

Labor Occupational Health Program MONITOR



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ARSENIC WOOD PRESERVATIVES



(Photo: Charles West.)

On the Cover:

Any worker using preserved wood is potentially exposed to arsenic compounds: laborers, carpenters, construction workers, lumber and sawmill workers, telephone or utility linemen, and many others. An OSHA standard only regulates some uses of arsenic, but other uses can be equally dangerous. (See pages 7-9.)

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Arguing for OSHA

Some Facts for Union Safety Representatives

By Richard Ginnold

LOHP Coordinator of Public Programs

For several years now, Congressional and business critics have attempted to restrict OSHA, charging that the agency has greatly increased the cost of doing business without achieving any improvements in job safety and health. This "stop OSHA" movement has culminated in a recent Congressional limitation on OSHA inspections of small employers and in a new, more restrictive bill, introduced by Senators Schweiker and Church, and co-sponsored by the author of the OSH Act, Senator Harrison Williams (D.-N.J.).

Are these charges and resulting legislation warranted? And what can unions do to defend their legitimate interest in OSHA's continued authority? There is little factual basis for negative claims or fears that OSHA will price businesses out of the market. In addition, a case can be made that OSHA has substantially reduced fatality and injury rates, in some cases.

THE CASE: WHAT ARE OSHA'S COSTS AND BENEFITS?

OSHA's cost impact has been far less than suggested by anti-OSHA spokesmen. Recent studies found that OSHA lagged behind almost all other federal safety and environmental agencies in its total cost impact on business. For the 48 large firms studied, the OSHA impact of \$184 million was less the one-seventh that of the Environmental Protection Agency, which alone was responsible for 70% of the total environmental costs incurred by these firms. In another survey, McGraw-Hill found that in 1979 employers planned to spend \$4.9 million on safety and health. This was only slightly higher than pre-OSHA expenditures after correcting for inflation. It was also less than 3% of total business capital spending. Economist Edward Denison measured the impact of environmental and safety laws on the economy from

1967 to 1975. He found that *all laws together* lowered production only 1.8 percent by 1975. OSHA's impact represents less than 5 percent of this small total. And, in fact, OSHA's cost impacts appear minor when compared to OPEC price increases and the costs of U.S. economic policies and other external shocks during the 1970's.

OSHA has in fact reduced job injuries and illnesses. A recent Ralph Nader report which was based on respected economic studies found that *at a minimum* OSHA reduced work injuries by well over 60,000 per year plus substantially lowering work fatalities due to cave-in, falls, and other hazards which have been better controlled since OSHA's promulgation in 1970. These benefits, which do not include reductions in occupational diseases, are estimated at more than \$5 billion annually. They are far greater than yearly OSHA costs to employers.

In California, for example, work fatality figures show that annual deaths due to specific violations of safety codes have fallen continuously since 1971 to a figure of around 248. New safety measures for electrical construction, rollover protections, and explosion prevention have reduced deaths by an estimated 40-50 annually.

Lost-time injuries from hazards such as falls, cave-ins, and rollover have fallen by 20 to 30 percent in recent years, due in part to an unusual permit system which allows Cal/OSHA safety and health officials to identify hazardous building projects. Between 1977 and 1979, workers' compensation rates for some major California building trades have been reduced by 30 percent.

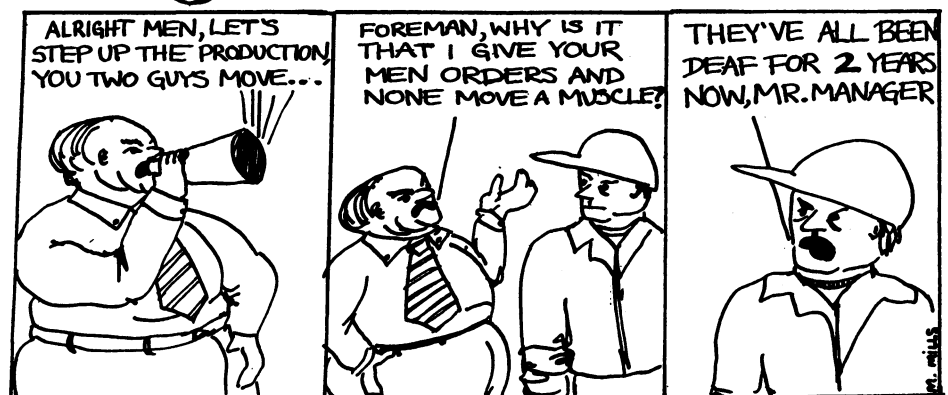
Grain elevators throughout the country, in response to greatly increased OSHA enforcement after the December, 1977 explosions, have been introducing new dust controls and preventive maintenance and housekeeping. These measures have already cut the number of fatal explosions to one-third the pre-1977 rate.

There has been a less measurable but definite growth in noise control and use of hearing protection throughout industry, resulting in less risk of hearing loss.

The aggressive use by some OSHA regions of General Duty clause 5(a)(1) citations for hazards lacking standards has begun to reduce serious injuries and fatalities due to confined space entry, failure to lock out equipment for repair and maintenance, and improper

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One day at the sheet metal . . .



—Original cartoon contributed by Ron Richardson.

Assembly Line Hysteria

by Janet Bertinuson

In recent years there have been what some occupational health experts consider "alarming increases" in reported incidents of mass illness in workplaces throughout the country. These mass illnesses have been labeled "assembly line hysteria," "mass psychogenic illness," or "mass hysteria," terms that may leave the victims of the outbreak feeling that their illnesses are not being taken seriously by investigators, or that they are being called crazy.

These mass outbreaks have occurred in numerous industries including shoe and furniture manufacturing plants, electronics plants, hospitals, and offices.

The most frequently described symptoms are feeling faint and labored breathing. Most of the episodes occur in areas where the workforce is predominantly female.

Researchers from the National Institute of Occupational Safety and Health (NIOSH) say that there is usually a "trigger," an actual or perceived problem to which workers "overreact," so that the initial response of one worker leads to many others becoming ill. In recent incidents (NIOSH has documented 19 in the past six years) the triggers have included odors, visible fumes or dusts, observation of fellow workers becoming ill, or a definite case of job-related illness.

A common scenario for these outbreaks is described by the NIOSH researchers. Workers are in repetitive jobs, ranging from assembly lines to an office filled with video display terminals. The jobs are generally low-paying and boring. Relations with management are often poor. An unfamiliar odor, dust, or new material is introduced into the workplace. One worker gets sick, may faint, and others witness or hear of the incident. The illness spreads and many workers (in some cases, more than 40) show similar symptoms. Generally OSHA or state OSHA inspectors come in to investigate after the occurrence. And, in the cases NIOSH has documented, NIOSH is called in, long after the outbreak, when conditions are no longer the



(Photo: *Working For Your Life.*)

same. Standard tests for possible air contaminants are repeated (if OSHA has already done them once) or performed for the first time. They come out negative (described in some NIOSH reports as "non-toxic accumulation of odors," "below harmful levels," "within current standards," or "significant levels not present.") Other factors are investigated, and the diagnosis is mass psychogenic illness.

THE CAUSE?

NIOSH researchers attribute these incidents to overly stressful working conditions. According to one NIOSH investigator, the workers are basically saying, "This job makes me sick." And why are women most affected? Researchers explain this by the fact that women are channeled into the worst, most repetitive positions, and are more likely to feel alienated by their jobs as well as stressed from trying to balance the burden of a job at home as well.

Despite the fact that NIOSH researchers find the probable cause of

these illnesses in working conditions (i.e. stress), there is concern among workers and unions that the outbreaks are still seen as "psychogenic" but may not be irrational at all. The catch phrases "mass hysteria" or "assembly line hysteria" then become an excuse to overlook real hazards in the workplace. Michael Wright, industrial hygienist for the United Steelworkers, worries that by putting a psychological label on a mass illness, researchers shift the blame onto the psychological condition of the workers and away from the real cause—unhealthy working conditions.

WHAT ARE OTHER POSSIBLE CAUSES?

Some researchers feel that chemical exposures must not be overlooked simply because they fall below established permissible exposure levels (PEL's.) In fact, in one NIOSH Health Hazard Evaluation, where workers had symptoms consistent with trichloroethylene exposure, NIOSH concluded that trichlor was toxic to workers in that area at the concentrations found, *even though levels were below the cur-*

rent federal standard. Susceptibility to very low levels of man-made chemicals is also a point to be considered. Claudia Miller, an industrial hygienist and consultant from Lake Forest, Illinois, contends that exposure to tiny quantities of these chemicals can produce both physical and psychological reactions in persons who are susceptible.

Another possible factor that is generally overlooked is the interaction of chemicals: what effects might be produced by low levels of two or more chemicals combining in the workplace or after they enter a worker's body? And, finally, if stressors in the workplace can be linked to these outbreaks of mass illness, the possibility that job stressors may increase susceptibility to chemicals, making low-level exposures a problem, must be considered.

It is apparent that better tools need to be developed for the study of these increasing incidents of mass illness. Investigators must be sure that *all* possibilities have been looked at before diagnosing an incident as mass psychogenic illness. Or we will continue to see situations such as an outbreak in Texas where 45 women became ill and the *fire inspector* made the diagnosis that the women were victims of hysteria.

Monitor Subscription Price Increases

Effective January 1, 1980, the annual subscription rates for the *Monitor* will increase. Individual subscriptions will be available for \$8.00 per year, and institutional or organizational subscriptions will be \$15.00 per year.

There will be no change in the price of bulk orders (\$1.00 per year per extra copy, with an annual subscription.)

This increase is made necessary by our increased printing costs. It is our first price increase since 1976.

SEIU Locals Study S.F. Office Building

Hazards at 170 Otis Confirmed

by Molly Coye, M.D.

In October, 1978, more than 900 workers at San Francisco's Department of Social Services moved into their new headquarters, a large concrete building at 170 Otis Street. Within a month, they began to get sick.

The workers brought their complaints to the bargaining unit health and safety committee in Locals 400 and 535 of the Service Employees International Union (SEIU.) This article is the story of how the health and safety committee has worked to solve the problems at 170 Otis Street.

The members complained about itchy, sore eyes; scratchy throats; frequent colds and coughs. In addition, the building had never been adequately cleaned after construction: the walls were dusty with concrete, the stair shafts had piles of debris, and workers suspected that the ventilation system was not working well. The elevators were unreliable and had caused several injuries, and neither fire exit signs nor extinguishers were properly placed. Worst of all, more than 900 workers were crowded into a building which the architect had initially designed for less than 500.

"The building was a disaster," said Paul Scott, health and safety representative for Local 535. "We got more and more complaints, and management wouldn't do anything about it."

So the union took two steps: they called Cal/OSHA to file a complaint about the dusty work areas, unsafe elevators, and fire protection; and they passed out a short survey to find out what and where the worst health problems were. Cal/OSHA came and cited the City for some of the safety violations, but could not determine what might be causing the health problems, which sounded vague and uncertain.

The union survey, however, found that in four symptom areas—headache, eye irritation, throat and nose irritation, and nausea—there were a very

large number of complaints.

At the same time, Local 400 representatives began to send workers with health problems to the Occupational Health Clinic at San Francisco General Hospital. The Clinic had just been set up to do job-related health screening for individual workers and for unions. Now the Clinic appointed a special committee to work with Local 400 on the problem.

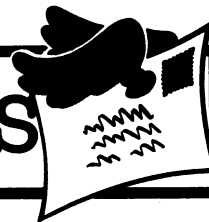
The Clinic reported that more and more workers were being seen, with health problems that fit the pattern which Local 400 suspected. SEIU representatives at 170 Otis Street faced a problem. Even though their survey and Clinic findings both suggested that there was a real problem in the new building, neither management nor Cal/OSHA was convinced. The symptoms were "vague," too much like common colds, or flu, and no one could suggest an explanation for the cause of these illnesses. Cal/OSHA came again to sample the dust and air, but found nothing abnormal.

CONTROLLED STUDY

Local 400 needed ammunition to make the City take a hard look at the 170 Otis Street building—to convince the City that there was a serious and real problem for workers who spent their days in that sealed, modern building. Together, the health and safety committee and staff members from the Clinic wrote a longer questionnaire. This time, they did what is called a "controlled study"—they made sure that a high percentage of workers answered the questionnaire, and they got workers from another building which did not seem to have the same problems (also a Department of Social Services building, at 1360 Mission St.) to fill out the same questionnaire. In this way, the workers from 170 Otis Street could be compared with a "normal" or "control" group, the workers at the other building.

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COMING: A Special MONITOR Issue on Cancer, March-April, 1980



Asbestos Insulation Removal— A Compliance Officer's View

To Monitor:

Despite considerable efforts to inform workers of the hazards of asbestos dust, OSHA regulations dealing with asbestos insulation removal are continuing to be violated in chemical plants and refineries throughout the country. From hundreds of recent interviews with insulators, pipefitters, instrument mechanics, carpenters, etc., I have learned that they almost invariably do not use the OSHA-required "wet method" of removal. Their union representatives all thought this problem had been solved, but in many plants it was actually getting worse.

With the introduction of "crossing of the crafts," the insulation removal is now being done by all crafts. Recent research at Mt. Sinai Hospital in New York is showing that low-level, short term exposures, such as those experienced during small tear-out jobs, greatly increase the risk of asbestos-related cancer. In one study, a total of 35% of the family members of asbestos workers were found to have x-ray abnormalities consistent with asbestosis. Exposures to craftsmen doing tear-out today are at least equal to, and probably exceed, the low-level, short term exposures which the insulators' family members received in these studies.

It is possible to get management to eliminate these exposures. The first step is to encourage recognition of the hazard that currently exists. Economic incentives can then come into play. A recent OSHA inspection of a major chemical manufacturer resulted in OSHA alleging a willful violation of the General Duty clause in the federal OSH law, as follows:

"Employer failed to correlate the available medical data of x-rays and pulmonary function tests. This data, concerning pulmonary and radiological changes, gives evidence of seven cases of pleural

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The Do's and Don'ts of Asbestos Insulation Removal

by Vince Gallagher

DO

- Rope off the area where you are going to work and post signs to warn other employees to stay away because of asbestos dust.
- Make sure you have sufficient lengths of hose, and adjustable nozzle for the hose.
- Use special throwaway clothing and change it when it gets ripped. Use whole body coveralls as well as head, foot, and hand coverings.
- Have the scaffold constructed in such a way as to avoid working on equipment that is over your head. (This avoids dust passing you breathing zone.)
- Have sufficient number of bags, properly labeled, to collect the insulation.
- Use a powered air-purifying respirator. (The two-strap throwaway type are approved but not very safe.)
- Use knives or saws rather than hammers or wrenches.
- Use an amendment to the water which will cause it to penetrate the insulation quicker.
- Use a sufficient amount of water, and wet the insulation entirely and thoroughly.
- Puncture non-absorbent surfaces by slitting to allow soaking prior to removal of the non-absorbent surface.
- Wait until the water penetrates the insulation.
- If dust starts flying when attempting to lift the tar paper or outer cover, stop and get another employee to help. He or she can apply generous amounts of water with a fine, low-pressure water spray to the insulation as you lift the tar paper or outer covering.
- If you must work dry, use a powered air-purifying respirator.
- Keep your clothes in a separate locker from your other clothes.
- When in doubt, treat the insulation as if it contains asbestos.
- Identify or code the new non-asbestos insulation so it cannot be confused with insulation containing asbestos.

DON'T

- Climb the scaffold while carrying containers of water.
- Let dry insulation drop to the ground.
- Allow the slurry that falls to dry.
- Knock off the insulation dry and then wet it when it is on the ground.
- Bring clothes home to laundered. (If you must, wash them separately from other clothes and rinse out the washing machine afterwards. Even if you wear special throwaway coveralls your clothes get dust on them when the throwaways get ripped.)
- Hit the insulation with a force of water that will cause the dust to fly.
- Crease or fold your throwaway respirator (because it will leak.)

ASBESTOS

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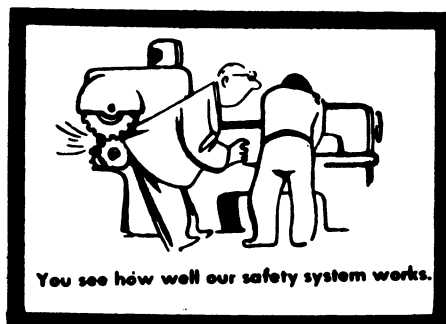
thickening and two cases of asbestosis. The nine insulators involved were not notified by their employer of their medical condition. The administration and organization, within the employer's management hierarchy, did not ensure that medical data was competently evaluated and reviewed, and in addition did not ensure that effective treatment or preventative action was taken when warranted."

It is not difficult to prove that the company had knowledge of the employees' disease. The evidence exists on the company-administered x-rays and lung function tests, to which employees' physicians and OSHA have legal access. A review of this data by a qualified radiologist employed by the union or hired by OSHA will disclose the simple fact that asbestos workers indeed get asbestosis and other related disease. This evidence, used properly, can cause the economic incentives of OSHA willful violations, workers' compensation, third party suits, and medical malpractice suits to come into play. It should be possible, then, to convince management to implement the "wet method" and other safe practices for removing asbestos insulation.

This is a battle which can be won. The ammunition, unfortunately, exists on the workers' x-rays.

—Vince Gallagher

Vince Gallagher is an OSHA Compliance Officer and Monitor reader in Camden, New Jersey. Monitor welcomes short letters describing personal health and safety experiences or expressing a point of view.



—Survival Kit

170 OTIS STREET

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THE RESULTS

The table below shows the results which were obtained:

Symptom or Complaint	% Positive at 170 Otis	% Positive 1360 Mission
Eye irritation/itching	54.9	36.1
Frequent irritation of nose or throat	52.5	23.5
Increased shortness of breath	18.9	3.0
Chest tightness	20.6	3.0
Eye inflammation/infection	19.5	3.4
Skin dryness	35.1	22.4

In all these cases, the differences between the percentages at 170 Otis Street and at 1360 Mission Street are what statisticians call "significant"—there is only about a 5% or less chance that these differences are due to random variations in the two groups.

There are two very important points about these results:

First, the survey results match very closely the symptoms found in examinations at the Occupational Health Clinic; so the agreement between *clinical evidence* and *epidemiological evidence* greatly strengthened the union's argument that something in the workplace at 170 Otis Street was affecting the health of the workers there.

Second, because of the participation of Local 400 members at 1360 Mission Street, these results can't be written off as (1) just due to chance, (2) just due to more smoking at 170 Otis Street (more people smoke at the other building!), or (3) just due to more people complaining at 170 Otis Street. The last point was checked with a "trick" question about an unrelated health problem—low back pain—and more workers at 1360 Mission Street complained about this, so the workers at 170 Otis Street were not just complaining more about *everything*.

From the results of this survey and the examinations done at the Clinic, the agent or agents causing these problems at 170 Otis Street appeared to be primarily *irritants*. We do not yet know which of many irritants are responsible, but many irritants will cause eye, nose, and throat irritation, chest tightness, and shortness of breath in the short term. Because of the study results, however, SEIU was able to obtain help from the Ventilation and In-

door Air Quality Group at Lawrence Berkeley Laboratories. This fall, Dr. Isaac Turkel and staff members from his group did several days of thorough air sampling. Preliminary reports suggest that they will be able to identify some unusual particles and vapors in the building's air. Even more important, their early testing of the ventilation system showed that it has not even been installed properly!

So, while Locals 400 and 535 wait for the more complicated laboratory tests, they do have information now about a basic problem in the circulation of air within the sealed building. With these early results, and constant activity by the health and safety committee, management has announced that they are taking bids to correct many of the safety and clean-up problems which the union first identified.

"With the laboratory test results, and the survey results, we will really be able to press the City for action to clean up the hazards," said Local 400 staff representative Brenda Presley, who has been working with members in the Social Services Department. This month the union committee will go before a City commission to present the problems at 170 Otis Street and demand a thorough clean-up.

"We never let up pressure, and we're seeing some progress," said Lucy Flato, one of the activists on the health and safety committee at Local 400. "But it's slow, and we need studies and laboratory tests—we need the technical back-up—to prove a hard case like this."

NATIONWIDE PROBLEM

Nationally, the problem of poor ventilation and chemical and physical hazards in new buildings has received more and more attention. Both NIOSH and OSHA have been called in on a number of cases, with widely varying results. The fact that so many of the new office buildings are sealed—as an energy-saving device in controlling air temperature—means that potential toxins are re-circulated rather than naturally escaping through windows. In some cases the ventilation systems themselves are so poorly designed that the intake for fresh air on the building roofs draws air directly from the exhaust outlet. When the environmental sampling and analysis is completed at 170 Otis Street, Local 400 and 535 members may not be the only workers affected by the results.

Arsenic Wood Preservatives

By Sidney Weinstein

One of the most commonly used chemicals in wood preservatives is inorganic arsenic.

Swallowing a large amount of arsenic at one time can poison or kill you. But swallowing, breathing, or otherwise taking in small amounts of arsenic over a long period of time can also harm your health.

Repeated, direct skin contact with inorganic arsenic is *very irritating*. It can cause skin rashes and other problems as well as holes in the nasal septum (cartilage separating the two sides of the nose).

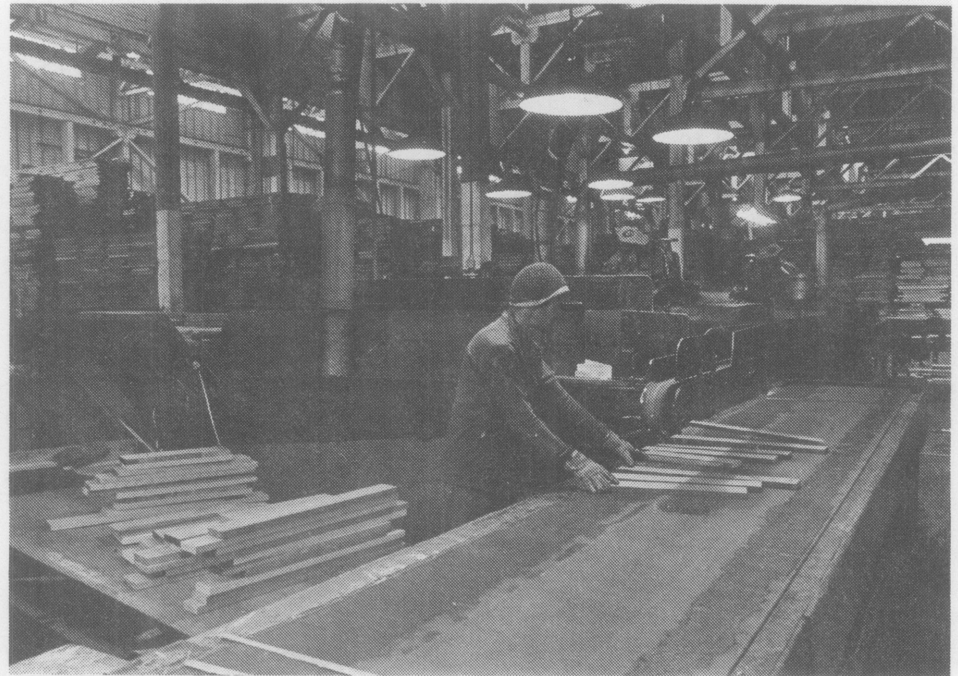
But arsenic-related health problems can be prevented. If you use arsenic compounds on your job or handle wood treated with such compounds, ask your employer to provide adequate protections—for example: yearly medical examinations including blood and urine tests; regular air monitoring (measurements); protective clothing; training in safe clean-up procedures; dust-control measures; showers; laundry service and storage facilities; and separate lockers for street and work clothing.

If your employer takes air measurements, find out what they are. And ask for the results of any medical tests provided by your employer.

By working safely and taking your own precautions, you can also help guard your health while working with arsenic compounds.

Some pointers:

1. *Avoid direct skin contact with arsenic-based preserving solutions, paints, and treated wood.*
2. *Don't smoke, eat, or drink in areas where arsenic is used or applied.*
3. *Wash your hands and face after handling preserving solutions or wood treated with arsenic compounds.*
4. *Don't take contaminated clothing home—you may be exposing your family.*



(Photo: Charles West.)

5. *Shower and change clothes at work, or as soon as you get home.*

6. *Clean up contaminated areas with vacuum methods, never with compressed air.*

WHO IS EXPOSED TO ARSENIC WOOD PRESERVATIVES?

Any worker using preserved wood is potentially exposed to arsenic compounds. If you are a laborer or carpenter or other construction worker, you might be exposed while moving, sanding, drilling, cutting, sawing, or otherwise handling preserved wood used for framing, decking, marine piers and pilings, fence posts, and anything else that comes into direct contact with water.

You might also dip wood on-site into preserving solutions or directly paint arsenic compounds onto the cut ends of lumber.

If you are a public utilities worker, you might be exposed while working

on poles, or during construction or maintenance of water flumes or structural or cooling towers.

If you work in a sawmill or at a wood-preserving plant, you might be exposed while stacking or loading preserved wood, mixing arsenic compounds, or doing other jobs around preserving operations.

In addition, exposure to arsenic may be a problem for anyone who handles treated wood, including homeowners and consumers. If you are exposed to arsenic compounds through your job *and* home use, your risk may be greater than that of co-workers.

HOW DOES ARSENIC AFFECT YOUR HEALTH?

Arsenic is *very irritating*. Workers who regularly come into contact with arsenic-based preservatives or wood treated with arsenic compounds complain of skin rashes and sore, swollen eyes and throats. With regular exposures over a long time, skin changes include



(Photo: Charles West.)

areas of darker color, scales, hardening of the palms and soles, brittle nails, hair loss, and possibly skin cancer.

Another long-term effect due to arsenic's irritating properties can be holes in the nasal septum (cartilage separating the nasal passages). Chromium, another chemical found in some arsenic wood-preservative compounds, can also cause nasal septum holes with long-term exposure.

Whether it is swallowed, breathed in, or absorbed through the skin, arsenic accumulates in the body to a certain extent. If you often work with wood that has been preserved with arsenic compounds, or work with the compounds themselves, your body may not be able to get rid of all the arsenic it absorbs. Then, progressive symptoms of chronic arsenic poisoning may develop: regular tiredness, headaches, nausea, garlic-smelling breath and perspiration, and numb, weakened hands or feet.

But these may not be the only dangers. Some animal and laboratory tests suggest that arsenic may have the ability to cause mutations (changes in the body's hereditary code) and birth defects. And one study of pesticide manufacturing and packaging workers exposed to lead arsenate and arsenic acid (a component of arsenic wood preservative compounds) showed an excess rate of deaths due to lung cancers.

Laboratory, animal, and human studies do not definitely prove that arsenic causes cancer in humans.

However, because evidence suggests that the risk of cancer is higher for workers exposed to arsenic, your employer should provide you with the best available information on your exposure risk (through medical tests, air measurements, and wipe tests on wood) and the best protections against exposure (i.e., local exhaust ventilation, dust-collection devices, process enclosures, respirators, and vacuum or fine-spray hose nozzles for clean-up).

OSHA REGULATION

Although there is an OSHA standard for exposure to inorganic arsenic, it does not cover construction and public utilities workers. Yet one industrial hygiene study in California indicates that these occupations may face the same health risks from arsenic as those involved in arsenic manufacture, formulation, or preserving operations which *are* regulated by the standard.

In addition, exposure levels allowed by the standard only limit the amount of arsenic in the workplace air. You will still have skin contact to worry about (with liquids as well as preserved wood). And the standard doesn't fully take into account arsenic's cancer-causing potential.

If you are a construction or public utilities worker, you or your labor organization can petition OSHA (or the state OSHA if you work in a state with its own plan) to extend the standard to cover your occupation.

ARE THERE OTHER DANGERS?

Arsenic compounds used to preserve wood contain other hazardous chemicals such as chromium, a strong skin irritant that is regulated by OSHA as a carcinogen (cancer-causing agent), and dinitrophenol or sodium pentachlorophenate, which is also very irritating to the skin.

HOW DO YOU KNOW IF YOU ARE BEING EXPOSED?

As a good rule of thumb, if the wood you are working with is **green**, it is probably preserved with arsenic compounds. The darker the green color, the more arsenic salts there are on the wood's surface.

But color is not always an accurate sign of arsenic's presence. Sometimes wood treated with arsenic compounds shows no color change, especially if the preserving solution used is ammonium copper arsenate (ACA) and has been kept "clean" and contains the proper proportions of arsenic to other chemicals.

How else can you find out if you are being exposed to arsenic compounds? Read the labels on dips, paints, coating, and wood. Ask your employer to request this information from the manufacturer (in the form of **safety data sheets**), or from the sawmill, preservative plant, or lumber supplier.

WHAT SHOULD BE DONE TO PROTECT YOU?

If you are exposed to inorganic arsenic compounds on your job, your employer should take regular air measurements or wipe tests on the wood you handle, and provide yearly medical examinations with blood, urine, and possibly nail and hair tests.

The kinds of controls your employer should be providing include: local ex-

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(Photo: Charles West.)

ARSENIC PRESERVED WOOD

continued from p. 9

haust ventilation; dust-collection devices; process enclosures; protective goggles and clothing; neoprene, rubber, or cotton-lined leather gloves (which are replaced with *any* signs of wear); respirators (if dust-eliminating controls are not possible); separate lockers for work and street clothes; wash-up facilities and showers; arsenic-free break and lunch areas; laundry service for arsenic-contaminated work clothes; impermeable containers to store contaminated clothes; and vacuum or wet clean-up procedures.

Your employer should also be training you in safe work and wood-handling practices as well as clean-up procedures.

Employers routinely use respirators to control exposures. But respirators are *not* generally good protections unless engineering controls such as ventilation, enclosures, and dust collectors are not possible. Respirators rarely fit properly, are hot to wear (particularly a problem during extreme summer temperatures), are hard to breathe through, and therefore could contribute to already-existing lung or heart conditions.

If your employer does supply a respirator, he/she must: take regular air measurements to determine what kind of respirator to supply; provide a medical examination to make sure your heart and lungs won't be harmed by working with such equipment; train you to use the respirator; and regularly clean and maintain it and change the filter or cartridge (if it is an air-cleaning type).

For guidelines to the types of respirators to use, see the OSHA (or equivalent state OSHA) standard for Inorganic Arsenic.

Dipping Operations

If wood is dipped where you work, solutions must be kept "clean" by filtering each time wood is treated, in solution, and at the right blend of arsenic and other chemicals. A survey of California wood-preserving plants found proportions of arsenic as high as eight times those specified by formulation guidelines. This means that not all the arsenic stays in solution: more arsenic salts will be present on the wood's surface.

Your exposure risk is also lowered

if the treated wood is washed with clear water while still wet.

Another useful precaution is to seal wood treated with arsenic compounds with a urethane coating.

Painting With Arsenic Compounds

If you paint with liquid arsenic compounds, your employer could substitute **copper naphthenate** to eliminate this exposure source.

Working on Utility Poles

Until recently, most utility poles in California were treated with another wood preservative, pentachlorophenol (Cellon). So many workers complained of skin irritation from contact with these poles that they are being replaced by poles preserved with arsenic compounds.

Poles treated with arsenic compounds may *not* be safer. If you work with utility poles, make sure your employer provides cotton-lined leather gloves and replaces the gloves with the first signs of wear.

Handling Preserved Wood

If you stack or load wood treated with arsenic compounds, your employer should provide protective gloves (chemical gloves if the wood you handle is wet) and goggles.

If you **saw, sand, drill, cut**, or otherwise handle wood treated with arsenic, your employer should provide local exhaust ventilation (if possible), process enclosures, dust collection devices, and/or respirators. Buying only urethane-coated wood will reduce your exposure even further.

WHAT ELSE CAN BE DONE TO PROTECT YOU?

Every worker exposed to inorganic arsenic should know of the dangers. If you think there is too much arsenic on your job, you can request an OSHA inspection by filling out a complaint form or calling the nearest OSHA Area Office. (It's always better to file a written complaint or a letter.)

In California, even though construction and public utilities workers are exempt from the standard, Cal/OSHA compliance inspectors can write **special orders** for a particular workplace.

These orders could require the same protections outlined in the standard.

Having an active union health and safety committee will help ensure that *all* workers at your jobsite are protected. Some things a health and safety committee can do are: conduct regular walkaround inspections to identify problems; investigate complaints about dangerous conditions; get involved in the OSHA (or state OSHA) standard-setting procedure; observe employer-provided air and wipe tests and request the results; participate in any OSHA inspection and closing conference; and keep track of health problems possibly due to arsenic or other job conditions.

WHAT OTHER PROTECTIONS DO CALIFORNIA WORKERS HAVE?

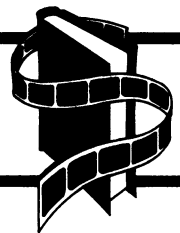
California law provides additional protections against job hazards.

Labor Code section 3203 requires employers to establish a formal **accident prevention program** which includes: informing employees that they are working with arsenic compounds or wood preserved with these compounds; informing employees of the dangers of working with inorganic arsenic compounds; conducting regular scheduled inspections with air measurements (and wipe tests) to identify and correct dangerous job conditions; and training employees to work with the hazard safely.

California Health and Safety Code sections 24200 *et seq.* require employers to register the use or production of a recognized carcinogen (cancer-causing agent) with the Carcinogens Control Unit, and inform employees of their potential risk. Both arsenic and chromium are regulated by Cal/OSHA as recognized carcinogens. In addition, this regulation requires regular air measurements, medical monitoring (examinations), posting or warning signs, and safe clean-up and other work practices.

Finally, California workers can ask their employer to call in the Cal/OSHA Consultation Unit to determine if there is too much arsenic (or chromium or other chemicals) in the work atmosphere, and what kinds of controls would solve the problem. This Unit is *not* connected with compliance, and will neither cite nor fine the employer for violations of OSHA standards.

Clearinghouse



PAMPHLETS

The Safety Committee and
Collective Bargaining

NEW CONCEPTS



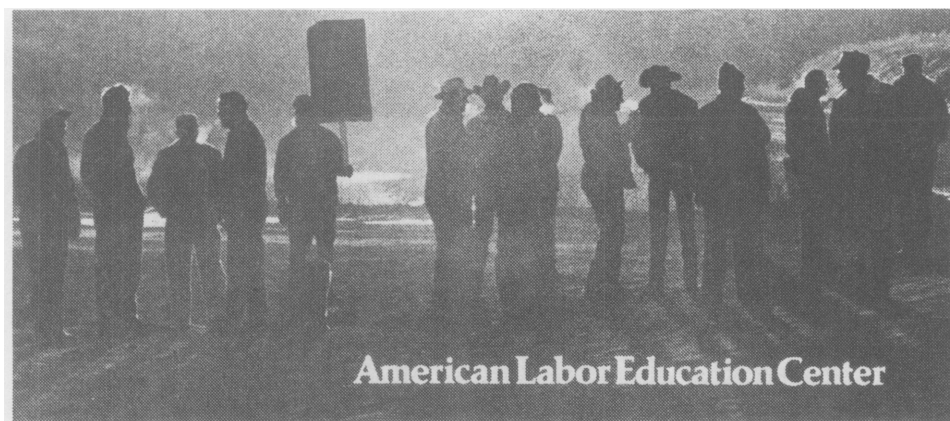
MICHAEL WOOD
Director of Safety and Communications
International Brotherhood of Boilermakers, Iron Ship Builders,
Blacksmiths, Forgers and Helpers, AFL-CIO

The Safety Committee and Collective Bargaining: New Concepts. By Michael Wood, Director of Safety and Communications, International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers, AFL-CIO. 1979, 29pp., free.

Although written for use by the Boilermakers, this pamphlet would be helpful to many unions seeking committee action and appropriate contract language. By quoting some pertinent statistics concerning workplace injury and illness rates, the tremendous need for organizing around health and safety issues is illustrated. Three options for action are listed: (1) lobbying for state and federal legislation; (2) negotiating collective bargaining provisions; and (3) establishing joint union-management plant committees. Major emphasis is placed on the latter two options. The importance of specific contract language is stressed, and a sample health and safety clause is included. Concise suggestions are given for organizing a health and safety committee, and the duties that a committee should assume are included.

The specific, action-oriented nature of this pamphlet should make it a good, immediate tool for a committee which is just starting out and needs

CALENDAR



The American Labor Calendar for 1980 is now being offered by the American Labor Education Center, 1835 Kilbourne Place, N.W., Washington, D.C. 20010. The calendar features

vivid illustrations of scenes from U.S. labor history. The single copy price is \$2.95 but special discounts are available for orders of more than ten copies.

suggestions for its operation. For copies, write to: International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers, and Helpers, AFL-CIO, 570 Brotherhood Building, Kansas City, Kansas 66101.

—Susan Salisbury

Occupational Lung Diseases—An Introduction. By J. Marion Anderson. American Lung Association, 1979. 80 pp., free.

This 80-page coverage of the issue of lung disease in the workplace is an overview only. The author covers many aspects of lung problems in a small space. In a few short chapters, normal lung function, hazards, major diseases, and methods of controlling pollutants are discussed. Some examples are given of hazards specific to certain trades like mining, textile workers, and farmers, but for the most part, the writing style is very general.

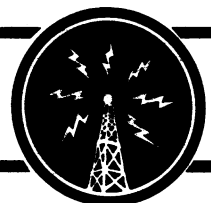
The pamphlet could be useful as a beginning source for a non-worker who knows little about occupational lung hazards, but because of its general

nature, it offers a minimum of concrete aid to someone needing help with a hazard endangering his or her health on the job. The difficulty in finding help is discussed and lamented, but no concrete suggestions (no list of resources, organizations, or even OSHA Area Offices) are given to help alleviate this problem. For example, in discussing OSHA on the state level, the author states the "appropriate agency" should be sought for up-to-date information, but no clue is given as to how this agency might be located.

The strongest points of the publication seem to be in its definitions of lung function and disease types (the areas of expertise that one would expect from the American Lung Association.) Unfortunately, this information is weakened by a lack of real, tangible aids to the worker seeking help.

Single free copies of **Occupational Lung Diseases** may be obtained from: American Lung Association of Alameda County, 295-27th St., Oakland, CA 94612 or from any local American Lung Association chapter.

—Susan Salisbury



Burlington Industries

Brown Lung Victims File \$15 Million Class Action Suit

Employers Must Post Job Injury Totals in February

California employers with 11 or more employees are required to post the total count of job-related injuries and illnesses that occurred in their firms in 1979 by February 1, 1980, and to keep them posted until March 1.

Employers need only post the last page or right-hand portion of Cal/OSHA Form 200, "Log and Summary of Occupational Injuries and Illnesses." Posting must be in the place or places where notices to employees are customarily posted. The form must be posted, with zeroes entered, even if there were no job injuries and illnesses in 1979.

Firms must also notify employees who move from one worksite to another, such as construction workers, and employees who do not report to any fixed establishment on a regular basis. Copies of the summary must be given to any such employees on the payroll during February.

Employers with ten or fewer employees are exempt from the February posting requirement, as from many other OSHA recordkeeping requirements.

The Carolina Brown Lung Association has announced the filing of a \$15 million class action lawsuit in federal court on behalf of former workers at Burlington Industries' F. W. Poe plant in Greenville, South Carolina.

The suit asks the court to hold Burlington, Burlington's company doctors, and Liberty Mutual Insurance Company responsible for intentionally exposing workers to hazardous levels of cotton dust, leading to chronic obstructive pulmonary diseases such as byssinosis (commonly called "brown lung").

Burlington's own surveillance identified 61 Poe Mill workers with chronic obstructive pulmonary disease and 20 employees who had byssinosis. According to the suit, the cases were detected through a medical surveillance program begun by Burlington in late 1970, which included pulmonary function tests. The suit alleges that Burlington never informed its workers that their illness was caused by cotton dust inhalation, never informed them that breathing cotton dust can cause lung disease, and never told them the results of the pulmonary function tests.

Liberty Mutual Insurance Company, which insures Burlington and much of the textile industry against Workers' Compensation claims, conducted inspections and sampled cotton dust levels for Burlington in the late 1960's. The

suit claims that, like Burlington, Liberty Mutual was aware that workers were being exposed to dangerous levels of cotton dust which would eventually be disabling.

The Carolina Brown Lung Association, which joined with the Southern Poverty Law Center in filing the suit, claims that most textile workers in the Carolinas learn for the first time that their breathing problems might be occupationally related when they attend a CBLA screening clinic.

According to CBLA, brown lung victims have found it extremely difficult to win Workers' Compensation claims because of the statute of limitations and because of long delays in processing the claims. Paul Cline, President of the Greenville chapter of CBLA, said that only one person in South Carolina is currently receiving benefits under Workers' Compensation for brown lung.

"The Carolina Brown Lung Association hopes this suit will also say to the textile industry that we brown lung victims are tired of the mill companies sacrificing our health for their profits," Cline added.

A similar suit was recently filed on behalf of workers at the West Point Pepperell textile mill in Opelika, Alabama by the Southern Poverty Law Center.

'Politics of Pesticides' Conference

The Coordinating Committee on Pesticides (CCOP) will present a conference on "The Politics of Pesticides" on Saturday and Sunday, March 29 and 30, 1980, at 155 Dwinelle Hall on the University of California, Berkeley campus.

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Key speakers will be Barry Commoner, Samuel Epstein, M.D., and Anthony Mazzochi. In addition, there will be a series of workshops on the health and environmental effects of pesticides and viable alternatives to their use.

CCOP is a coalition of labor, environmental, consumer, and public interest groups.

Registration fee is \$10. For more information, call: (415) 526-7141.

ARGUING FOR OSHA

continued from p. 3

job design causing repetitive motion injuries.

In the health arena, OSHA standards for, and worker/employer awareness of the hazards of, asbestos, vinyl chloride, carcinogens, lead, and coke oven emissions will greatly reduce future cancer deaths, lung ailments, and other illnesses due to these materials.

Industry has actually reaped major benefits from OSHA and other environmental laws. Most dramatic is the development of an anti-pollution control industry which employs two million workers and is one of the nation's most progressive and competitive businesses. The engineering noise control industry alone has grown to \$300 million of sales per year in recent years, in part due to engineering control requirements of the OSHA noise standard.

In many cases, pollution control measures actually benefit the employer. For example, a recent industrial hygiene journal article pointed out that one foundry dust control system not only sharply reduces silica dust levels while it saves energy, but it costs *one-third* the price of previous dust control systems.

Another major advantage is tax savings to employers who purchase pollution control equipment, including five-year accelerated depreciation.

OSHA has increased worker and employer awareness of the link between job conditions and exposures, and injuries and illnesses. This increased awareness has greatly expanded employer safety and health efforts, even apart from OSHA. Ironically, one of the effects of increased employee/employer awareness has been a rise in reported injuries and illnesses accompanied by a liberalization of workers' compensation rules concerning what constitutes work-relatedness. The resulting increased injury/illness rates, mistakenly interpreted by some OSHA critics as evidence of OSHA's decreased effectiveness, disguise the impact of the many prevention efforts and successes mentioned earlier.

WHAT CAN UNIONS DO?

Unions and workers have a lot to lose if present Congressional bills, and the OSHA opponents, have their way.

To counter these moves, it may be up to union officials and safety representatives to discuss their position on OSHA with management, the union membership, and legislators. In addition, you can get a greater return for your investment on OSHA by the following:

1. *Identify firms, jobs, and processes with high injury/illness risks. Concentrate union efforts on reducing these risks by using OSHA as well as collective bargaining.*

2. *Participate in the standard-setting process by proposing standards, and commenting and testifying on already-proposed standards.* We still need protective, clear standards on accident prevention programs, confined space entry, lockout, labelling of chemicals, etc. OSHA's present planned standards in these areas may be held up for years unless they receive strong union support. Write your Congressman and OSHA when you feel that a standard is needed for these and other serious hazards.

3. *Push for training requirements on serious job hazards in your collective bargaining agreements or OSHA standards.* Recent studies show that training of new employees and workers in hazardous occupations, as well as safe job design and active employee involvement in safety committees, are major factors in reducing injuries. Yet no OSHA standards cover these issues, except in California, which requires an employer accident prevention program, and Washington, which requires a plant-wide employer-employee safety committee.

4. *Use your OSHA rights.* Complain, participate when there is an OSHA plant inspection, appeal when you feel the abatement period is unreasonable, and elect "party status" so you can participate in hearings when your employer contests an OSHA citation. Currently, OSHA data show that up to one-third of union shops are *not* using their rights to walkaround with the OSHA inspector. By walking around with the inspector, you can make sure no serious hazards or violations are missed. You can also make sure the inspector uses common sense and the general duty clause (5(a)(1)) to cite known serious hazards even when there is no specific code. (State plans may differ somewhat.)

5. *Don't allow untrue statements about OSHA to go unchallenged.* Mention OSHA's positive benefits and modest cost impacts in meetings with management and with your own membership.

6. *Share your successes with others.* Where you have developed a practical way of correcting a hazard which results in a definite reduction in injury or illness risks, pass on the word within your union. Also, let OSHA and LOHP know the specifics. Your experiences may be useful to others.

7. *Talk to your international union and support their efforts concerning OSHA's current level of authority.*

8. *Write to OSHA, and federal and state legislators to let them know your position on the proposed restrictions, OSHA, and any facts in this article you find important.* Particularly, write to:

Eula Bingham
Assistant Secretary of Labor, OSHA
200 Constitution Ave. N.W.
Washington, D.C. 20210

and to:

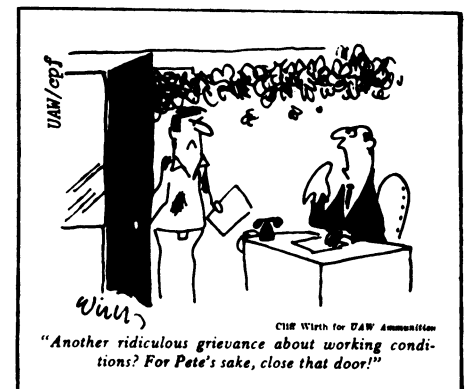
Senator Harrison Williams
Chairman
Senate Committee on Labor and
Human Resources
U.S. Senate
Washington, D.C. 20510

and to:

Senator Richard Schweiker
U.S. Senate
Washington, D.C. 20510

FOR MORE INFORMATION

For more information on this issue, write: Richard Ginnold, Labor Occupational Health Program, 2521 Channing Way, University of California, Berkeley, CA 94720.



Black Workers and Cancer

by Andrew Rowland

Cancer rates in the Black community have been rising drastically since the 1940's. This article will examine the possibility that a significant proportion of Black cancer incidences today are related to occupational exposures of twenty or thirty years ago.

THE RISE OF CANCER IN THE BLACK COMMUNITY

In the early 1930's, many people thought that cancer was primarily a "white disease." At that time, the incidence of almost every type of cancer, including lung cancer, was very low for Black Americans. Then, sometime in the late 1930's and 1940's, a dramatic reversal in these trends took place. Black Americans began to get cancer at a faster rate than white Americans. In a twenty-year period between 1935 and 1955, Black male cancer incidence rates passed White male cancer rates for cancer among Blacks cannot be explained as genetic in origin because females passed White females in their incidence rate for cancer of the esophagus, stomach, pancreas, colon, and lung.

Today, the overall cancer rates are higher among Black Americans than among Whites. Lung cancer in particular has hit the Black population in near epidemic proportions. The death rate from lung cancer among Blacks today is about twenty times what it was forty years ago.

These trends have given scientists some important information about the nature of cancer itself. High rates of cancer among Blacks cannot be explained as genetic in origin because cancer was so uncommon among Blacks before 1935. So investigators have had to look for other factors. Most scientists now agree that cancer is caused mainly by exposures to specific chemicals or physical agents (such as radiation) which are present in the environment—that is, in the air, in the water, in food (for example, as additives or pesticide residues), in certain medical drugs, at home, and at work.



(Photo: Andrew Rowland.)

These "environmental contaminants" have increased the rate of cancer among all Americans, including Blacks, during the past thirty years.

But if all of us are exposed to these environmental contaminants, why has the incidence of cancer among Blacks increased out of proportion to the increase among the general American population? There is evidence that the answer to this question can be found by examining the types of jobs Blacks held when they first entered the industrial workforce.

BLACKS ENTER INDUSTRY

In 1910, most Black Americans lived in the rural South and made their living doing some sort of agricultural work—as field hands, tenant farmers, or sharecroppers. Between 1910 and 1960, a major shift took place in the U.S. Black population. Over 4.5 million Blacks left the South during these years. For the most part, they settled in the highly industrialized, urban centers of the North.

In the North, most of these Black migrants could only find employment as unskilled laborers, personal service workers, or factory workers. This was true even for the many Black skilled workers who had worked as carpenters, blacksmiths, seamstresses,

and bricklayers before they left the South.

Because World War I disrupted the flow of cheap, immigrant labor, industries such as steel and auto, that had employed White ethnic immigrants to fill their hardest and dirtiest jobs, now recruited Southern Blacks. In many instances, white workers who had more job opportunities available to them, refused to take the hottest, dirtiest, most unpleasant jobs. This caused one Black worker, interviewed in the 1930's, to say, "A Negro's job is any job that the white man cannot stand."

But Black workers were not happy with these job assignments. Some even suspected that these jobs might be killing them. As one Black steelworker assigned to the coke ovens in the 1930's said, "Because this work is so hard on men, I think that is why you find the death rate among Colored so high."

Many of these hot, unpleasant, dirty jobs also exposed Blacks to chemicals and physical agents that scientists now know or suspect cause cancer. The combination of large numbers of Blacks in jobs using or producing carcinogens plus long working hours could certainly account for the disproportionate rise in cancer rates among Blacks after 1935. (In the 1920's, '30's, and '40's, Blacks worked close to 60-hour work weeks in many industries.)

In addition, the reversal in White and Black cancer incidence rates began about twenty years after Black workers first entered the urban labor market at the end of World War I. For most forms of cancer, there is a twenty- to thirty-year "lag" period between exposure to cancer-causing agents and onset of the disease. This is exactly what happened!

INDUSTRY CASE EXAMPLES

The following industry case examples probably touch on only a small percentage of the carcinogens to which Blacks were habitually exposed during the 1920's, '30's, and '40's. But they vividly illustrate the potential cause and effect relationship between occupational exposure and rising cancer incidence among Blacks after 1935 and into the present.

Auto. So many Black automobile workers were hired in the foundry that it became known as the "Black Department." One author describing the auto industry in the 1940's wrote, "One can be quite certain that an automobile plant employing a sizeable proportion of Negro laborers includes a foundry department." A recent foundry study reported sharp increases in cancer deaths for workers employed in the 1930's: those employed for five years prior to 1938 had two times the expected number of deaths due to digestive and respiratory (lung) cancers.

Steel. During these years, the most common job for Black workers was as a laborer in the coke oven department. A recent study shows that coke oven workers have a risk of developing lung cancer of between 2.5 and ten times that of other steel workers, depending on the amount of coke oven emissions to which they were exposed.

Shipyards. For most of the years between World Wars I and II, Black workers were excluded from working in the shipbuilding and repair industries. But when a labor shortage developed in World War II shipyards, Blacks were hired in record numbers. Recently, researchers have proven conclusively that all World War II shipyard workers are at serious risk of developing lung and other cancers from asbestos exposure.

Chemical. Black workers were often hired as laborers in the chemical industry. In some parts of the country, the chemical industry relied almost entirely on nonwhite workers for these jobs. For example, in 1940 almost three-fourths of all laborer jobs in Southern chemical plants were held by Blacks. Because the chemical industry has always been so diversified, it is difficult to determine what types of exposures these workers incurred. Nevertheless, recent studies linking organic solvents such as benzene and certain agricultural pesticides with cancer underscore the importance of determining exactly which chemicals these workers were exposed to.

Tobacco. The tobacco industry, which is very old in this country, has depended almost entirely on Black labor for many parts of the production process. Even today, it employs a higher percentage of Black workers than any other American industry. During the '30's and '40's, Black workers, mostly women, worked in the very dusty stemming areas where tobacco leaves were separated from the stems. Until the mid-1940's, tobacco leaves were treated regularly with arsenic—now proven to be a powerful skin and lung carcinogen.

Wood products. Blacks have traditionally been hired in logging (a notoriously dangerous occupation), as operatives in lumber mills, and to some extent as laborers and operatives in the furniture industry, particularly in the South. Recent studies of these occupations have caused researchers to suspect that wood dust in itself may cause cancer. In addition, lumber that is used outside is often treated with arsenic, exposing Black workers in wood preserving plants as well as in construction.

Laundry and dry cleaning. Laundry work is another occupation where conditions are hot and damp. In the 1940's, many Black workers were hired into dry cleaning jobs during a period of rapid growth. A recent study of laundry and dry cleaning workers showed increased rates of cancer of the lung, cervix, blood, and liver, possibly due to exposure to dry cleaning solvents such as tetrachloroethylene ("perc"), carbon tetrachloride (used extensively until recently, when it was banned due to its severe liver effects and cancer-causing potential), and trichloroethylene.

The extent of exposures faced by Black workers between 1910 and 1960 is, at present, unknown. Therefore the extent to which the Black cancer epidemic is due to work exposures is also impossible to assess. Although many of these jobs have improved, and the average American work week is shorter (thereby reducing exposure risks), Blacks continue to fill a disproportionate number of the dirtiest, lowest paying, and most dangerous jobs in American industry today. And, in spite of government regulations, potentially cancer-causing chemicals are still being introduced into the workplace in ever-increasing numbers each year.

IMPLICATIONS FOR RESEARCH AND OTHER ACTION

This article presents a hypothesis that the increase in cancer in the Black community is based to a significant extent on Blacks' exposures to carcinogens on the job when they first entered the industrial workforce in large numbers. Until research is done that proves whether the number of workers exposed to carcinogens during this period was as large as this article suggests, the hypothesis will remain unproven. Conclusive proof can only come through a large-scale research project that documents how many Black workers were exposed to carcinogens on the job during these years and how extensive their exposures were. Until that research is done, the possibility that there is such a connection carries with it the following implications for the occupational health community:

Scientists: Scientists are now in a position to find out more about the nature of cancer itself by exploring the extent to which Black cancer rates reflect occupational exposures. If further research confirms a close relationship, the now accepted belief that occupational cancers make up only a few percent of all cancers will be disproved.

Government. Despite large amounts of government money poured into the "War on Cancer," very little research has been done to determine the causes of increased cancer incidences among Blacks. Our government has a responsibility to the Black

continued on p. 16

BLACK WORKERS

continued from p.15

community to pay more attention to this problem and to back it with research dollars. In addition, should a close connection between Black work exposures and increased cancer incidences be confirmed, this poses a clear requirement for more emphatic enforcement and regulation of environmental (including occupational) carcinogens.

Medical Personnel, Health Educators, Community Workers. A major problem is identifying and informing workers who have been exposed to carcinogens. The fact that many Black workers were often the last hired and first fired (or laid off) means that Black workers are likely to have had more jobs (and more exposures to carcinogens) during their lifetimes than other workers. Medical personnel, health educators, and community workers need to become sensitized to these issues. They also need to be trained to take extensive work histories that will enable them to identify workers at risk of developing cancer. Exposed

workers who *are* identified can then be encouraged to seek regular medical examinations in order to catch any cancers as they develop. Additionally, these workers need to be counseled on their right to receive disability and workers' compensation benefits.

Labor Unions. As new links are made between cancer and the jobs traditionally held by Blacks, labor unions might want to consider whether minority workers they represent are still working in the most dangerous jobs. If so, an assessment of the relationship between job assignment and discriminatory employment practices would also be necessary. This type of evaluation may disclose a need for targeting minority worker training programs, as well as special organizing approaches to reach groups of unprotected or uninformed minority workers.

Management. The rise in cancer among Black workers should cause management to re-evaluate whether they have done everything possible to protect workers from exposure to carcinogens on the job. Particular attention needs to be paid to those traditionally "hot, dirty, and unpleasant jobs" that have changed very little in the last fifty years, especially in industries that are not unionized. In most cases, the technology now exists to protect workers from exposure to cancer-causing substances.

In summary, the rise in Black cancer deaths can alert the occupational health community to the serious health hazards Black and other minority workers face. And the changes necessary to reduce Black worker exposure to carcinogens on the job may be a step toward cleaning up the workplace for all workers.



(Photo: Andrew Rowland.)

Black Worker Exposure to Carcinogens in Basic Industry

Industry	Jobs Black Workers Held in Large Numbers, 1920's, 1930's, and 1940's	Possible Carcinogen Exposure	Cancer Implicated With Exposure
Steel	coke oven operative	coke oven emissions	lung
Automobile	foundry laborer	foundry fumes and resins	lung
Shipbuilding	laborer	asbestos	lung, pleural cavity, stomach
Tobacco	stemming department operative	arsenic	lung, skin, liver
Laundry and dry cleaning	operative	cleaning solvents	lung, cervix, bladder, liver
Wood products	mill operative; furniture operative/laborer; logger	wood dust, arsenic	lung, skin

Institute of Industrial Relations,
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Center for Labor Research and Education

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