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Labor Occupational Health Program MONITOR

In This Issue:

On the Cover:

Mandatory drug testing in the workplace is gaining momentum. Encouraged by commercial promoters of drug testing services, by the media, and by the political climate, many employers in both the private and public sectors have instituted testing programs. When job applicants or veteran workers are required to undergo such tests, what are the implications for their civil liberties and their privacy? What can unions do to prevent abuse of workers' rights? This issue of **Monitor** *looks at the drug testing controversy; see pages 4–9. Also in this issue,* **Monitor** *interviews former federal OSHA health standards director Dr. Bailus Walker, Jr., who assesses OSHA's efforts to prevent occupational disease. Dr. Walker finds little progress under the current administration; see page 12. (Photo: Automated testing of urine samples for drugs using the EMIT test. Photo courtesy of PharmChem Laboratories, Inc., © Rick Browne Picture Group.)*

Labor Occupational Health Program
MONITOR

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Right to Know

LOHP Will Join AFL-CIO Teleconference in April

The Labor Occupational Health Program will participate in a national teleconference on the "right to know," sponsored by the AFL-CIO and the George Meany Labor Center, on April 23–24, 1987.

The teleconference, linking Labor Centers across the country via a closed-circuit satellite TV hookup, will examine OSHA's Hazard Communication standard, which gives workers and their unions access to information about hazardous chemicals in the workplace. Participants will also discuss how unions can use the rule in their efforts to protect worker health.

The Bay Area program will alternate between the national teleconference and local discussion of California issues including state "right to know" regulations and how they differ from the federal standard. Recently proposed Cal/OSHA cutbacks and their effect on worker access to information will be addressed as well. *(See "Newswire" in this issue of Monitor.)*

There will also be opportunities for problem-solving and skill-building in using the "right to know." To register for the Bay Area session, or for more information, please call Cathy Davis at (415) 642-0323.

This special double issue of MONITOR (Winter 1987) combines the scheduled Fall and Winter issues.

Newswire

Labor, Legislators Launch Fight

Governor Proposes to Kill Cal/OSHA

California AFL-CIO unions have begun a campaign to fight Republican Governor George Deukmejian's proposal to abolish the California Occupational Safety and Health Administration (Cal/OSHA). In January, 1987, Deukmejian announced plans to end the state program and transfer its responsibilities to the federal government.

Joining the AFL-CIO in opposition to the move were many health professionals, prominent members of the state legislature, the Sierra Club, and the *San Francisco Chronicle.* Opponents of the plan said that the Cal/OSHA program has proven itself much more effective than the federal government in protecting workers' health.

Under Deukmejian's proposal, state funding for Cal/OSHA would be eliminated and federal OSHA would assume responsibility for nearly all industrial health regulation and enforcement in California. The governor said that the transfer would save the state $8 million per year. He has threatened to use his veto power to strike Cal/OSHA funding from the 1987-88 state budget if the legislature restores it. The proposal has the support of Ron Rinaldi, director of the state Department of Industrial Relations, which runs the Cal/OSHA program.

Federal OSHA is responsible for health and safety enforcement in 26 states. The other 24 states, including California, currently run their own regulatory programs, which have been approved by the federal government.

At a San Francisco press conference, John Henning, head of the California AFL-CIO, called the governor's plan a "dramatic destruction of worker safety." Henning pointed out that Cal/OSHA sets exposure limits for 170 hazardous substances which federal OSHA does not regulate. Assemblyman Dick Floyd (D.-Hawthorne) and state Senator Bill Greene (D.-Los Angeles) have said that federal OSHA responds much more slowly to worker complaints and emergencies than Cal/OSHA does. Health and safety activists have also expressed fears that federal OSHA would not be as responsive to proposals for new standards in areas like indoor air pollution or VDTs.

The proposal would eliminate over 350 Cal/OSHA inspection and enforcement personnel. Additional personnel would probably be cut from related programs such as the Hazard Evaluation System and Information Service (HESIS), which runs a statewide toxic substances "hotline."

Many protest activities are planned by labor and other groups during the coming months.

TWO JUDGES VETO FEDERAL DRUG TESTING

A federal judge in Savannah, Georgia has become the second in recent months to rule that random drug testing of federal employees is unconstitutional.

Judge B. Avant Edenfield ruled that random drug testing of civilian employees of the U.S. Army constitutes "unwarranted search and seizure" in violation of the Fourth Amendment. Judge Robert F. Collins in New Orleans earlier had ruled similarly in a case involving Customs Service employees. Both district court decisions are currently being appealed by the federal government.

In the summer of 1986, President Reagan issued an executive order calling for drug testing of all federal workers. That program has since been narrowed to include only employees in "sensitive" positions. Some observers have said that as many as 50% of all federal jobs might be classified as "sensitive," although no formal guidelines have been announced.

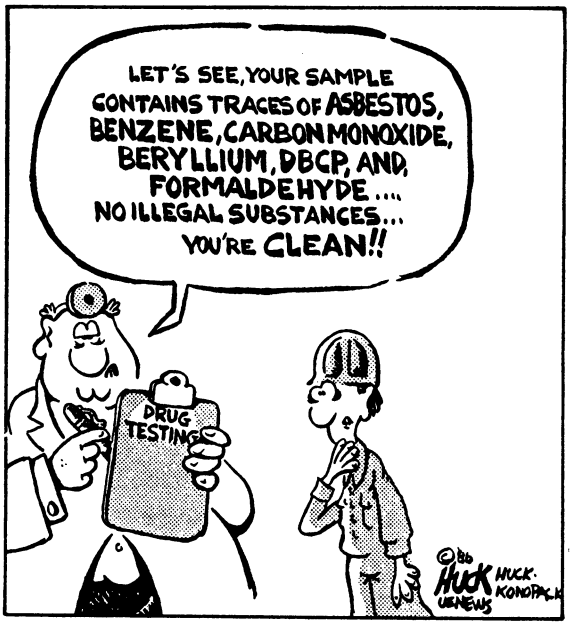
The U.S. military has conducted random drug testing of its personnel for over five years.

Monitor Closeup on Drug Testing

In January, 1987, LOHP staff participated in a major Berkeley conference, ***Drug Testing and Employment Rights: Strategies for Labor.*** *Sponsored by the University's Center for Labor Research and Education, the conference examined the growing popularity of workplace drug testing and the implications of such programs for workers and unions.*

Among the topics discussed were workers' constitutional and legal protections against mandatory drug tests, the accuracy of testing technology, collective bargaining strategies, treatment and rehabilitation of drug-dependent employees, and the relationship of drug testing to occupational safety and health issues.

Several articles in this issue of ***Monitor,*** *including the editorial below and the exchange of views on the following pages, consider questions raised at the January conference.*



—Mike Konopacki, Labor Cartoons.

An Editorial

Workplace Drug Testing: An Occupational Health and Safety Issue?

by Robin Baker
LOHP Director

These days one often hears the terms "drug testing" and "safety" uttered in the same breath. Media attention focuses on tragic accidents and the possible link to drug and alcohol abuse among bus drivers, train crews, pilots, and nuclear power plant operators. Debate rages over whether testing programs can offer an effective—or even legal—approach to preventing such tragedies. *(See related articles in this issue.)*

But what of *worker* health and safety? Worker safety is often cited as a justification for random screening programs. But how much genuine concern is there for worker protection? If an employer who is normally disdainful of OSHA regulations suddenly starts referring to his duty to perform drug testing in order to provide a "safe and healthful workplace" as required by the Occupational Safety and Health Act, workers and their unions would be wise to think twice before accepting this argument.

First, OSHA does not require drug and alcohol testing. Second, if an employer is truly concerned about worker protection, then there are important questions to answer before forging ahead with a testing program:

- If there is a significant drug and/or alcohol problem in the workplace (significant enough to warrant consideration of a testing program), what is causing the problem? How might the work environment be contributing to substance abuse? Will a testing program improve the situation? Or should something be done to reduce workplace stress, which often fosters drug and alcohol dependency?
- What other hazards are there on the job, and what is being done to prevent them? Is a drug/alcohol program integrated into an overall health and safety approach?

JOB STRESS AND DRUG ABUSE

High-stress jobs are associated with a whole set of disorders, including anxiety, sleep disturbances, mental health problems, skin rashes, hypertension, and peptic ulcers. Highly stressful jobs are also associated with drug and alcohol abuse.

For example, in a study of air-traffic controllers conducted by the Boston University School of Medicine for the FAA, it was found that more than 50% of people in this highly stressful occupation were heavy drinkers. Shift workers are another group who have been shown to experience a high degree of stress and have an accompanying high rate of tranquilizer, sleeping pill, and alcohol abuse.

Job-induced, stress-related diseases

are on the increase, according to the National Institute for Occupational Safety and Health. NIOSH now lists psychological disorders as one of the top ten causes of occupational disease. Compensation claims for work-related neurosis more than doubled during 1980–82 in California, while claims for all other work-related injuries during the same period actually declined.

It is not surprising at all that highly stressed workers turn to drugs and alcohol in order to achieve the relaxation response that the human body requires to recover from stress. What *is* surprising is that any reasonable society would look toward random testing to prevent drug and alcohol dependency, while ignoring underlying contributing factors such as job stress.

Job stress is obviously not the sole cause of drug and alcohol abuse. But if the workplace *contributes* significantly to the problem—as it often does—our society should consider the substance abuse an occupational disease, just like other illnesses which are aggravated or prolonged by conditions at work.

UNION ROLE

Unions have a critical role to play in assuring that employers adopt sensible and well-balanced drug and alcohol programs. When the employer opens the door by proposing drug or alcohol testing, the union can seize the opportunity to bargain not only for employee assistance and rehabilitation programs, but also for prevention measures directed at stressful conditions.

A good prevention program might include: reduced work hours at full pay for highly stressful jobs; improved staffing ratios where work overload is a source of stress; increased worker control over decisionmaking; additional breaks or job rotation; and/or stress-reducing changes in workplace design. Unions in many European countries are ahead of their U.S. counterparts in bargaining contract protections against stressful conditions. In some countries, measures designed to reduce stress in the workplace have been written into law. We should begin to move in the same direction.

For example, in Sweden, stress is a recognized hazard among video display terminal (VDT) operators. A VDT ordinance under their Safety and Health Act requires that VDT operators be provided special rest breaks and task rotation, wherever possible.

This approach to worker impairment ensures that the employer does its part in creating a safe and healthy workplace, rather than placing all the responsibility on the individual worker. It also places the safety question in proper focus. It is important to keep in mind that drugs and are not the only sources of impairment; they should not be singled out.

As a business representative of an airlines union recently said to me, "I am always asked the question, 'Would *you* want to fly on a plane with a pilot who was on drugs?' I say, 'No, but would *you* want to fly with a pilot who was so stressed out and exhausted that he didn't know up from down?' "

Drugs, alcohol, and excessive stress can all cause impairment and should *all* be addressed by any workplace program which purports to create a safer work environment. Even certain workplace chemical exposures can cause impairment, as in the case of a worker who used degreasing chemicals on the job and was arrested for drunk driving on the way home from work. The worker had to prove that his impairment resulted from chemical exposure, not drug or alcohol abuse. A job safety program would obviously have to deal with this kind of impairment, too.

Let's look first to the workplace, and to the many ways it may produce worker impairment—directly or indirectly. We live in a society which is quick to look to the individual as the source of problems; consequently we are also quick to devise solutions which focus on the individual. There are numerous recent examples of this tendency in the world of occupational health and safety. Rather than clean up the workplace, emloyers seek to exclude workers with "individual" problems—to ban fertile women from work with lead in industry; or to refuse to hire "chemically sensitive" people for work in chemical plants. Random drug and alcohol testing programs are yet another example: rather than deal with the workplace sources of the problem, they deal with the individual's impairment, which is as much a symptom as it is the problem.

The real causes of worker impairment are varied and complex, but it is fair to say that they are not just individual problems. They will require collective solutions. And collective solutions are what the trade union movement is all about.

Screening of urine samples using gas Chromatography/mass spectrometry. (Photo courtesy of PharmChem Laboratories, Inc.)

Accuracy Questions, Worker Protections

Drug Testing and Employee Rights

by Joan Braconi and Nick Kopke

Drug and alcohol abuse are serious problems confronting our society. These problems may impact on the workplace, resulting in impaired work performance. Over the past year, employers, encouraged by pharmaceutical laboratories promoting drug testing services, have embraced drug testing and screening as the solution to many poor work performance problems.

Most of the popular drug testing methods cannot, however, determine impaired work performance. These tests can only detect past use of medication and/or controlled substances. Drug tests, particularly the less expensive types of urinalysis, are inaccurate and give a high percentage of false positive readings. Also, the employer can ascertain additional, unauthorized information about the medical condition of the employee from the blood or urine sample taken for the drug test. A drug test opens a chemical window through which the employer may peer into the private lives of individuals.

Employers have a valid concern regarding drug- or alcohol-impaired work performance; however, the appropriate and proven method for identifying performance problems is careful observation by attentive supervisors.

Alcohol and substance abuse are treatable diseases, and any employee suffering from these conditions should be offered the opportunity for rehabilitation through a reputable program with the full support and encouragement of the employer.

Workers may have certain protections against mandatory alcohol and drug screening programs under their union contracts, and there are other safeguards under federal and California law. Later sections of this article will suggest some of the contractual and legal rights which workers may be able to exercise.

ACCURACY OF TESTS

Opposition to drug testing is rooted in scientific, as well as legal and philosophic grounds. Independent scientific studies have proved beyond any doubt that many of the commonly used testing methods produce a high percentage of false positive readings.

For example, the EMIT test for drug use (Enzyme Multiplied Immunoassay Test), manufactured by Syva, is relatively inexpensive and widely used by employers. It is also one of the least accurate tests. In independent scientific studies, the tests have had a false positive rate of 25% to 65%. In some cases, the false positives occur because of improper technical procedures, poorly trained technicians, and just plain sloppy handling of materials. In many other instances, the test gives a false positive because it detects perfectly legitimate and unharmful chemicals in the employee's system. A disciplinary action based soley on the result of this particular test should, almost certainly, be overturned. Some employers, recognizing the inaccuracy problems of this test, will confirm it with a second EMIT test. If the inaccuracy of the first test was caused by detection of a legitimate chemical in the worker's system, the same reading will be repeated in a second EMIT test.

The RIA (Radioimmunoassay) test has many of the same problems and should never be allowed as a "back up" to the EMIT (or vice versa). The most reliable urine test for drugs is gas chromatography/mass spectrometry. This is an expensive test and rarely used by employers.

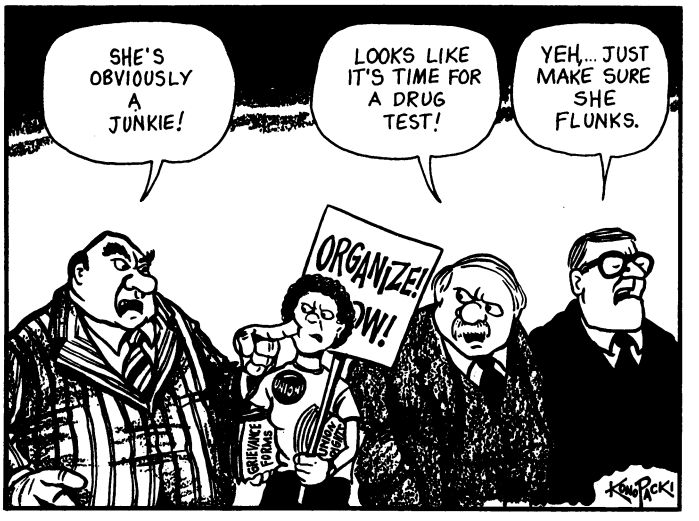
SOURCES OF FALSE POSITIVES

Over-the-counter and prescription drugs can trigger false positive responses. Even such commonly used drugs as Advil and Nuprin can show up as illegal drugs in some tests.

Codeine, a commonly prescribed pain reliever, can "look" like heroin in urinalysis. Heroin is indicated by the appearance of morphine in the urine, but codeine will also metabolize into morphine in the urine.

Quinine is a common adulterant in street heroin, but it is also commonly used in soft drinks and in over-the-counter medications. The appearance of morphine and quinine is a very strong indicator (to the drug testing lab) of heroin usage, so that the perfectly innocent ingestion of codeine and quinine together "looks" suspicious.

Cocaine is a rapidly metabolized drug, so technicians often look instead for procaine (a common adulterant) to indicate cocaine usage. However, a positive reading for procaine could also be due to the use of procaine penicillin, a



—Mike Konopacki, Labor Cartoons.

prescription drug.

Some tests for marijuana usage are so sensitive that an individual who has had passive exposure to the smoke (e.g. in a room with someone smoking marijuana) may test positive even though they, themselves, did not smoke.

According to PharmChem, a prominent laboratory in the field of drug testing:

> **It is important to remember that urinalysis results do not necessarily provide conclusive information about what drugs a patient has taken. This is because of variations in a drug's metabolism. The urinalysis results indicate which substances are present in the urine after the drugs used have undergone conversion in the body. The metabolic end products present in the urine can come from a variety of sources, both legal... and illicit.**

TESTS DON'T SHOW IMPAIRMENT

A urinalysis cannot indicate whether an individual is under the influence of a drug, or whether work performance is impaired. Urinalysis tests for past, not current use. The drug may be detected in the individual's urine long after it was used. Detection time varies with the individual, depending on fluid intake, metabolic rate, kidney function, food intake, amount of drug injected, and other factors. However, the following indicates approximate maximum detection times for certain drugs:

Alcohol	12 hours
Heroin	24 hours
Barbiturates	38 days
Cocaine	18–144 hours
Marijuana	120–720 hours

INVASION OF PRIVACY

A blood or urine sample can yield information about an individual beyond questions of drug use. An employer can determine pregnancy through a urine sample, and exposure to the AIDS virus through a blood sample. An employer can determine genetic predisposition to a wide variety of diseases. It is unlawful for an employer to seek this kind of information without the express written consent of the employee. However, it is within the realm of possibility that an unscrupulous employer might be tempted to use the samples for these purposes.

UNION RESPONSE

In almost all cases a union's position will be a flat *no* to any agreement on drug testing. Most workers should never, under any circumstances, be subjected to drug tests. Most people are engaged in work where there is no possibility of them proving to be a danger to the public or themselves. There is no justification for requiring drug testing for most employees.

However, some employees do work with potentially dangerous equipment, drive potentially dangerous vehicles, or carry weapons. Even in these cases the union's initial position should be that observation is the proper way to detect impaired behavior, and that drug testing is not necessary. Under no circumstances should the union agree to blanket drug screening or random sampling. (This kind of an agreement is probably a violation of constitutional rights.)

The union should not agree to testing for drug use which is not related directly to work performance. Any discipline should require proof of an actual performance problem. The union should not agree to any employee assistance program which requires or allows drug test results to be reported to the employer, or to any treatment program which if unsuccessful will result in disciplinary action. Drug and alcohol problems, like all health problems, often require several treatments to be tried before a successful approach is discovered.

In addition, in California the union cannot legally agree to certain policies, such as those which allow taking of urine or blood samples without the employee's written consent, or which provide for employee discipline for refusing to authorize the release of drug test results.

LEGAL RIGHTS

In addition to the safeguards which may be negotiated in union agreements, federal and California law also gives workers certain rights with regard to employer-required drug testing.

Public employees have special constitutional protections as workers that are not available to private sector employees. The federal and California constitutions protect citizens from certain actions of the government, which in this case is the employer. Relevant constitutional rights protect against unreasonable search and seizure and against self-incrimination. (The precise application of these provisions to public employees confronted with drug tests is a developing area of the law.)

All employees in California (both private and public nonfederal sector) have a right of privacy under the California Constitution. Article 1, Section 1 *specifically forbids* an employer from collecting or using information which does not directly relate to the job. Use of data about off-the-job behavior which does not affect job performance would appear to be prohibited.

All employees in California (both private and public nonfederal sector) also have a variety of other rights under California statutes which provide for medical confidentiality, laboratory licensing, patient remedies against medical malpractice, and reasonable accommodation for employees with drug or alcohol problems.

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Nick Kopke is an attorney who practices labor law in Berkeley.

A Response

Drug Testing Technology: Unfounded Fears?

At the Labor Center's January conference, the views which Joan Braconi and Nick Kopke express in their article were questioned on several grounds by Charles Renfroe of PharmChem Laboratories, Inc., a major drug testing laboratory in Menlo Park, California., One of Mr. Renfroe's themes was that drug testing technology continues to improve, and has become much more reliable than Braconi and Kopke suggest. Although the issue of test accuracy is only one concern among the many which testing programs raise, **Monitor** *invited Mr. Renfroe to respond to the article in the interest of airing both sides of the accuracy question. Comments by Braconi and Kopke follow Mr. Renfroe's remarks.*

by Charles Renfroe
PharmChem Laboratories, Inc.

Drug toxicologists should resist being drawn into the political fray when management and labor battle over the application of drug testing in the workplace. But when biased arguments on either side misrepresent the capabilities of technology, silence not only contributes to misunderstanding but erodes the credibility of science.

In the article entitled **Drug Testing and Employee Rights,** the authors Braconi and Kopke express doubts regarding the accuracy of drug testing methods, and hence the validity of drug testing programs. Nevertheless, identifying impaired work performance by observation alone is a poor alternative which is prone to subjective interpretation, and may be used by supervisors to single out a person on the basis that he or she is exhibiting "strange" behavior. Added to the fact that drug users build up tolerance and compensatory behavior, a chronic user in need of help may exhibit no identifiable behavioral indications. These factors leave testing as an objective and fair assessment of drug usage.

Those who oppose drug testing in any form make a strategic error to the extent that they pin their opposition on the supposed inherent inaccuracy of test results. Braconi and Kopke attack the accuracy and reliability of test results by presenting erroneous information which does not represent the capabilities of the technology. My purpose is to respond to some of these inaccuracies.

Their article states that "independent scientific studies have proved beyond any doubt that many of the commonly used testing methods produce a high percentage of false positive readings." They single out the Syva Company's enzyme immunoassay (EMIT) as "one of the least accurate tests."

EMIT TEST

The EMIT-d.a.u. series comprises separate tests for many of the common drugs of abuse. Using specific antibodies to detect the presence of drugs or drug metabolites in urine, these EMIT tests are regulated by the federal Food and Drug Administration (FDA) as medical devices. As such, the manufacturer must obtain FDA clearance prior to marketing each type of EMIT test, and that clearance is contingent upon a scientific review of the test's accuracy. In addition, the entire manufacturing process used to create the EMIT test on a commercial scale is regulated by the FDA to ensure that each lot of EMIT tests meets or exceeds the performance requirements established by the initial approval procedure.

PharmChem regularly uses the EMIT-d.a.u. test and believes it is an extremely reliable and accurate test when used for the detection of drugs in urine and when used with a confirmatory test. This confidence is based upon PharmChem's own laboratory experience and also upon a number of comparative studies in the technical literature which have examined the reliability and accuracy of the EMIT-d.a.u. laboratory tests in conjunction with a second confirmatory test based on a different technology.

The EMIT system has been reported to be subject to high rates of "false positive" error. Such unfounded criticism has resulted for the most part from imprecise use of terminology, misrepresentation of test results in the published literature or, more seriously, from a failure to understand that the Syva Company has released several different generations of its EMIT-d.a.u. test assays for drug abuse testing. It *is* correct to state that, *in the past,* there were reports in the technical literature that certain non-steroidal anti-inflammatory drugs such as ibuprofen, fenoprofen or napoxen created a cross-reactivity with several of the EMIT assays. It was also reported that the EMIT assays for drugs of abuse reacted with certain enzymes normally present in the human body. These reports induced Syva Company to modify the test kits to preclude such interferences.

The *current* generation of EMIT-d.a.u. assays marketed by Syva Company does not produce either of the foregoing sorts of interferences and, thus, does not generate this sort of "false positive" result. PharmChem uses only the latest generation of EMIT-d.a.u. test reagents from Syva, and like most reputable laboratories, PharmChem monitors all technical reports in the literature regarding such cross-reactivity or interferences to ensure that its testing remains scientifically valid and up-to-date.

PASSIVE INHALATION

The EMIT-d.a.u. immunoassay for cannabinoids has also been criticized in relation to so-called "passive inhalation" situation where an individual who did not smoke or use marijuana nonetheless inhaled enough marijuana smoke from others in close proximity to trigger a positive EMIT test result. Although these passive inhalation "positives" have been reported on the basis of in-laboratory clinical experience, they have been the result of extreme and unusual concentrations of marijuana smoke in tightly confined spaces, which may not necessarily resemble any likely scenario in ordinary experience. Moreover, it is scientifically possible to distinguish between these two distinct groups of users and non-users by specifying a higher "cut-off calibrator," i.e., the

number assigned within the EMIT-d.a.u. assay as the point at which a given urine specimen would be deemed positive for the detection of cannabinoids.

TEST CONFIRMATION

Several of the EMIT-d.a.u. assays (e.g. amphetamines and opiates) are specifically designed by the Syva Company to detect the presence of one or more of a group of chemically related drugs. This is an entirely scientifically valid test design if the EMIT-d.a.u. test is used only as a *screening* test and any positive result from such a test is then confirmed by a different testing methodology. The wide reach of these assays enables a single test to check for the presence of a number of drugs, which is both more economical and more efficient in large volume screening. The conclusive test, however, is the confirmatory test, which is by gas chromatography/mass spectrometry (GC/MS).

GC/MS has become the preferred method of confirmation in corporate drug testing programs despite the contention by Braconi and Kopke that it is "rarely used by employers." Most major commercial laboratories now use GC/MS routinely to confirm pre-employment and employment drug screens, and at PharmChem, industrial clients have no other choice.

COCAINE POSITIVES

Braconi and Kopke also give readers the false impression that analysts look for procaine as an indicator of cocaine use. While procaine, a common cocaine adulterant, can be detected by most methods of urinalysis, such a result would never be reported as a cocaine positive. Most laboratories detect benzoylecgonine, a compound produced when the body metabolizes cocaine; the presence of benzoylecgonine—detected by an initial screen and confirmed by a separate technology—is conclusive evidence of recent cocaine use.

PHARCHEM REFERENCE

Braconi and Kopke quote PharmChem without referencing the 1980 article from which the quotation was taken. The article, "Urine Drug Screening and Interpretation of Test Results," written by PharmChem founder Dr. James A. Ostrenga, concerned only one method of analysis, Thin Layer Chromatography, which is used predominately as a tool in drug rehabilitation programs. The quotation is taken out of context and should in no way be interpreted as an argument against the current state of technology available today for workplace drug programs.

INVASION OF PRIVACY

Finally, the assertion that laboratories may collude with unscrupulous employers to test for pregnancy, AIDS and genetic predisposition to disease stretches the Orwellian metaphor a bit too far. There is absolutely no way for laboratories to detect any of these conditions in the course of urinalysis or blood testing for substance abuse.

While some clinical laboratories may have the capability of doing pregnancy, AIDS and genetic testing, it is highly speculative to expect they would conspire with employers in a sinister, high-tech witch-hunt. Good technology can always fall into bad hands, but to ban proven methods because of unfounded fears threatens us all. A similar panic almost drained the nation's blood supply when donors believed they could contract AIDS by *giving* blood.

Drug testing is not the panacea to the problem of drugs in the workplace. However, it should be considered as a valuable tool in a comprehensive effort which must include participation from management, labor, employee assistance, personnel, safety, security, and, ultimately, the employee. As futurist John Naisbitt writes, "In our minds, technology is always on the verge of liberating us from personal discipline and responsibility. Only it never does and it never will."

Response by Joan Braconi and Nick Kopke

Since its inception in the sixties, PharmChem has provided its clients with one service: drug testing. In the beginning, the lab provided anonymous testing (for content and purity) of illicit drugs. Dealers or users who feared they had gotten "bad" or poor quality drugs could send a sample to PharmChem and have it analyzed.

In today's climate, PharmChem's business comes from the testing of urine for evidence of drug use for methadone and other drug rehab programs, and the testing of employee or job applicant samples. Understandably, PharmChem is concerned about the growing controversy over the reliability of the one service it offers.

Mr. Renfroe, Public Relations Director for PharmChem, would have us believe that our future is safe in the hands of politically-neutral scientific authority, and suggests that laymen haven't the knowledge to question the technologists. While not accepting this premise, we must note that all the arguments questioning the validity of drug tests come from scientists and technicians themselves.

ACCURACY

The scientific literature is replete with studies indicating high error rates for both drug test methodologies and drug laboratories: *(Complete citations to the studies mentioned below are available from Joan Braconi at the Center for Labor Research and Education.)*

- A study, conducted by the Center for Disease Control and published in 1985, found drug-test lab error rates as high as 69%.
- Dr. Riedes of the National Medical Service reports false positives in 30% of samples tested by the EMIT series.
- Drs. Allen and Stiles found that 65 out of 161 over-the-counter and prescription drugs caused false positives on the EMIT series.
- The Center for Human Toxicology found that 38% of EMIT marijuana "positives" were false.
- A study of 400 marijuana "positives" from New Jersey government labs found that more than 25% were false.
- Dr. David Smith, a leading expert on drug abuse, reports that 50% of all

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DRUG TESTING

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over-the-counter cold remedies contain PPA, which will give a false positive for amphetamines on the EMIT tests.

• A 1984 report of the Department of Defense Einsel Commission study of four labs stated that the "best" lab had a false positive rate of 20% and the "worst" lab a false positive rate of 97%.

• In 1982, 6,000 "positives" reported by the U.S. Navy were re-tested. One-third of these were found to be false and another one-third were found to be unreliable because of chain-of-custody or other problems.

• Drs. Dinovo and Gottschalk found that 6 out of 19 forensic labs reported illegal drugs that were not in the samples, and California parole officials discovered that the forensic labs they use had error rates from 20% to 70%.

• Drs. Wallace and Hamilton report accuracy problems with chromatography tests in some labs, which result in false high readings for cocaine metabolites.

• Drs. Mule, Bastos and Jukofsky found labs, when testing for cocaine, giving false positives 10% of the time.

• In 1985 the U.S. Center for Disease Control, after studying eleven labs reporting cocaine results, rated only *one* as "acceptable".

Despite Mr. Renfroe's claims to the contrary, the scientific community recognizes the accuracy problems of the current technology. Each month the literature reports findings of error due to cross-reactivity, endogenous enzymes, faulty lab work, or as yet undetermined sources. In fact as recently as October of 1986, Dr. Kim Kelly, Manager of Medical Affairs for Syva (manufacturer of the EMIT series) admitted to California Senate and Assembly committees holding hearings on drug testing that the EMIT test could not distinguish heroin from Vicks Formula 44 or many other over-the-counter cough medications.

Mr. Renfroe himself, while praising its accuracy, admits that PharmChem will never report a "positive" from EMIT unless it has been confirmed by another method.

Other labs, however, do report these unconfirmed results to employers. Dr. David Smith, in his testimony to the legislative committees on drug testing, reported that employers in general do not use confirmatory tests.

PASSIVE INHALATION

Mr. Renfroe says that there is no real risk of workers being punished for "passive inhalation" of marijuana smoke. The scientific experts disagree with him. In fact, PharmChem itself recommends use of a high cut-off point for marijuana results, just because of this problem. But Mr. Renfroe has admitted that every lab and every employer makes its own determination. PharmChem admits that many of its own clients reject its recommendation and receive reports of very low levels of THC. According to the Bureau of National Affairs' 1986 Special Report, "leading urine test manufacturers, such as Hoffman-LaRoche and Syva Corporation, acknowledge the potential for positive results due to passive inhalation of marijuana smoke."

INVASION OF PRIVACY

A urine sample can be tested for pregnancy or diabetes and a blood sample can be tested for exposure to the AIDS virus; indeed this kind of testing is done thousands and thousands of times a day. Giving a sample of body fluids to an employer opens the door to abuse. Mr. Renfroe is incredibly naive if he believes employers never violate the law or the rights of employees. In fact, those of us who work in the field of employment rights see serious violations occurring daily. Drug labs are hired by the employer (rarely by a worker or a labor union) and if they wish to be successful they generally carry out the instructions of that employer. In fact, it is well documented that many drug labs, at the behest of the employer, routinely violate the law by sending the results of drug tests directly to the personnel director of a company rather than to a healthcare professional as is required by Business & Professions Code section 1288 (16 Calif. Ops. Atty. Gen. 209; 66 Calif. Ops. Atty. Gen. 302.)

Once an employer has the urine sample they can test it for anything. However, even if they only test it for substance abuse, those tests will often indicate by the substances found in the urine that a certain disease or condition is being treated.

SUPERVISORY OBSERVATION

Mr. Renfroe argues that supervisory observation of impaired performance may not work to identify drug users because chronic users may build up tolerance and compensatory behavior. The only employer justification for concern with an employee's off-duty behavior is the negative effect it has on that person's ability to do the job. If the individual is not impaired, then what is the point of the drug test?

Mr. Renfroe's second argument, that supervisory observation may not lead to an objective assessment of the worker is a concern that we share as well. However, a whole system of checks and balances and contractual protections against abuse exist in the unionized workplace. The problem of unfair treatment exists in many aspects of non-union employment, but imposition of mandatory drug tests will lead to greater, not lesser abuse and unfair treatment. As Dr. Ronald Seigel, Professor of Psychopharmacology at UCLA Medical School writes, drug testing "does not tell us anything about the recency of use, it does not tell us anything about how that person was exposed to the drug, it doesn't even tell us whether it affected peformance."

Drug testing violates the fundamental principles of our liberties, both as Americans and as workers.

As Federal Judge Sarokin wrote:

> **Urine testing involves one of the most private of functions, a function traditionally performed in private and indeed, usually prohibited in public. The proposed test in order to ensure its reliability requires the presence of another when the specimen is created and frequently reveals information about one's health unrelated to use of drugs. If the tests are positive, it may affect one's employment status and even result in criminal prosecution.**
>
> **To argue that it is the only practical means of discovering drug abuse is not sufficient. We do not permit a search of every house on the block merely because there is reason to believe that one contains evidence of criminal activity. No prohibition more significantly distinguishes our democracy from a totalitarian government than that which bars warrantless searches and seizures. Nor can the success of massive testing justify its use.**

Unions Urge Magnetic Field Shielding

International VDT Conference Finds Both Agreement and Controversey

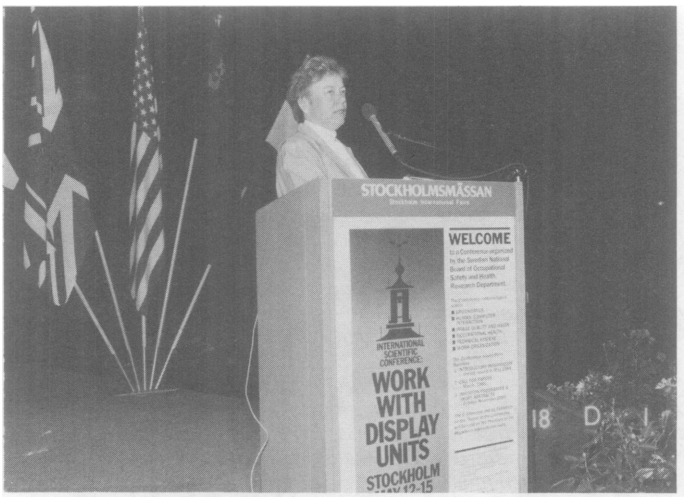
Representatives of LOHP and the California VDT Coalition joined 1200 people from around the world at a major scientific meeting on the health effects of video display terminals (VDTs) in Stockholm, Sweden in May, 1986.

The "International Scientific Conference—Work With Display Units" drew researchers and activists from government, universities, international organizations, industry, and unions to discuss old and new concerns about the widespread introduction of VDTs in workplaces worldwide. More than 300 papers were presented, covering topics ranging from stress to ergonomics to reproduction.

U.S. participants reported that there was surprisingly widespread agreement from all parts of the world that VDT work can cause visual and musculoskeletal problems. But the health effects of VDT radiation and the connection between VDTs and reproductive problems remain controversial.

Conference participants representing 36 trade unions in eight countries gathered after the scientific sessions ended, and issued a statement calling for new measures to require shielding of VDTs against magnetic fields, and for new studies of the reproductive effects of VDTs.

The scientific conference was organized by the Swedish Board of Occupational Safety and Health, and co-sponsored by its U.S. counterpart, the National Institute for Occupational Safety and Health (NIOSH).



Anna-Greta Leijon, Swedish Minister of Labor, addresses the international VDT conference. (Photo: Video Views.)

FOCUS ON ERGONOMICS

Robin Baker, LOHP's director, attended the conference with LOHP staff member Laura Stock, who is also the coordinator of the California VDT Coalition. The two presented a paper on VDT worker education programs, criticizing corporate-based programs which "are designed more to reassure workers than to educate them." The paper uses the VDT Coalition as an example of how education can be used, instead, to empower workers by giving them the knowledge and skills they need to work for improvements which will protect their health.

Most papers at the conference dealt with musculoskeletal and visual problems, linking health complaints to poor workstation design. Researchers from the World Health Organization, the Swedish Board of Occupational Safety and Health, and NIOSH presented recommendations for workstation improvements, covering furniture placement and design, character size, display quality, keyboard layout, and operator posture.

Baker and Stock said that the conference showed there is worldwide scientific agreement about the existence of ergonomic problems with VDTs. According to Stock, "This is in sharp contrast to the situation in the U.S., where efforts to achieve VDT regulations have been repeatedly rebuffed on the grounds of lack of evidence. It is now abundantly clear that the evidence and technology exist to eliminate most VDT-related problems." (Labor-sponsored bills calling for ergonomic requirements and other VDT safeguards have failed in the last three sessions of the California Legislature, although such safeguards are already mandated in several European countries.)

Some potential new problem areas for VDT operators were suggested at the conference. Participants from Australia reported that they are seeing an alarmingly high incidence of "repetitive strain injuries" such as tendonitis and carpal tunnel syndrome, apparently the result of rapid, repititive motions of the wrist, hand and fingers at the keyboard. Florida scientists warned of the health problems associated with prolonged sitting and subsequent blood pooling in the legs. And a number of Scandinavian papers focused on cases of dermatitis among VDT users that may be explained by VDT-generated static fields or excessively dry air in the office environment.

RADIATION/ REPRODUCTION

Sessions focusing on radiation and reproduction generated the most interest and controversy. Dr. Lars Erik Paulson of the Swedish Karolinska Institute reported on his controversial research in which fetuses of mice suffered adverse effects when exposed to magnetic fields like those generated by VDTs. Paulson cautioned that his results are preliminary, but he did recommend that VDTs be shielded against magnetic fields until the matter is settled. His research is continuing.

Anna-Greta Leijon, Swedish Minister of Labor, said at the opening session of the conference that Sweden will now buy only VDTs shielded for magnetic-field as well as electric-field emissions. "We cannot sit idly waiting for the research findings to come through," she said. "We must . . . be prepared to take

continued on page 16

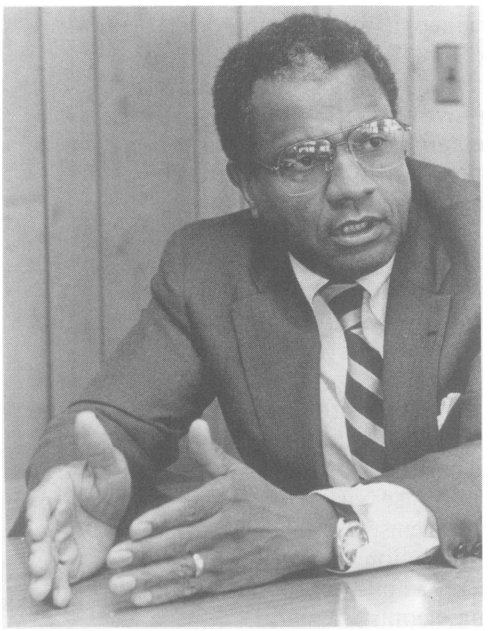
A MONITOR Interview

Dr. Bailus Walker: Reagan's OSHA Is "Treading Water"

Monitor recently had the opportunity to interview Dr. Bailus Walker, Jr., when he visited the San Francisco Bay Area. Because Dr. Walker is a leading figure in occupational disease prevention and regulation, his views on the status of occupational health under the current federal administration should be of wide interest. The interview also covers several related questions: What are state and local governments doing on occupational health in the absence of strong federal initiatives? How do U.S. efforts compare to those in other countries? And what is the significance of the new emphasis on the "right to know"?

Dr. Walker was director of occupational health standards for federal OSHA from 1979 to 1981. During that time, he was instrumental in the development of the nation's first policy for classifying and regulating potential occupational carcinogens. He also wrote the first federal hazard communication rule, designed to inform workers of the hazards of workplace chemicals. In 1980, he headed a U.S. Dept. of Labor exchange mission to Japan to advance collaborative U.S.-Japanese efforts in occupational medicine.

Now Commissioner of Public Health for the Commonwealth of Massachusetts, Dr. Walker holds the M.P.H. and Ph.D. degrees in occupational and environmental health. He has also directed the Michigan Department of Public Health, and is President-Elect of the American Public Health Association.



Dr. Bailus Walker, Jr.

Monitor: As a former OSHA official (during the Carter administration), what do you think of OSHA's recent occupational disease prevention efforts? What is OSHA doing? Where is it going?

Walker: OSHA today is an agency that is simply "treading water." It is not aggressively pursuing any programs. It is not providing services that would prevent occupational disease.

Standard setting is non-existent, yet an increasing number of chemical and physical hazards in workplaces remain unabated. Reproductive toxins, neurotoxins, and nephrotoxins are among the broad spectrum of toxic chemicals for which we urgently need new standards.

We no longer have a national strategy for prevention of occupational disease. Some work is being done by NIOSH, but the research, monitoring, and surveillance activities of NIOSH must be complemented by more aggressive activity from OSHA.

Monitor: What is your reaction to the appointment of John Pendergrass, the new OSHA head?

Walker: Mr. Pendergrass is a highly respected industrial hygienist, but we do not expect a major thrust in the direction of new occupational health standards.

With only two years remaining in the Reagan administration, we should not expect OSHA to reverse six years of non-emphasis on occupational health. This administration has other priorities.

What is often overlooked is that a healthy, disease-free workforce is critical to international competition, to a strong defense, to a reduction in the deficit, and to overall economic and social well-being.

Monitor: What has OSHA done, or not done, for minority workers?

Walker: OSHA has done absolutely nothing for minority workers. That is consistent with the general philosophy of an administration that has tried to weaken affirmative action, and that has only paid lip-service to civil rights.

OSHA even reduced funds for education of workers about workplace hazards—a program that was especially helpful to minority workers.

Minority workers are still concentrated in many of the high-hazard occupations. Estimates confirm the higher-than-expected rates of occupational illness and injury among minority workers in agriculture, manufacturing, transportation, and even service occupations.

Monitor: There is a new emphasis on the "right to know." You were a real pioneer in that area. What do you think of the new "right to know" legislation at the federal, state, and local level?

Walker: "Right to know" is one of the most significant developments in occupational health and safety. We have learned from bitter experience that an informed worker is one of the best "weapons" against occupational disease and dysfunction. But OSHA's rule should be expanded so that *all* workers are covered.

Many states have right-to-know laws that are far superior to, and more comprehensive that the federal rule. So the federal rule must be expanded so that all workers have equal protection.

Monitor: Are there other areas where you see the states and local governments making more progress than federal OSHA?

Walker: While we would encourage a national, uniform approach to occupational safety and health, we can appreciate the need for state and local jurisdictions to pursue legal and/or criminal action against those who would endanger the health of workers.

Because of the lack of leadership by federal OSHA, states have also had to step in with their own programs to regulate carcinogens and other types of hazards. These can be effective if properly administered.

At the moment, many states have occupational disease prevention efforts far more effective than OSHA's.

Monitor: Despite the federal government's attitude, do you see concern about occupational health growing at the grassroots level in America? What can communities do? What about community organizations and local health activists?

Walker: Community organizations must become more knowledgeable about occupational health and safety as it relates to overall community health, particularly for minorities.

Other important tasks for community organizations are to hold policymakers accountable for government's failure to enforce health and safety rules and regulations; to be constantly vigilant to ensure that funds are provided for government programs in occupational health; and to evaluate elected officials on their commitment to occupational health and safety.

Also, community organizations concerned with health should invest some of their own resources for the promotion of public health, including prevention of substance abuse, teenage pregnancy, AIDS and other infectious diseases. These problems, in addition to the strictly occupational ones, are certainly relevant to the health of the community's labor force.

For example, substance abuse on the job may make a worker more vulnerable to work-related disease and dysfunction. And stressful situations in the home can increase the risk of occupational injury.

It is time to integrate occupational health services into the mainstream of primary health care. All physicians must become more sensitive to the need for a good occupational history of their patients, because that is essential to the diagnosis of occupational disease. Many occupational diseases are misdiagnosed because of the physician's lack of sensitivity to, or awareness of occupational exposure.

Monitor: You have traveled to other countries and observed what they are doing in occupational health. Are they ahead of the U.S. or behind?

Walker: On the international scene, occupational health and safety is a "mixed bag." Some countries put greater emphasis on health and safety than the U.S. does; others are doing less.

Standard setting in many countries lags behind the U.S. On the other hand, in many European countries occupational health services are an integral part of the health care system, and the U.S. hasn't reached that point yet.

In some countries, the employers view occupational health programs as a routine, essential part of "doing business." Therefore safety is as high a priority for them as productivity or the quality of the work product. Such an emphasis on safety hasn't traditionally been found in the U.S. companies, but some American corporations are beginning to borrow these ideas and institutionalize hazards management. This development bodes well for the health and welfare of workers. Indeed, there are corporations now with health and safety regulatory systems that match or exceed those set up by government.

Monitor: At OSHA, you had responsibility for the agency's health standards. The process of setting standards seems cumbersome—full of controversy, politics, and delays. Is there a better way?

Walker: Standard setting is replete with many conflicting roles and motivations. Management usually uses every possible strategy to oppose a new standard, out of concern with the cost of complying. Health scientists and others often want to end all current and future exposure to a dangerous agent immediately. A basic confrontation is thus set up which often has to be resolved in the courts or in the political arena.

There must be a way to achieve our occupational health goals without long court battles or political interference.

Datebook

LOHP Continuing Education Program

Spring Courses Will Highlight Safety, VDTs, Ventilation

In early 1987, LOHP's Continuing Education program will offer three major courses in the San Francisco Bay Area—an introduction to workplace safety emphasizing prevention of occupational accidents, an examination of the health problems which video display terminal (VDT) operators can experience due to poor workstation design, and a review of the fundamentals of industrial ventilation.

While LOHP Continuing Education courses are primarily oriented toward professionals in various health and safety disciplines (physicians, nurses, industrial hygienists, risk managers, and others), trade union leaders, stewards, and staff with health and safety responsibilities often find the courses valuable and are also encouraged to enroll.

Fundamentals of Workplace Safety for Health Professionals will be presented Wednesday and Thursday, March 18-19, 1987, at the Clark Kerr Campus Center, 2601 Warring Street in Berkeley.

Occupational accidents are second only to motor vehicle accidents as a reported cause of death in the U.S. When an occupational injury is not fatal, it may nevertheless be disabling, robbing a worker of many productive years. Participants in this course will learn techniques for evaluating job settings and analyzing common safety hazards; aspects of safety to be covered include materials handling, flammables and fire protection, electrical safety, machine guarding, walking/working surfaces, confined spaces, and personal protective equipment. Federal and state safety regulations will be explained. Course leaders will also introduce the components of an effective accident prevention program, including worker education.

Instructors have been invited from NIOSH, the Cal/OSHA Consultation Service, and several private firms in California.

Continuing Education credit is available for nurses and industrial hygienists, and discount hotel rates have been arranged for attendees from out of town.

Registration is $250 (including course material and a certificate of completion). Discount registrations are available for groups of five or more persons. For more information, or to register, call LOHP's Continuing Education Coordinator, Lela Morris, or her assistant Stephanie Cannizzo at (415) 642-5507.

Video Display Terminals: Workplace Design for Optimal Health and Safety will offer a comprehensive overview of the physical and psychological health problems which can result when VDT equipment and work areas are poorly designed. Class sessions for the two-day course (Thursday, April 30 and Friday, May 1, 1987) will be held at the Clark Kerr Campus Center, 2601 Warring Street in Berkeley. There will also be a field trip to a VDT worksite at a major corporation on the second day.

Automation is changing the nature of work. Within the next decade, it is expected that half of all American workers will be using a VDT for some portion of the work day. Some areas of VDT health and safety, such as radiation exposure and reproductive effects, remain controversial and require additional research before we have the final answers. However, a great deal is known about the effects of VDT use on the visual, musculoskeletal and psychological systems. In fact, there is now considerable scientific agreement on how to design VDT workstations to maximize operator health and safety.

The course will provide practical approaches to creating VDT work environments which are ergonomically sound and protect operators' health. It will be useful to health and safety professionals, supervisors, those responsible for purchasing new equipment, VDT workers and their union representatives.

Continuing Education credit is available for nurses and industrial hygienists, and discount hotel rates have been arranged for attendees from out of town.

Registration is $300 (including a course syllabus and lunch on the second day). Early registration is encouraged. Some discount registrations are available. For more information, or to register, call LOHP's Continuing Education Coordinator, Lela Morris, or her assistant Stephanie Cannizzo at (415) 642-5507.

Fundamentals of Industrial Ventilation is scheduled for Monday through Friday, May 11-15, 1987, at the Clark Kerr Campus Center, 2601 Warring Street in Berkeley.

The course will emphasize the design of ventilation systems for the removal of toxic gases, vapors, and/or particulates from workplace air in order to protect employees and to achieve compliance with occupational health standards. Topics will include exhaust and air supply ventilation systems; selection of exhaust hoods, fans, ducts, and air cleaning devices; uses of instruments to determine air volume, pressure, and velocity; calculation of system pressure losses; and the use of computers in system design.

Laboratory exercises will be included. Competence in basic math is required. Course instructor will be D. Jeff Burton of the University of Utah.

Continuing Education credit is available for nurses and industrial hygienists, and discount hotel rates have been arranged for participants from out of town.

Registration is $600 (including textbooks and a pre-programmed calculator). Discount registrations are available for groups of three or more. For more information, or to register, call LOHP's Continuing Education Coordinator, Lela Morris, or her assistant Stephanie Cannizzo at (415) 642-5507.

Clearinghouse

New LOHP Slide Shows on Lab Chemicals, Occupational Disease

LOHP has released two new educational slide/tape programs on health and safety topics. One focuses on chemical hazards in laboratories, and the other explains how and why workers develop occupational illness. Each show consists of a set of 35mm slides, a synchronized taped narration, and a printed script. Price is $100 each (including shipping and handling). Order from: LOHP, 2521 Channing Way, Berkeley, CA 94720. Please enclose prepayment and allow six weeks for delivery. Make checks payable to: The Regents of U.C. LOHP also offers several other audiovisual materials on workplace health and safety. Please write for a free catalog.

How Workplace Hazards Affect the Body

Many different kinds of job hazards—noise, heat, stress, radiation, ergonomic factors, and toxic substances—can cause health problems. This new LOHP slide show highlights the human body and occupational disease. Written in clear, non-technical language, the show suggests how workers can find out about the risks they face and what they can do to protect their own health.

Some of the basic concepts and terminology of occupational health are introduced, with particular emphasis on the effects of toxics. Subjects covered include routes of exposure, toxicity, acute and chronic effects, latency, medical testing, and risk assessment. The show illustrates these ideas with stories about workers' actual experiences.

***How Workplace Hazards Affect the Body* is an LOHP production with photography by Ken Light. It consists of 91 slides with a tape and printed script. Price is $100, including shipping and handling. Order from the address above.**

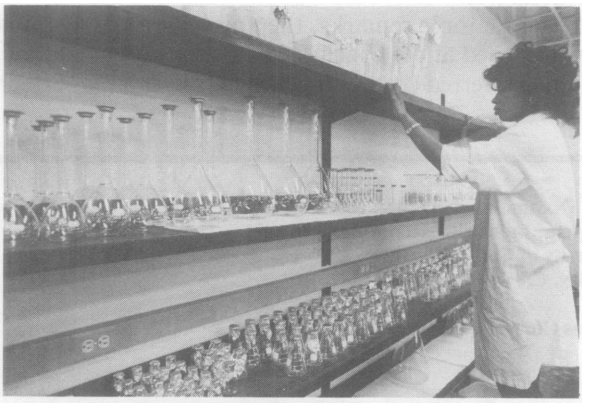
Working Safely With Laboratory Chemicals

Every day, thousands of people go to work in laboratories. This new LOHP slide show explains how chemicals may be the source of serious health and safety problems for lab workers, and what can be done to reduce the risk.

We watch as a typical safety committee surveys a lab and finds chemicals ranging from flammables and corrosives to carcinogens and reproductive toxins. The committee then introduces us to the basics of chemical safety: container labels and Material Safety Data Sheets, good work practices, proper storage and disposal, first aid, and exposure control measures like fume hoods and respirators.

The show will be useful to both workers and management who are concerned about lab safety, regardless of technical background.

***Working Safely With Laboratory Chemicals* is an LOHP production with photography by Ken Light. Funded by the U.S. Dept. of Labor, it consists of 136 slides with a tape and printed script. Price is $100, including shipping and handling. Order from the address above.**



(All photos: Ken Light.)

Clearinghouse

OTHER AUDIOVISUAL MATERIALS

Five Walnuts: The Health Effects of Asbestos is a new educational videotape, produced by the Occupational Health Clinic at San Francisco General Hospital, which focuses on medical screening for asbestos-related illness.

Asbestos was once hailed as the "miracle fiber," but no one told the millions who worked with it that the mineral was dangerous to their health. We now know that thousands of people have developed lung disease or cancer as a result of workplace asbestos exposure, and many more will.

The tape tells the story of Tom, a worker in his late fifties, who discovers that a friend and co-worker has asbestosis. Tom must overcome his denial and fear before going to a medical screening himself.

Tom's story is punctuated with documentary interviews. We hear the first-hand experiences of several real asbestos-exposed workers and the observations of John R. Balmes, M.D., a recognized pulmonary specialist. The tape explains the various types of lung diseases associated with asbestos exposure and addresses the reasons why workers may hesitate to undergo screening. The importance of early detection of lung disease is stressed.

There is also a strong anti-smoking message, emphasizing the "synergistic effect" of smoking and asbestos exposure.

Five Walnuts: The Health Effects of Asbestos was designed to be used in medical surveillance programs, worker training, union meetings, and patient education in clinics. The 20-minute color videotape is available in VHS, Beta I, and Beta II formats for $125.00. (A ¾" U-matic version is $150.00.)

Order from: Occupational Health Clinic, Building 9, Room 109, San Francisco General Hospital, San Francisco, CA 94110. Call (415) 821-5391 for more information.

VDT CONFERENCE

continued from page 11

unconfirmed but suspected risks into account."

Several devices to screen VDTs against magnetic-field emissions were demonstrated at the conference by Swedish manufacturers.

Echoing Leijon's remarks, the union statement issued at the conclusion of the conference referred to the "increasingly strong possibility" that there is a relationship between VDT emissions (particularly magnetic-field emissions) and reproductive problems. The statement called for further research, but emphasized that in the meantime it is "essential to provide adequate protections immediately."

The union delegates who met in Stockholm also discussed questions of work organization and the social and economic effects of office automation. There was some disappointment about the limited focus of the scientific conference. "Our members don't only need an ergonomic chair," said a delegate from Denmark. "They need advance notification of work changes, job security, and participation in the decision-making about both workstation and job design."

—Adapted from Video Views

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