the people of Virginia for Kepone contamination of the James River," and assured readers it would expand its efforts to "remedy the damage caused by Kepone."



This past summer, Allied awarded the Medical College of Virginia a \$62,247 grant for one year to study Kepone's effects on humans and laboratory animals. Also this summer, Allied requested the Environmental Protection Agency (EPA) to cancel the registration of all 12 of its Kepone-containing pesticides. The approximately 37 Kepone-containing products registered with secondary producers were not affected. Allied is now awaiting word on what to do about the Kepone products and wastes stored in Hopewell and Baltimore, Md.

Meanwhile, it doesn't seem enough that Allied is *now* eager to cooperate with the public and EPA. Nor does it seem enough that Allied is *now* supporting research to find a Kepone cure.

A LANDMARK DECISION (?)

According to an Environmental Protection Agency administrator, the fine against Allied is "a landmark decision in the history of environmental protection. The court clearly signalled that polluters will be held accountable to the full extent of the law." But what about workers? We wonder whether poisoners of people will be held as responsible as poisoners of rivers. In the meantime no one knows the ultimate fate of the Kepone victims or their families, exposed inadvertently by the work clothes worn home from the plant. *They* already have a cloud hanging over them.

Institute of Industrial Relations,
University of California
Center for Labor Research and Education

2521 Channing Way
Berkeley, CA 94720

Address Correction Requested

Nonprofit Org.
U.S. Postage
PAID
Berkeley, Calif.
Permit No. 1