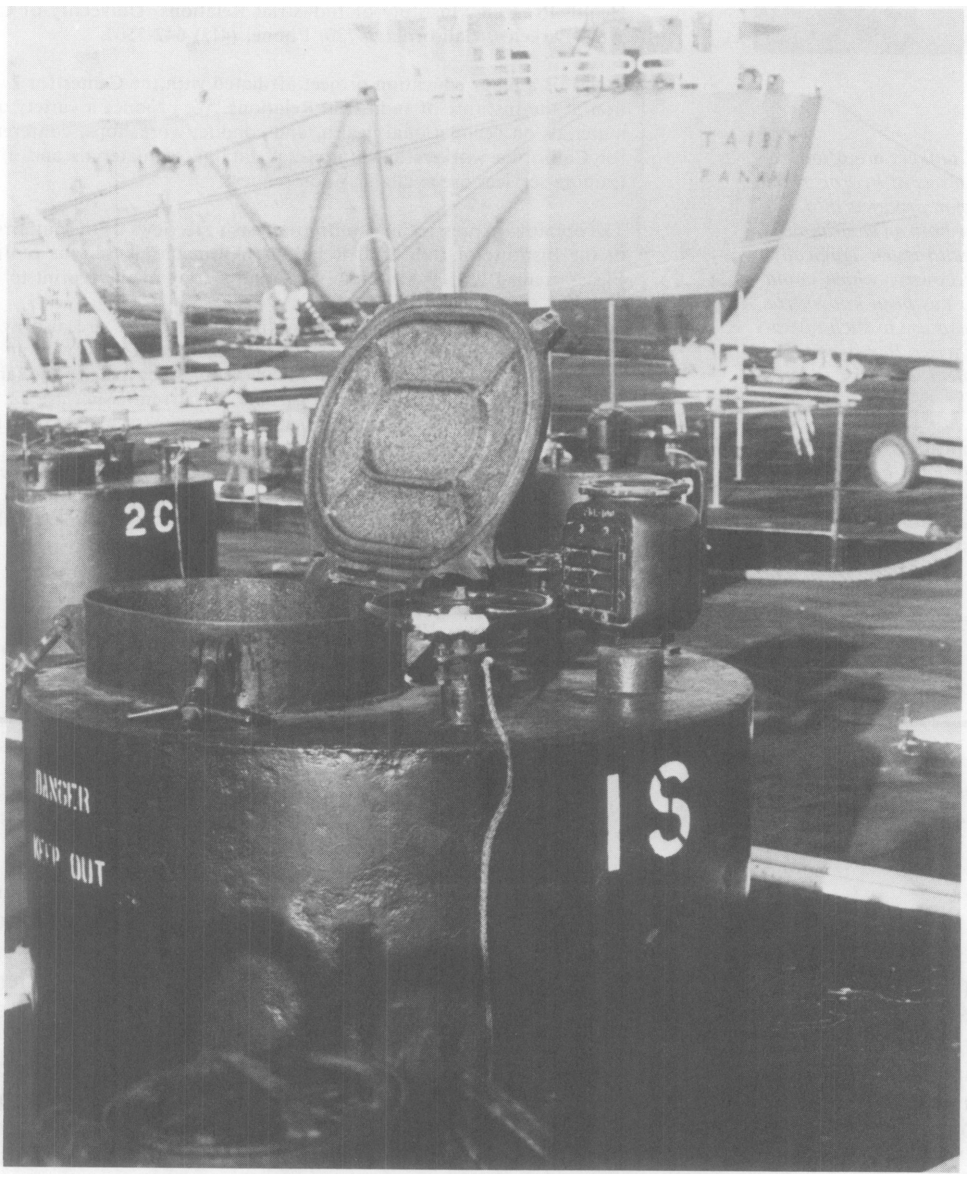
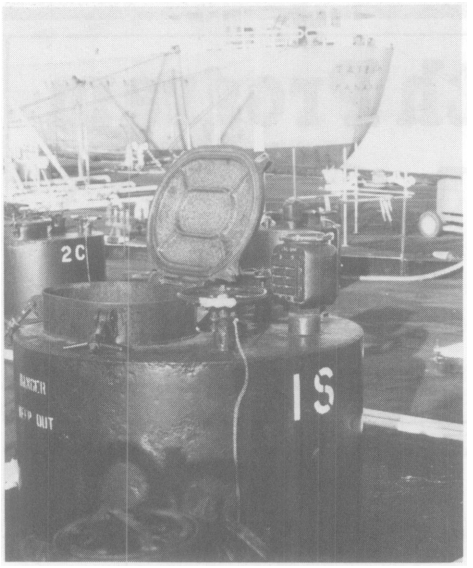
Vol. 16 No. 1, Spring 1988 *(April–June)*

Labor Occupational Health Program MONITOR



In This Issue:

- **OIL BARGES, TANKERS, AND TOXIC FUMES**
  Health and Safety on the Waterfront
- **THE COST OF AIDS**



On the Cover:

Workers on oil barges and tankers are often exposed to dangerously high levels of hydrocarbon fumes when loading petroleum products into vessels. The fumes have become both an environmental and an occupational health issue. Tragically, the technology of vapor recovery, which could reduce the toxic emissions, has been known for years but is not in widespread use in such operations. On page 5, a San Francisco Bay Area tankerman discusses the problem and his union's response to it.

Also in this issue: The financial cost of AIDS to the health care system may have been overestimated; the mistaken figures have been widely accepted by employers and insurance companies, and could lead to new pressure for AIDS testing of workers. See page 9.

(Cover photo: Open hatch on oil barge with no vapor recovery system, by J. Quam-Wickham.)

Labor Occupational Health Program

MONITOR

Vol. 16 No. 1, Spring 1988 ***(April-June)***

$2.50 per copy

Published quarterly; four issues per year. **Monitor** is a publication of the Labor Occupational Health Program, Institute of Industrial Relations, University of California, 2521 Channing Way, Berkeley, California 94720. Phone: (415) 642-5507.

LOHP is a labor education project affiliated with the Center for Labor Research and Education at the Institute of Industrial Relations. We produce a variety of printed and audiovisual materials on occupational health, and conduct workshops, conferences and training sessions for California workers and unions. A catalog of materials and a brochure which describes training services are available upon request.

Subscriptions: $10.00 per year. Quantity subscriptions are also available to union locals or other groups at a cost of $1.00 per year for each extra copy, with an annual subscription at the regular price. Thus a subscription for two copies per issue to the same address is $11 per year, etc. When available, single copies of back or current issues are $2.50 each. Please prepay all orders for subscriptions or back issues; make checks payable to: The Regents of U.C.

Staff: Marty Morgenstern, Labor Center Chairman; Robin Baker, LOHP Director; Gene Darling, **Monitor** Editor; Darryl Alexander; Elaine Askari; Gail Bateson; Anne Bracker; Stephanie Cannizzo; Anne Maramba-Ferrell; Lucy Martinez; Lela Morris; Barbara Plog; Susan Salisbury; Laura Stock; Betty Szudy.

LOHP Organizes Health Care Workers' Task Force

by Anne Bracker
LOHP

The hazards of hospital employment, from infectious diseases to toxic chemicals, have recently received much attention. In the San Francisco Bay Area this year, the Labor Occupational Health Program (LOHP) organized a Health Care Workers' Task Force when local unions became increasingly concerned about the problem.

The Task Force has developed a position paper on implementing the Centers for Disease Control recommendations for universal blood and body fluid precautions. (These new guidelines are particularly important in protecting workers against the AIDS and hepatitis B viruses.) Another project was distribution of a survey focusing on needlestick injuries.

The Task Force has also encouraged the formation of health and safety committees in Bay Area hospitals. Task Force members have conducted inspections of several health care facilities and written fact sheets on reproductive hazards, infection control, and model occupational safety and health contract language.

A number of unions representing local health care workers have participated in these innovative approaches to hospital health and safety, including: American Federation of Government Employees; American Federation of State, County, and Municipal Employees; California Nurses Association; Engineers and Scientists of California; International Longshoremen's and Warehousemen's Union; Office and Professional Employees International Union; Service Employees International Union; and United Public Employees.

A new Task Force booklet, which presents a detailed union approach to health and safety inspections of hospitals, will be published soon.

For more information, or to join the Health Care Workers' Task Force, please call Darryl Alexander at LOHP, (415) 642-5507.

Summer Safety and Health Institute at Lake Tahoe

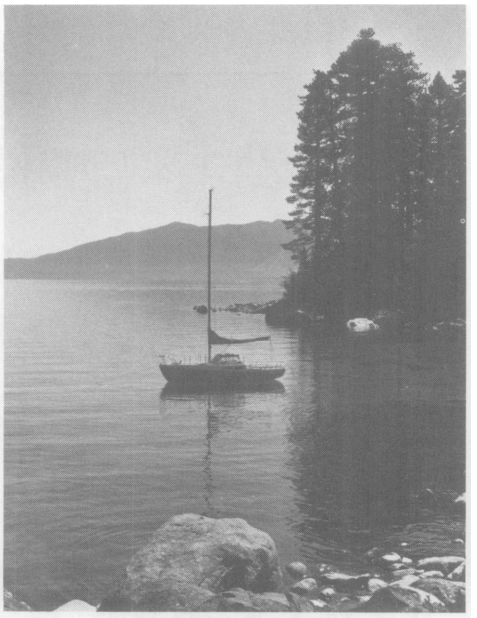
This summer, for the first time, the Northern California Occupational Health Center (NCOHC) will present a week-long Institute featuring more than a dozen courses on a full range of workplace safety and health topics. NCOHC's **First Annual Occupational Safety and Health Institute** will be held from Sunday, August 21 through Friday, August 26, 1988 at the Squaw Valley Inn and Conference Center, located in the Olympic Village area of North Lake Tahoe, California.

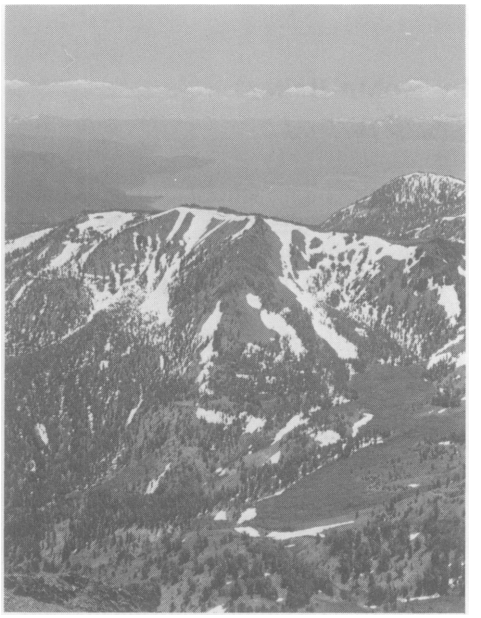
NCOHC, with which the Labor Occupational Health Program is affiliated, is an interdisciplinary partnership of several University of California departments on three campuses. It is sponsoring the Institute to increase the number of relevant Continuing Education courses available to industrial hygienists, nurses, physicians, safety specialists, union health and safety personnel, managers, supervisors, and others concerned about the work environment. The objective is both to present practical information and to provide a forum for the exchange of ideas among participants with diverse backgrounds.

Courses, which vary in length from a few hours to five days, will be designed and presented by NCOHC faculty and invited visiting instructors. Participants may enroll in any number of courses provided that course schedules do not conflict. There is a separate registration fee for each course, ranging from $50 to $600 depending upon course length, but no additional fee for the Institute itself or for General Sessions which will include everyone attending.

Among the courses will be:

- **Agriculture: Health and Safety Issues**
- **Cancer Prevention Strategies**
- **Computer Applications in Health and Safety**
- **Indoor Air Pollution and Building-Associated Illnesses**
- **Industrial Ventilation: Design and Operation**
- **Repetitive Motion and Cumulative Trauma Disorders**
- **Sampling and Evaluating Airborne Asbestos Dust** (NIOSH Course #582)
- **Workers' Compensation and Legal Issues for Occupational Health and Safety Professionals**





(Photos: Jeffrey P. Schaffer.)

The backdrop for the Institute is the spectacular Lake Tahoe/Reno area, where attractions include wild river rafting, horseback riding, hiking, and tennis. The Squaw Valley Inn is a year-round resort and convention facility which features a pool and spa.

The Squaw Valley Inn is offering a discount room rate for Institute participants. Reduced air fares for those attending are available on American Airlines, and special ground transportation has been arranged from Reno International Airport to Squaw Valley.

Registration begins on Sunday afternoon, August 21, and continues throughout the week. Continuing Education credit for physicians, nurses, and industrial hygienists will be available for all courses.

For further information, or for a free brochure with complete details, please call LOHP's Continuing Education Coordinator, Lela Morris, or her assistant Stephanie Cannizzo at (415) 642-5507.

There was no Winter, 1988 (January–March) issue of MONITOR. All subscriptions will be extended so that subscribers receive the number of issues for which they paid.

Labor Studies at Bay Area High School

Health and Safety Training for the Workforce of Tomorrow

by Robin Baker

LOHP Director

Today's high school students are tomorrow's workforce. In fact, many young people have been working on jobs for years before they ever finish school.

How well prepared are students to enter the world of work? The usual answer to this question focuses on how well the schools teach particular job skills. But there is another issue: Do students acquire the knowledge and skills they will need to protect their rights to decent wages and working conditions? This was the concern addressed by a recent program at Oakland Technical High School, designed to introduce labor studies into the public school classroom.

Oakland Tech, an inner-city, multiracial public high school in the Bay Area, sponsored a "Labor Education Week" in late February, 1988. It was a joint effort of the school with local labor unions and labor education programs, including the Labor Occupational Health Program (LOHP). Featuring classroom presentations, union worksite tours, films, and cultural activities, the week-long project was geared toward acquainting students with the important contributions the labor movement has made in improving the workplace and society as a whole. Students were also introduced to specific information—about workers' rights, about health hazards—which could prove useful on the job.

One of the most popular topics for classroom sessions was occupational safety and health. LOHP staff presented material in the school's physiology, chemistry, biology, "family life," and student leadership classes. Lesson plans covered how to recognize hazards on the job; stress and work; toxics in the workplace and the environment; AIDS in the workplace; and career options in the occupational safety and health field.

Occupational Health Assignment

(From Labor Education Week, Oakland Technical High School, February, 1988.)

This assignment requires that you do three things:

1. Interview someone about health hazards of some specific occupation. (You must take at least a page of notes. Include the person's name and what job you interviewed them about.)

2. Research some topic or topics in human physiology which relate to the health hazards suggested by your interview. (Again, you must take notes, including names of sources and page numbers.)

3. Write a report of *at least* three pages, including information from *both* your interview and your research. The report must be legible, must include a bibliography, and must have your interview notes and research notes included with it.

EXAMPLES

- You interview someone who works as a typist. She says the health problems she experiences are back pain from sitting, and sometimes headaches from eyestrain. You decide to find out why eyestrain causes headaches (or why sitting causes back pain).

- You interview someone who works at a frozen foods factory. He often moves things in and out of the room-size freezers, and says that many workers get respiratory infections. You try to find out why sudden temperature changes might cause respiratory infections.

- You interview a childcare worker who says she gets colds from the kids. You try to explain why this happens, using information you find about the transmission of cold and flu viruses.

- You find out about causes of accidents at fast food restaurants.

Speakers emphasized the role of the labor movement in improving both workplace and social conditions, using strategies ranging from shop floor health and safety committees to national legislative campaigns. The point was illustrated through case examples, such as the successful efforts of labor to obtain new Environmental Protection Agency rules which mandate asbestos cleanup in schools. Teachers in the high school participated actively, assigning related class projects. *(See sample exercise on this page.)*

Students, teachers, and Labor Education Week organizers were all enthusiastic about the program. There is a possibility of conducting a repeat performance in 1989, as well as expanding the model to other schools.

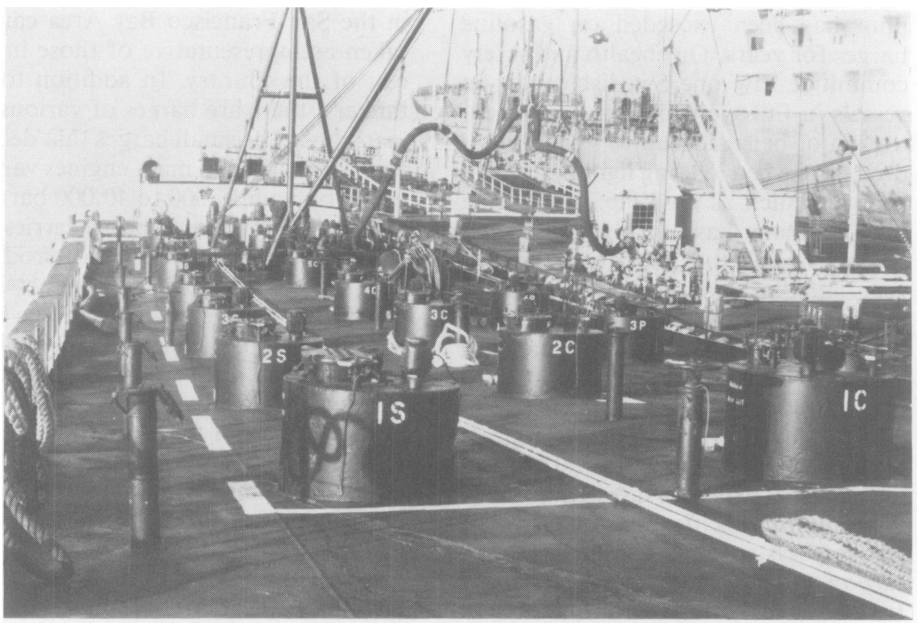
Waterfront Workers, Communities Push for Controls

Oil Barges, Tankers and Toxic Fumes

by J. Quam-Wickham
Inlandboatmen's Union
Marine Division, ILWU

with Gene Darling
Editor, Monitor

> "Going around the hall, one tankerman brings up shortness of breath and high blood pressure. Another asks about the combined effects of toxic exposure and our goofy work schedules. A third considers the possibility that we are the asbestos workers of the 1980s...
>
> "Other members discuss our inability to get test data that we know exists, the seriously high death rates among our co-workers, the frequent complaints about pre-cancerous skin conditions, and the summertime fumes so thick as to distort vision across the deck of a barge...
>
> "While most of these questions are left for other meetings in the future, a direction emerges from the discussion: Basic, scientific health and safety information can organize what we already know as individuals, and thus develop union unity of purpose."
>
> —*From minutes of health and safety meetings, Inlandboatmen's Union, San Francisco, 1988.*



Tank domes on a barge deck. (Photo: J. Quam-Wickham.)

Loading petroleum products into ships and barges emits tens of thousands of tons of hydrocarbons into the air. The tankermen and pumpmen who do the loading are skilled, experienced workers licensed by the Coast Guard. We load cargoes ranging from crude oil to finished products like gasoline and lubricating oils. We know, first hand, the medical effects of hydrogen sulfide in black oil, and the benzene which is added to gasoline. Our health is in jeopardy, and so is the health of the communities surrounding marine loading facilities.

Although the technology is available to protect us from the effects of these substances, it is not being used.

During an eight-month strike in 1987, the San Francisco Region of the Inlandboatmen's Union—the Marine Division of the International Longshoremen's and Warehousemen's Union—began to take a fresh look at job health hazards, including the obvious need for protective measures like vapor recovery.

Since mid-1987, we have obtained small amounts of job exposure data; we have been heard by air quality regulatory agencies; we have staged rallies; we have learned about the inexact nature of Draeger testing tubes; we have begun to work with environmental and community groups also concerned with the issue of clean air. We are currently forming a health and safety committee.

A recent California Department of Health Services study shows that water transportation death rates surpass those in any other occupation in the state. Water transport workers have a higher job death rate than loggers, miners, roofers, or police. Water workers' deaths occur (in order of frequency) from various cancers, machinery and

continued on page 6

BARGES AND TOXIC FUMES

continued from page 5

falls, cirrhosis, suicide, and high blood pressure. But these figures embrace the whole water transport industry. The union has asked for a morbidity study to be done by the Department of Health Services, analyzing deaths in our bargaining units. We believe the study will show that oil barge tankermen have death rates among the highest of all water transport workers.

There are objective reasons for our concern. Tug and oil barge workers suffer from a range of health and correlated social problems: chronic insomnia, heart disease, hydrogen sulfide and lead poisoning, benzene leukemia, and the consequent tearing at family life that these diseases cause. Both exposure to chemical fumes and long, variable work schedules have been identified as potential sources of trouble. (Deckhands and barge tankermen work twelve hours before they even begin overtime.) In San Francisco, the employers frequently settle worker injury, illness, and death lawsuits for sums ranging into the hundreds of thousands of dollars for a single individual.

These problems require scientific solutions. Without massive pressure, the companies will not be likely to bankroll honest studies of unhealthy work schedules and exposure to toxic chemicals. This is the challenge to trade unions, to rank-and-file activists, to scientists and regulatory agencies with a social conscience.

These industrial, scientific, and medical problems arise in the context of our society. Changing the work process for the better naturally requires interdisciplinary cooperation. Elected political and union representatives do not need to throw up their hands and guess at solutions. Happily, democracy produces experts: workers and scientists who can splice the practical experience of marine loading with the best science available in order to find some answers.

VAPOR RECOVERY: SCIENCE AND SOCIETY

Exposure to fumes during the work process of marine loading (transferring petroleum from docks to vessels) is a principal cause of the health problems we experience. Engineering controls for the reverse process (transfer from vessels to docks) have been in effect for decades. Onshore oil tanks, into which ships and barges discharge their cargoes, have been vapor-recovered for so many years that there is concern about having to replace old parts in old systems. The technology of vapor recovery is not new. Most of us fuel our autos with the vapor recovery nozzles at gas station pumps. Gasoline tank trucks load in vapor-recovered terminals.

National attention is focused on the recovery of petroleum vapors, and regulatory developments are underway which hold the promise of change. Physical and chemical hazards are under scrutiny by the National Academy of Sciences and the U.S. Coast Guard. Chemical and biological concerns are being vigorously investigated by local agencies such as the San Francisco Bay Area Air Quality Management District. *CBS Evening News* reported the Air District's regulatory and permit innovations in July, 1987.

Local "green" organizations such as Citizens for a Better Environment, the West Contra Costa County Toxics Coalition, and the Sierra Club are taking up environmental issues for the citizens near oil refineries. The University of California at Berkeley's Labor Occupational Health Program (LOHP) and other active safety groups are researching the issue. "Right to Know" legislation has come into effect.

Federal OSHA is gearing up to enforce by 1990 its new workplace benzene exposure standard of one part per million (ppm). All the evidence is that even OSHA's old benzene limit of 10 ppm has been exceeded on gasoline barges for years. Our health and safety committee saw one Swedish study on vessels in Europe which had a concentration of benzene "up to several hundred ppm when loading light petroleum products such as gasoline." One "big oil" company has already said that it will not be able to comply with the benzene standard unless it installs vapor recovery on all its vessels, for all cargoes.

OSHA's new 1 ppm benzene standard has finally energized the Coast Guard into considering new engineering standards for recovering vapor. (It appears likely that the Coast Guard will not regulate worker exposure directly, but only the technical specifications of the vapor recovery systems.) *Controlling Hydrocarbon Emissions from Tank Vessel Loading* (1987), a report of a blue-ribbon committee for the National Academy of Sciences, found the engineering of vapor recovery feasible. Recent Coast Guard meetings in Washington, D.C., have brought out dozens of oil, chemical and shipping companies. The companies have had heavy input into the Coast Guard's discussions.

Industry's own political apparatus is moving in the direction of vapor recovery. But are the companies only pursuing vapor recovery for public relations purposes, bypassing their responsibility to workers? According to Dan Berman —author of *Death on the Job*—our task is to raise workers' issues, so that those most affected can play a role in making necessary change.

The vapor recovery issue is becoming a case study in the relations of industry, science, and society. We are seeing the beginnings of change across the length and breadth of the oil shipping industry—from the West Coast to the Atlantic, from the Gulf Coast and the Mississippi Valley to the Great Lakes and the St. Lawrence Seaway.

In this article, we will try to understand the work process of oil cargo transfer from the bottom up. We will consider the vessels and docks of the petroleum trade, the chemical characteristics of the products as well as their biological and medical effects. Finally, we will look at recent developments in the Inlandboatmen's Union which show that rank and file unionists can and do become involved.

VESSELS AND DOCKS

Vessels carrying petroleum products in the San Francisco Bay Area can be taken as representative of those in the rest of the country. In addition to oil tankers, there are barges of various dimensions. The small barges that deliver fuel for cargo ship main engines vary in capacity from 10,000 to 40,000 barrels. The large "450 class" barge carries approximately 140,000 barrels of product. This makes one load of product in a "450 class" barge bigger than one load in a small ship, such as the 126,000 barrel capacity *Lion of California*, which became the first vapor-recovered ship in the country in 1987.

The Bay Area marine trade involves many of the major and minor oil companies operating on the West Coast, including Arco, Standard Oil, Tosco, Exxon, Huntway, Amorco, Shell, Union Oil, and the Pacific Refinery. In the Martinez to Rodeo bight of the Carquinez Strait alone, there are no fewer than nine petroleum docks. The total

The Lion of California, the first tanker in the U.S. with a vapor recovery system. (Photo: J. Quam-Wickham.)

cargo that can cross the docks is very high. Total hydrocarbon emissions, then, must also be very high.

Which poses the greater emission hazard—tankers or barges? Per unit of volume, barges emit more fumes than ships for a number of technical reasons. According to the National Academy of Sciences, nationwide barge loadings made up 37,600 of the total 56,600 tons of emissions for 1985. Barges, which may be as large as ships, can also make more frequent cargo transfers because many of them remain in local waters. Their voyages can be as short as moving product just across the river in the Benicia-Martinez area. Lightering—making an anchored ship's cargo lighter by loading into a barge—can occur between the same barge and the same ship three or four times in one week.

An inverse relation often exists between toxicity and vessel size. Small barges will frequently carry the more toxic, concentrated products, because those products are produced in less quantity. Thus, larger ships may not be necessary. An extreme example can be seen in the very small barges used in the Mississippi Valley that transport acrylonitrile (vinyl cyanide) for acrylic fabrics. Every organic molecule of this product contains cyanide. Until recently, one company's barge loading safety instructions only required a five knot wind, in order to blow some of the cyanide fumes away.

Barges are often improperly and illogically exempted from the regulations which apply to ships. For example, only ships are required to have inert gas recirculation systems against fire and chemical hazards. So there is a real danger that future emission regulation on the local or national level may exempt barges. Barges are like any other vessels; except barges have no engines for self-propulsion. It would be contradictory to exempt them.

THE CARGOES

Understanding the characteristics of the volatile hydrocarbons released during marine loading requires that we know the composition of the various products handled on the barges and ships.

Laws about workers' "Right to Know" are now being brought into the maritime industry, and may soon provide good answers as to the precise chemical breakdowns of these products. Until then, we present here a list of commonly handled products, as oil vessel workers know them. We omit the qualitatively more poisonous cargoes such as the acrylonitrile mentioned earlier.

Generally, our cargoes are broken down into "black oil" and "light oil" categories. A black oil barge will generally be used only for that so-called "dirty" service, while light oil products are loaded into another set of "clean" barges. Actually, as we can see by the dangers of benzene, the term "clean" is rather inappropriate.

Among the black oils are crude oil, sour crude (containing hydrogen sulfide), reformate, and naphtha. Other black oil cargoes include the ship fuels called bunker fuel and marine diesel oil, as well as reportedly cancer-causing catalytic cracking oils.

The light oils of the West Coast trade include: super unleaded as well as unleaded gasoline (both with benzene added), leaded gasoline, diesel fuel, and lubrication oils.

Perhaps the most dangerous cargo of all is gasoline with benzene as an additive. The substitution, several years ago, of benzene for lead as an octane booster obviously had serious flaws from a health standpoint. The irony is that we have a suitable alternative to benzene... ethanol, or grain alcohol. Only a few gasoline companies use this relatively harmless additive. In an age of a seriously depressed farm economy one would think that far-sighted legislators would consider adding ethanol to fuels, simultaneously stopping benzene cancer and boosting the demand for American farmers' products. But this is a subject for another day.

continued on page 8

BARGES AND TOXIC FUMES

continued from page 7

JOB HEALTH HAZARDS

What are the known effects of the hydrocarbon fumes to which we are exposed? Benzene leukemia has been the best publicized of the cancers attributed to petroleum products. Medical studies indicate that petroleum workers are also susceptible to a large number of other cancers, including cancers of the pancreas, throat, and kidney.

Donna Mergler, Montreal neurotoxicologist and visiting scholar at LOHP, has addressed the Inlandboatman's Union (IBU) membership on these questions. According to Mergler, absorption of fumes by the lungs puts organic solvents into the blood, from which they can affect all the cells of the body. The liver does overtime metabolizing the toxic compounds; the kidney does overtime excreting them. The toxic compounds in the blood also affect nerve and brain cells. Nerve cells require fatty tissue for insulation of the electrical impulses they transmit. When solvents dissolve that fatty nerve tissue, the nerves get the equivalent of a short circuit.

The resulting nervous system effects are numerous. As with ethanol (grain alcohol), mood changes or dizziness can occur as acute effects. Overexposure can eventually cause one to pass out. Chronic effects are often irreversible: memory loss, concentration difficulty, constant tiredness, and long-lasting changes in behavior.

Skin problems, sexual difficulties, high cholesterol counts, and arterial hardening have also been identified as physiological responses to organic solvent exposure.

Mergler told union members an anecdote about workers at a hockey stick manufacturing plant. Workers there couldn't concentrate and would go home without remembering that they had ever left the job. A Coast Guard licensed tankerman, one of the oil barge workers at the meeting, commented, "That sounds familiar to me." The solvents used to lacquer the hockey sticks were among the principal causes of the workers' problems. Workers in some industries have found themselves becoming addicted to solvents. Some have even found themselves working more overtime or taking home small quantities of the products to satisfy their addiction.

AIR QUALITY: SCIENCE AND POLITICS

The Inlandboatmen's Union, recently affiliated with the ILWU, has been an historical bellwether for change throughout the century: organizing in 1918, coming and going from the CIO depending upon the political wind. In February, 1987, the IBU/ILWU began an eight-month strike, marked in March by the first San Francisco port shutdown in decades.

In July—right in the middle of the strike—a back page article appeared in the San Francisco press. The headline read, "Gas Shippers Cry Foul on Fume Restrictions." The Bay Area Air Quality Management District intended to regulate emissions from vessels that load petroleum products. The District, the oldest in the country, is governed by a Board composed of political representatives from nine Bay Area counties. It has a staff of 225 people, including 50 inspectors; the staff has been trying for more than ten years to get vapor recovery systems placed on loading vessels.

In a workshop on regulations, Citizens for a Better Environment (CBE) had told the District that total refinery benzene emissions would be cut 60% by installing vessel vapor recovery on both ships and barges. American Waterways Operators, the biggest national barge lobby, came to the District's workshop to protest the costs of installing vapor recovery. Big oil was there.

Representatives of a little oil refinery announced at the workshop that the company had put the nation's first vapor-recovered ship into service—Tosco's *Lion of California*. In return, the Air Quality Management District Board permitted the refinery to increase the volume of petroleum cargo crossing its docks, thus allowing the little refinery to avoid a "big oil" takeover by increasing its business. One big oil concern announced that it too was considering vapor recovery systems on its vessels.

Almost simultaneous with the article about the air quality hearing, the press published results of the Department of Health Services study (discussed above) demonstrating water transportation workers' lives to be most at risk. After reading about these findings, boat and barge workers immediately recognized their common interest with the citizens of the towns near refineries. If citizens in the towns needed protection from refinery fumes, so did citizens on the job. After all, using a phrase from a technical report, who was at "the point source of the production of emissions?" By mid-July a new headline read, "Barge Firm Accused of Shirking on Safety." This time, the focus was on inland boatmen's work hazards.

The Citizens for a Better Environment addressed a union rally. Bargeworkers began publicly to count their dead, having had their concerns repressed for too long. One member of the negotiating committee died of benzene leukemia during the strike. Bargeworkers began to ask questions: Who died two years ago of pancreatic cancer? Who had throat cancer? What about that class action suit a few years ago? Astonished families questioned whether they should send their loved ones to work with such toxic fumes. Experienced trade unionists replied that now—at last!—they had a chance to change things for good.

Some unionists did even more, inviting their families to join in their efforts. Kids came to union rallies. Wives began writing letters, attending meetings when their husbands were at work, lobbying with political and union representatives.

Suddenly, the eighteen city council members, county supervisors, and mayors on the Board of the Air Quality District became aware that constituents of theirs knew a great deal about the processes that the Air District planned to regulate.

The District is planning to schedule more workshops during 1988 for public comment on its proposed marine vapor recovery rules. The Board will then vote on the proposal. Its final regulation is expected to be a "generic" rule which will not specify the actual engineering to be done to reduce emissions. The rule will probably call for no more than two pounds of hydrocarbon emissions per 1000 barrels of product.

ORGANIZE, REGULATE INDUSTRY

These developments in organizing action to regulate industry may mark a new direction for unions and their membership. Bay Area environmental politics during 1987 helped focus union attention on air quality issues. That new activism has continued to grow since the end of the strike in October

1987, when tug and barge workers were forced back to work under an imposed, unsigned contract. The San Francisco Inlandboatmen are beginning to apply —in the work process, in the political process—traditional trade union activism to help solve this social problem.

Health and safety sparked the beginnings of a whole new political flavor within the Mineworkers' Union when miners organized against black lung in the late 1960s. Perhaps we are coming to something similar.

The past decade has produced many labor defeats, not unlike defeats in the 1920s. In the 1980s, large scale economic forces have caused the *appearance* of union backwardness and occasional political ineptness. But this appearance today, as in the 1920s, only masks labor's basically progressive position in this temporarily retrograde situation. After a decade of labor retreat in the 1920s, one of the most advanced industrial unions of the day, the Mineworkers, came back to lead labor advances from within the American Federation of Labor, forming the CIO in the 1930s.

Alice Hamilton pioneered industrial hygiene in the 1920s, in that period of large scale defeats. She demonstrated that workers can improve their conditions and contracts by *scientifically* challenging some of the worst of unfair labor practices: the shortening of their lives. Applications of science become a type of working, reproducible, *social* experiment. If citizens, occupational health experts, environmentalists, regulatory agencies, and unions join to control safety and health, the companies cannot prevent significant successes. The good of all citizens—not just corporate profit—will become part of the bottom line.

The author thanks Antioch College for his general education. Mail any correspondence to Labor Occupational Health Program Monitor.

Insurance Industry Uses Inflated Figures

AIDS Cost Estimates: What Do They Mean for Workers?

Based on a paper by ***Bruce Kieler and Nancy Euske***

Editor's Note: The following are excerpts from a paper, Cost of AIDS as Symbol: A Social Constructionist Analysis, which was presented at the Annual Meeting of the American Public Health Association in New Orleans in October, 1987.

The current controversy within the public health community over the cost of an AIDS patient's care has important implications for workers and unions. Inflated estimates can affect medical insurance rates, lead employers and insurance carriers to demand AIDS antibody testing of job and insurance applicants, and impede workers' access to insurance.

Bruce Kieler is a graduate student in the School of Public Health, University of California at Berkeley, and has worked with LOHP's AIDS Labor Education Project. Nancy Euske is a graduate student in U.C.'s School of Business Administration.

The conflict between the insurance industry and persons who have AIDS (or who might carry the virus) is in its first stage. Insurance companies have refused to pay bills stemming from hospitalizations for AIDS treatment. Some have moved to cancel coverage for persons who test seropositive, or are suspected of being seropositive, on tests for the Human Immunodeficiency Virus (HIV), the virus that causes AIDS. The insurance industry has also begun to press government regulatory agencies for permission to use AIDS antibody tests to screen people who apply for coverage.

Subsequent stages of this conflict will follow. Working parents with family medical insurance coverage may become involved next. As the insurance industry begins to realize the potential for an explosive spread of AIDS virus infection in the sexually active teenage children of these workers, it can be expected to move to curtail such family coverage or to press even harder for antibody testing of the entire family.

The pivotal issue is the belief that AIDS is a prohibitively expensive disease, one which the insurance industry cannot afford to insure. The belief that AIDS is exorbitantly expensive appears to be based on research reported by A. M. Hardy and her co-authors in a January, 1986 article in the *Journal of the American Medical Association*, titled *The Economic Impact of the First 10,000 Cases of Acquired Immune Deficiency Syndrome in the United States.* The paper was the first attempt to determine the economic cost of AIDS, but its estimate that the entire course of treatment of each AIDS patient costs approximately $147,000 is huge when compared to estimates in various earlier reports as well as every subsequent AIDS cost study.

The Hardy estimate has emerged as the governing image of the cost of AIDS. This image has panicked the insurance industry. As a result, the industry has taken actions to limit its liability. But the developing consensus among leading researchers is that the Hardy estimate is flawed.

AIDS IN PERSPECTIVE

Hardy's estimate of cost was circulated in draft form during 1985 and became *the* "cost of AIDS" figure for the United States, with some policymakers citing $140,000 per patient and others citing $147,000, but with both figures attributed to Hardy or to the Centers for Disease Control. Hardy's cost estimate has been used in testimony before the U.S. Congress and before state and federal agencies. The insurance industry has used the Hardy estimate in its predictions of the financial disaster facing it.

All of this concern over the cost of AIDS has occurred without a critical examination of the methodology and data used by Hardy in computing the estimate. Briefly, the study has serious flaws: it assumed that people suffering

continued on page 10

COSTS OF AIDS

continued from page 9

from AIDS are typical of the average American wage earner, when in fact they are not; and it overestimated the length of hospital stays by focusing on a small number of hospitalized terminally ill patients, not differentiating among the various AIDS-related diseases, and not considering hospice or home care. It also used cost estimates based on full hospital charges, including profit markup, although insurance companies reimburse hospitals only for their actual costs; and it probably included public aid costs for destitute AIDS patients, which are not costs of illness. *(The authors of the paper include a detailed analysis, not reprinted here, of the Hardy study's methods and data.)*

Several researchers have recently demonstrated that the direct cost of AIDS is less than Hardy calculated. A. A. Scitovsky *et al.*, in a 1986 report prepared for the Centers for Disease Control, noted that the estimates of the cost of AIDS for 1984 totalled $1.9 billion, a "fraction of one percent of the total economic costs for all diseases." They went on to say that if the AIDS virus continues to spread and kills significantly more persons in the 1990s (as projected by some high estimates), the cost will still be "less than one percent of the total" amount that the U.S. annually spends on medical care.

T. Shahoda, in a 1986 article in the journal *Hospitals*, noted that AIDS represents a small percentage of the nation's total medical bill and that, on the whole, insurance companies are paying more for cancer, heart disease, and maternity care. Shahoda also noted that most AIDS patients are not covered by private insurance companies and that up to 80% of the reported cases are covered by Medicare and Medicaid.

The insurance companies have a low involvement in this epidemic. If they are not facing a catastrophic financial drain due to AIDS, why are they clamoring to adopt the AIDS antibody test as a way of screening out seropositive persons as clients?

ANTIBODY TESTS AND STIGMA

The prevailing overestimates of the financial costs of AIDS have several implications for health care policy and health care financing. Perhaps the most far-reaching is the focus on the use of the HIV antibody test to identify individuals who are seropositive for the purpose of discriminating against them (denial of insurance coverage, denial of jobs, etc.).

Introduction of widespread antibody testing for other than medical purposes would tend to reinforce the stigma associated with AIDS. Concern over antibody status is misplaced; concern should be focused on preventing transmission of the virus, and the only way to accomplish that is through education. It might be assumed that as concern over antibody status increases, discrimination and stigma will also increase, as will the threat of such measures as quarantine.

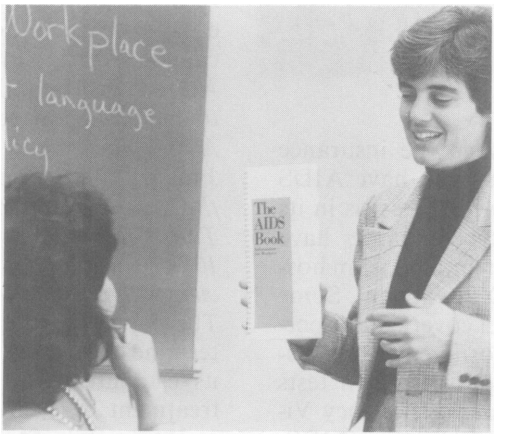
Fears about antibody status appear to be increasing among the population at risk for HIV infection, with many refusing to be tested or learn the results of the test when conducted. Also, any future vaccine to prevent AIDS infection would probably produce antibodies indistinguishable from the antibodies that result from actual exposure to the HIV virus. So it is possible that the developing stigmatization of antibody status by the insurance industry and others (e.g. the military and State Department) could increase the chance that those at risk might reject the vaccine to avoid being labeled antibody positive.

Not only could vaccine use be impeded because of fears about being seropositive, but the development of the vaccine itself, right now, might be impeded. How many persons who are antibody negative will be willing to volunteer for an HIV vaccine trial, knowing that it could make them test positive and that there is a movement to identify and isolate anyone who tests positive?

The fear of antibody status might also lead many persons to delay or refuse to seek medical treatment for illnesses. Rather than commit more attention and money to antibody screening, emphasis should be placed on education. Currently screening expenditures are almost nine times as great as expenditures on education, and this situation can only worsen if antibody testing spreads throughout the insurance industry, the military, and among employers. To stem the spread of HIV infection, it is necessary to:

- **increase educational efforts, especially among the young;**
- **enact protective legislation for those who are infected with HIV;**
- **enact legislation mandating free medical care for those suffering from any immune or neurological dysfunction stemming from HIV (national health insurance to cover HIV infection); and**
- **supply free sterile needles to IV drug users along with increased efforts to assist those seeking recovery from addiction.**

Copies of the complete paper, Cost of AIDS as Symbol: A Social Constructionist Analysis, are available from Bruce Kieler, Institute of Industrial Relations, University of California, 2521 Channing Way, Berkeley, CA 94720.



Education is a better response to the AIDS epidemic than indiscriminate antibody testing used to deny workers jobs or insurance. Here, workplace AIDS training is conducted by LOHP's AIDS Labor Education Project. (Photo: Ken Light.)

NEW STUDY FINDS AIDS COSTS ARE LOWER

A new study on the cost of AIDS care appears in the May–June, 1988 issue of the journal **Public Health Reports**. The researcher, Fred J. Hellinger, a health economist at the National Center for Health Services Research and Health Care Technology in Rockville, Maryland, finds the cost lower than previously estimated by the government.

Dr. Hellinger assumes that 38,000 patients will be newly diagnosed with AIDS this year, and estimates that the total cost of providing their hospital and medical care will be $2.2 billion. He predicts an increase to 73,000 patients newly diagnosed with AIDS in 1991, with a total care cost of $4.5 billion. These figures are lower than previous government estimates. Dr. Hellinger attributes the lower figures partly to the fact that AIDS patients are spending fewer days in the hospital and receiving more care at home or in nursing homes, and partly to a slight decrease in estimates of the number of people who will develop AIDS.

The new study is the first to include the cost of the expensive drug AZT (azidothymidine), the only medication proved effective in treating AIDS.

Dr. Hellinger cites evidence that the average AIDS patient in recent years received $41,000 in hospital services and $4,000 in medical services outside the hospital. If AZT extends the average patient's life one or two years, this would require another $12,000 in hospital and other medical costs, and an additional $12,000 for the AZT. The total of these figures is substantially lower than the "Hardy estimate" discussed in the accompanying article.

Newswire

Cal/OSHA Initiative Qualifies for November Ballot

The November, 1988 California ballot will include a proposal to restore Cal/OSHA, thanks to a grassroots petition effort this spring which collected over 700,000 voter signatures to qualify the measure. Cal/OSHA, the state's job safety and health program, was virtually eliminated in 1987 when Governor George Deukmejian cut its funding, leading federal OSHA to assume responsibility for safety and health enforcement in California's private sector. Labor and many others believe that federal OSHA's enforcement program is much less active and effective than Cal/OSHA's.

The total number of signatures collected on the petition was almost twice the number needed under state law. The highly successful petition drive was led by the Coalition to Restore Safety at Work, a broad-based alliance which includes labor, business, environmentalists, health organizations and health professionals as well as consumer and law enforcement groups.

In other Cal/OSHA developments, the state Supreme Court has agreed to hear *Ixta v. Rinaldi*, a suit brought by opponents of the Cal/OSHA cut which argues that Deukmejian acted illegally in curtailing the program. In late 1987, a state appeals court ruled against Deukmejian in the case and the Governor asked for review by the Supreme Court, which granted his petition for review in January, 1988. No Supreme Court decision is expected, however, for many months.

Also, the California legislature's fiscal committees again put funds for a full Cal/OSHA program into the state budget for the 1988–89 fiscal year, as they did last year. However, Deukmejian again vetoed the appropriation.

Major Rewrite of Standards; Labor Sees Weaknesses

OSHA May Reduce Many Chemical Exposure Limits

In early June, 1988, federal OSHA announced it would seek a wholesale reduction of the permissible exposure limits for over 100 toxic chemicals used in the workplace. At the same time, OSHA proposed setting new exposure limits for about 200 more, previously unregulated chemicals. In announcing the plan, OSHA chief John A. Pendergrass said that it "represents a 20-year leap forward in levels of protection" for workers.

OSHA officials said that about 17 million U.S. workers are now exposed to the chemicals involved, and that about 3.6 million are exposed to concentrations of the chemicals above the proposed new limits. OSHA estimated that the new rules could prevent 50,000 cases of work-related illness each year, including cancer as well as liver, kidney, cardiovascular, and respiratory disease. In addition, the agency said that 500 lives could be saved each year. OSHA estimated that the cost to industry of meeting the new standards will be $900 million a year.

Because the change would affect OSHA's permissible exposure limits (called "PELs"), the agency has dubbed the proposal the "PEL Project."

Exposure limits appear in OSHA's so-called "Z-tables," a part of its published safety and health standards. The proposal would reduce exposure limits for about 100 substances listed in the Z-tables, including chloroform, carbon monoxide, hydrogen cyanide, ammonia, trichloroethylene, and perchloroethylene. Current exposure limits for 25 more substances would be retained, and the exposure limit would be increased tenfold for one substance, fluorine. In addition, PELs would be adopted for 205 substances not previously regulated. Short-term exposure limits would be added or changed for another 70 substances.

Most of the present OSHA PELs are actually exposure limits recommended in 1968 by the American Conference of Governmental Industrial Hygienists (ACGIH) and later adopted by the American National Standards Institute (ANSI). An entire list of ACGIH/ ANSI "consensus" exposure limits was incorporated into OSHA standards when OSHA was formed in the early 1970s. Although current in 1968, the old ACGIH limits have in many cases been found inadequate on the basis of new research. The ACGIH itself has lowered many of them, but until now those changes have not usually been reflected in OSHA standards. Most of the limits in OSHA's new proposal are based on the current ACGIH recommendations, although National Institute for Occupational Safety and Health (NIOSH) recommendations are used in some cases.

OSHA has been widely criticized for not updating its exposure limits before. In the past it has proposed revised standards on a substance-by-substance basis and only on a relatively few occasions. Those proposals have usually been highly controversial, often ending in long court battles. In announcing the new approach, Pendergrass said that a "substance-by-substance approach cannot keep pace with the scientific development in occupational health nor with the introduction of new chemicals and chemical compounds into the workplace."

OSHA said that it will use an "accelerated rulemaking" process for adopting the proposed changes. The agency expects to conduct public hearings in the summer of 1988 and to take final action by November.

The Chemical Manufacturers Association supports the proposal, although its spokesman said that specific companies might object to some of the changes.

The AFL-CIO said that it supports the concept of updating the standards, but suggested the new standards should also cover maritime, construction, and agricultural workers, who are excluded as the proposal is now written. Diane Factor, an AFL-CIO industrial hygienist, also criticized OSHA's announced intention to allow compliance with the new limits through use of respirators for the first four years before requiring engineering controls such as ventilation.

In addition, Factor said there should be a rule requiring exposure monitoring to accompany the new exposure limits. Otherwise, she said, it is "like setting speed limits without providing speedometers."

Labor Occupational Health Program
Institute of Industrial Relations
University of California
Berkeley, CA 94720

Address Correction Requested

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