

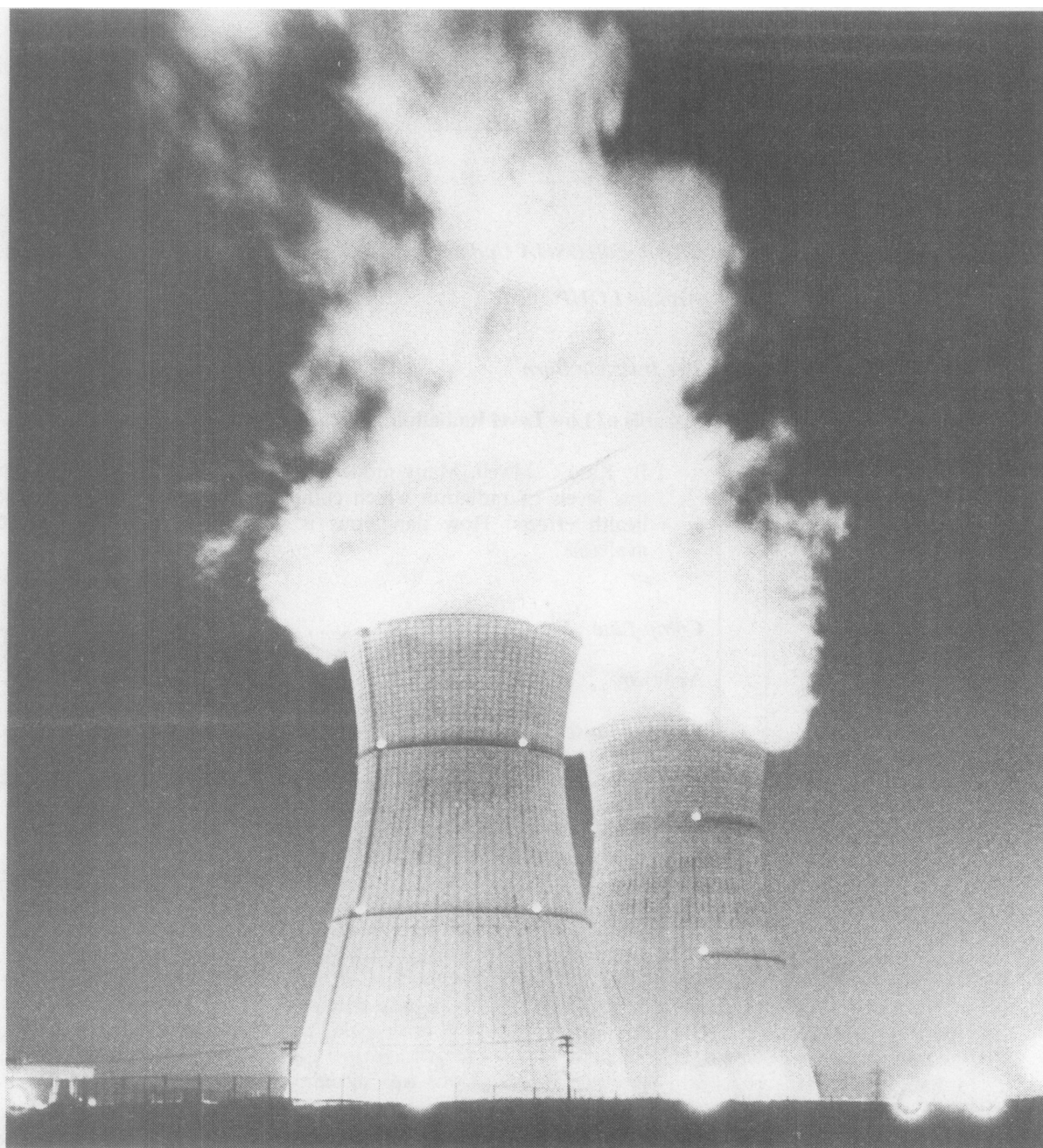
Labor Occupational Health Program

MONITOR

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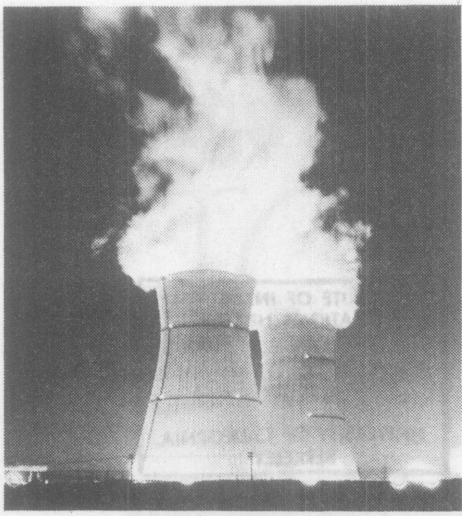
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LOW LEVEL RADIATION: THE INVISIBLE BURN



Labor Occupational Health Program MONITOR

Vol. 9 No. 1, January-February, 1981

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On the Cover:

Power reactors at nuclear electrical plants are only one source among many of low-level radiation. Here, the Rancho Seco nuclear reactor in California. (See article on p. 7.) (Photo courtesy of Daily Californian.)

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Monitor Cover Date Change

This is Vol. 9, No. 1 of **Monitor**, for January-February, 1981. The last issue was Vol. 8, No. 5, for September-October, 1980.

Thus, we have skipped one issue (November-December, 1980). This adjustment has been made to enable us to inaugurate a new publication schedule. Beginning with this issue, **Monitor** will appear at the beginning of the two-month period for which the issue is dated, rather than at the end as previously. Despite lengthy delivery times

(up to three to four weeks) which are beyond our control, the new schedule should allow all readers to receive issues with a current date.

Despite this change, all subscribers will receive the actual number of issues for which they paid, since all subscriptions will automatically be extended by one issue.

Please address all inquiries about your subscription to: Labor Occupational Health Program, Institute of Industrial Relations, 2521 Channing Way, Berkeley, CA 94720.

New LOHP Film

Another Day's Living

LOHP's new film, *Another Day's Living*, is now available for sale or rental. Filmed on location in the forests and sawmills of Washington and British Columbia, the film details the hazards of the forest products industry (logging, sawmills, and plywood mills.) Featuring songs by Johnny Cash and Mel Tillis, the film is a co-production of LOHP, the International Woodworkers of America, and filmmaker Charles West. The 16mm. color film runs 30 minutes; sale price is \$350. and rental is \$50. Sales orders should be addressed to: LOHP Films, 2521 Channing Way, University of California, Berkeley, CA 94720, or telephone: (415) 642-5507. Rental orders should be addressed to: LOHP Films, Transit Media, P.O. Box 315, Franklin Lakes, N.J. 07417, or telephone: (201) 891-8240.

The hazards of life in the logging camps are just a bitter memory. Gone are the killer river drives and log jams that swept whole crews to their death.

But today's loggers and millworkers are still faced with hazards and even death. Chemical dust and noise envelop these workers, many of whom don't know or are indifferent to the health problems that have been linked to their jobs.

White Finger, contact with formaldehyde glues, and the loss of limbs and life are a reality that these workers face day after day.

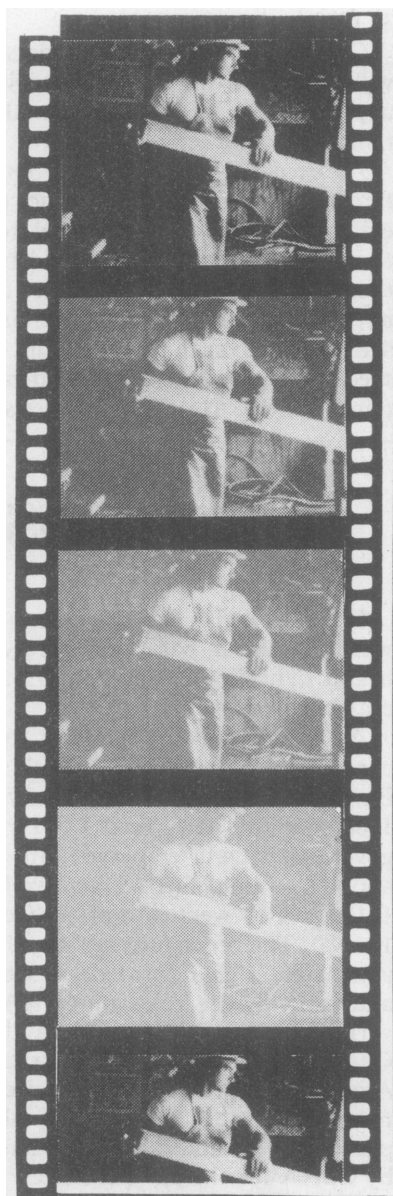
Another Day's Living looks at the life of the woodworker both yesterday and today. Some of the history of the industry is told through song and the voices of old time woodworkers.

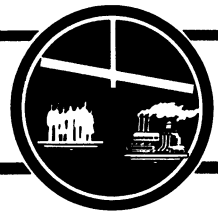
But *Another Day's Living* is really about the wood products industry of today. From the forests to the mills of the Pacific Northwest, the film follows the process of the industry.

It is a health and safety film, but is also a document of the lives of the loggers and woodworkers. It discusses the hazards as seen through the eyes of those who must face them. Workers talk about their experiences, and offer their views on how to deal with the myriad problems.

The workers interviewed discuss the causes and cures of the hazards that they have experienced. The film addresses issues that go beyond the wood products industry such as equipment design, the workers' right to information, and the use of collective bargaining as a tool for health and safety.

Another Day's Living is more than just a health and safety film. Its striking and often beautiful images, and its poignant interviews, make it a salute to the men and women of the wood products industry. It is a film that should be seen by union members, occupational and public health specialists, college and community groups, and people who are interested in problems that all workers face in dealing with the questions of health and safety in the work environment.





New Rule

OSHA May Obtain Ex Parte Warrants

The U.S. Department of Labor has promulgated a new rule specifically confirming the authority of federal OSHA legal personnel to obtain ex parte warrants to enable inspectors to enter workplaces for inspections. The rule, issued in October, became effective November 3, 1980.

Other, non-legal OSHA personnel will be allowed to seek warrants with the approval of OSHA's regional administrator and regional solicitor.

An ex parte warrant is one obtained through the courts without notice to the employer involved. According to the new rule, such a warrant could be obtained after an employer refuses to admit an inspector, or, in some circumstances, in advance of an attempt to inspect. Advance warrants could be obtained where: (1) the employer's past

practice leads OSHA to believe that a warrantless inspection will not be allowed; (2) an inspection is scheduled far from a local OSHA office and a lengthy return trip would be necessary to obtain a warrant if needed; or (3) an inspection is to include the use of special equipment, or will involve the presence of experts, and coordination problems would result if it later became necessary to obtain a warrant.

A May 23, 1978 decision of the U.S. Supreme Court (*Marshall v. Barlow's Inc.*) struck down as unconstitutional section 8(a) of the Occupational Safety and Health Act of 1970, which OSHA claimed to authorize warrantless inspections without an employer's consent. The Court construed the Act to permit inspection with an employer's consent or, where consent has not been given,

with a judicially authorized search warrant or its equivalent.

Subsequently, in December, 1978, OSHA promulgated a rule almost identical to the new one, authorizing ex parte warrants. However, the U.S. Court of Appeals for the Third Circuit later upheld a U.S. District Court's ruling enjoining the agency from seeking ex parte warrants and declaring the 1978 rule invalid because OSHA failed to provide for public notice and comment in establishing the rule. (The agency considered its rule "interpretive" and thus felt that the notice and comment rulemaking procedures were unnecessary.)

OSHA did seek public notice and comment prior to adopting the new rule in October.

New OSHA Rules on Federal Employees

Federal OSHA has issued new rules which establish basic job safety and health rights for 2.8 million U.S. government workers.

Assistant Secretary of Labor for Occupational Safety and Health Eula Bingham announced on October 21, 1980 that the new, final OSHA rules governing federal employees are being adopted to implement Executive Order 12196, which went into effect October 1, 1980. The order provides new health and safety rights for federal workers and expands the roles of OSHA, the various federal agencies, and the General Services Administration. Among other provisions, it requires that federal agencies comply with all applicable safety and health standards set by OSHA for the private sector.

"Part of OSHA's job under the executive order is to establish the elements of an effective worker protection program for federal agencies to follow,"

Dr. Bingham said. "Agencies must operate their job safety and health programs in accordance with the model elements we have issued. However, since government agencies vary widely in size, mission, and organization, the rules are flexible to permit agency heads to tailor their safety and health programs to the nature of their operations."

The program elements apply to all working conditions of federal employees, except those involving uniquely military equipment, systems, and operations.

Minimum program elements which will be required by OSHA of all federal agencies include: sufficient staff to administer and evaluate the program, as well as sufficient expertise; joint labor-management health and safety committees; training, recordkeeping, and reporting; and mandatory compliance with applicable OSHA standards except where alternative or supplementary

standards have been approved by the Secretary of Labor.

Joint labor-management health and safety committees may be established on a voluntary basis by each agency if it so chooses, but if no committee is established, the agency is subject to unannounced inspections by OSHA personnel. Otherwise, all inspections at an agency will be by personnel working for its own health and safety program, unless the joint health and safety committee majority votes to call in OSHA inspectors.

On either type of workplace inspection, employee representatives have the right to accompany inspectors. The new rules also contain mechanisms to give employees a recourse in cases of reprisal for health and safety activity.

The complete text of the new rules appears in the *Federal Register* for October 21, 1980.

Supreme Court Will Rule on Cost-Benefit Analysis

The U.S. Supreme Court has agreed to rule on the long-standing debate as to whether the government is required to conduct formal cost-benefit analyses before issuing new job health and safety standards.

The Court's ruling will come as part of its evaluation of the case against federal OSHA's cotton dust standard. The cost-benefit analysis issue had arisen earlier in legal challenges to two other OSHA standards, but the Supreme Court did not rule on the issue in those cases. Earlier this year, the Court struck down OSHA's proposed strengthening of the benzene standard, but ducked the cost-benefit issue raised by opponents. The Court then agreed to

confront the issue when it considered the American Iron and Steel Institute's challenge to the standard on coke oven emissions, but this case was recently withdrawn by the Institute, which represents the steel industry.

The Court said that it will address three issues in its evaluation of the cotton dust standard, all of which concern the economic implications of health and safety regulations. It will rule on: (a) whether OSHA is required to prove to the industry's satisfaction that a proposed regulation is economically feasible; (b) whether OSHA's current interpretation of economic feasibility as anything that does not endanger the survival of the industry is valid; and (c)

whether OSHA must weigh the estimated costs and benefits of any proposed standard, regardless of its economic feasibility.

In the coke oven case, the American Iron and Steel Institute charged that OSHA failed to weigh the cost to industry of limiting coke oven emissions against the health benefits for workers from reduced exposure to coke. The Institute said it withdrew the appeal because the engineering controls and work practices necessary to meet the standard, which went into effect in November, 1978, "have been or are in the process of being put in place."

—Jamie Robinson

New Rules on Walkaround Pay

Federal OSHA has proposed amendments to its regulations which would require employers to compensate employees who participate in "walkaround" inspections with OSHA inspectors.

"Workers are often in the best position to know of hazards in their workplace," noted Assistant Secretary of Labor for Occupational Safety and Health Eula Bingham, in announcing the new proposed rules on November 19, 1980. "We need their input, as well as that of their employer. Without compensation, most employees cannot afford to accompany an OSHA inspector or even take time out to talk with our personnel during the walkaround tour of the workplace."

The new rule provides for compensation of one employee representative for each team of OSHA inspectors during the walkaround, and at the opening and closing conferences which are part of the inspection. The same benefits are to be provided to employees who talk with inspectors during the inspection. Walkaround benefits include earnings, seniority, and other employment rights, and are to be provided for walkaround time spent during regular working hours and normal overtime hours. If an employee chooses to stay after hours to complete the inspection, the employer would not be required to compensate the employee for that time.

The new rule would replace a previous rule declared invalid by the U.S.

Court of Appeals for the District of Columbia because it had not been published for public comment before the agency issued it in final form in September, 1977. OSHA considered the rule to be an interpretive one, requiring no comment period; the Court held it to be legislative, and thus the notice and comment provisions of the Administrative Procedure Act were triggered. This time, OSHA is seeking public comment on its proposal prior to publishing it as a final rule. Details on procedures for

submitting comments are contained in the *Federal Register* of November 14, 1980, which also includes the complete text of the proposed rule.

OSHA estimates that the maximum cost of the rule would be \$5.3 million, based on an average wage in June, 1980 of \$6.61 hourly for nonsupervisory, nonagricultural employees. There were 166,560 inspections during 1979. Average federal safety inspection time was 4.4 hours, and average federal health inspection time was 8.3 hours.



—Bulbul/LNS

Around LOHP . . .

Newsletters, Audiovisual, Media

LOHP Resources Conference in April

From Monday, April 13 to Wednesday, April 15, 1981, the Labor Occupational Health Program will sponsor its first Conference on Health and Safety Resources at the Bellevue Hotel, Geary and Taylor Sts., in San Francisco.

A registration fee has not yet been set, and registration materials are not yet available, but anyone interested may be added to the conference mailing list for all announcements by writing to: LOHP Resources Conference, Institute of Industrial Relations, University of California, 2521 Channing Way, Berkeley, CA 94720.

The conference is designed to provide a forum for participants and resource persons to share information and experiences on development and use of audiovisual and written materials for occupational health and safety training of workers.

Workshop topics will include:

- *Developing Occupational Safety and Health Newsletters;*
- *Factsheets, Pamphlets, and*

Books: From Research to Production;

- *Film-making and Use;*
- *Slide-tape and Video Development;*
- *Working With the Media;*
- *Library Development and Networking;*
- *Effective Use of Audio-visuals.*

Included on the program will be screenings of health and safety films,

slide-tape shows, and video programs. LOHP staff will pre-screen any audiovisual materials submitted for possible inclusion in the conference if the materials are submitted with a \$10. non-refundable screening fee by January 15, 1981. Further screening information may be obtained from LOHP's address, above.

The latest in audio-visual equipment will be demonstrated, and new books, packets, curricula, pamphlets, and fact sheets will be reviewed.

Workshop leaders and resource persons will be media workers, union newspaper editors, filmmakers, and occupational health specialists.

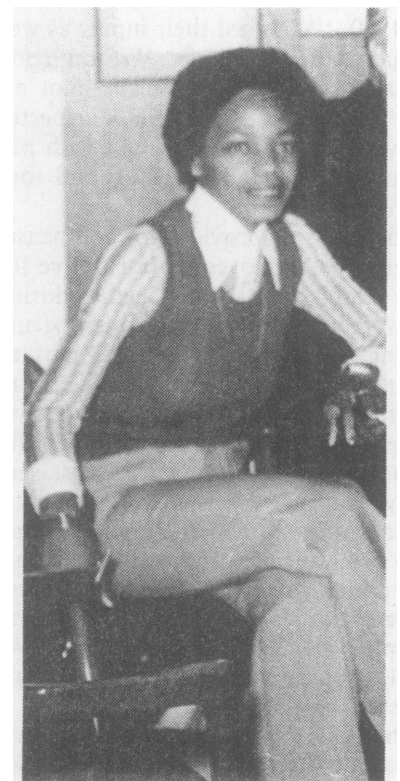
Brenda Presley Joins LOHP Staff

Brenda Presley, 32, a native of San Francisco, is the newest member of the LOHP staff. She joined us as a Labor Co-ordinator in December, 1980.

Brenda comes from Service Employee's International Union (SEIU) Local 400, where she was a Business Representative for approximately five years. Working with departmental stewards, she was effective in negotiating contracts, formulating safety and health contract language, working with the Safety and Health Committee, and conducting workshops. She also processed grievances and represented employees in hearings.

A member of the Editorial Committee of Local 400's monthly newspaper, she was also on the Local's COPE Committee and Affirmative Action Committee. She has also represented Local 400 on the San Francisco Commission on the Status of Women.

Welcome aboard, Brenda! We're glad to have you.



CORRECTION

The fact sheet on PCB's which appeared on p. 11 of *Monitor* for September-October, 1980 may have given a misleading impression of the effects of PCB's on the fetus.

PCB's have not been demonstrated to cause teratogenic effects, which are defined as permanent malformations of the fetus. Rather, there is some evidence that they may cause trans-placental effects on the fetus which are reversible after birth.

The Invisible Burn

by Kate Caldwell

In the past three decades the use of radiation producing technology in industry has expanded dramatically. Our daily lives have also become more and more saturated with low level radiation-producing machinery, materials, and procedures (such as medical and dental x-rays, radioisotopes, nuclear energy, fallout, and various inspection devices). Workers are particularly concerned since their involvement with many industrial processes will significantly increase their cumulative dosage of radiation over that of the general population. Employees in a large number of industries will typically be found to work with potential sources of radiation. As more and more evidence is gathered to indicate that there are potentially serious health hazards from exposures to low levels of radiation, workers clearly need to become aware of these hazards and to implement safeguards against them.

WHAT IS RADIATION?

Radiation is a form of *electromagnetic* (EM) energy. It travels in waves (like sound and vibration) and is measured by its characterizing wavelength and frequency (number of vibrations per second.)

All matter is composed of *atoms* which are linked together in complex chains called *molecules*. An atom is a system of balanced electrical charges, and structurally resembles a planetary system. In the center is a *nucleus* containing *protons* and *neutrons*, and circling outside are *electrons*. *Ionizing radiation* has sufficient energy to pull off one or more of the orbiting electrons, or to alter the nucleus, leaving an electrically charged atom or molecule which was previously neutral, or balanced. That is, atoms or molecules which have been ionized by radioactive energy become electrically *unstable*.

A radioactive substance remains at one level of energy for a measurable period of time after which it decays into

radioactive "*daughters*" which emit less energy than the parent. This process of *decay* continues for a fixed time (called the *half life* of the substance.) Radioactive Iodine (I^{131}), for example, has a half life of a few days whereas the half life of Plutonium 239 spans tens of thousands of years. Although a radioactive element has reached its half life it is still radioactive, but to a lesser degree.

There are five types of ionizing radiation: *alpha* and *beta* particles, *x-* and *gamma* rays, and *neutrons*. Each of these types of radioactive energy has characteristic physical and biological effects which will be discussed later.

EFFECTS ON THE BODY

The body is composed of trillions of microscopic *cells* resembling sacks, each containing many, many molecular chains. Cells perform a wide variety of life-ordering functions, depending on their location in the body. They form all the various tissue and organs—for example, blood, the nerves, the digestive system, and reproductive organs. Radiation can disrupt normal cellular function by altering the molecular or atomic structures within the cell. Once a

cell has been disrupted it loses its ability to perform normally. Radiation can cause molecular breaks which may result in enormous numbers of reactive by-products; once this begins other molecules may become involved. The biological effect produced on the cell may be trivial or disastrous, according to the importance of the cell in the body and the nature of the damage.

Alpha and beta particles (associated with nuclear energy production and weapons manufacture) are very large and have low penetrating power. However, these particles can be inhaled and lodge in the lungs; or they can be ingested in food or water and taken into the body. Although they are easy to block externally (a piece of cardboard will stop them), once they have entered the body, they can remain and continue to emit damaging radiation to surrounding cells. X- and gamma- rays are very small and fast, and travel in a straight line. They require several inches of lead or steel to stop. However, their primary man-made sources are mechanically generated and can be controlled; when the beam is turned off the radiation stops. Neutrons are a by-

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(Photo courtesy of Daily Californian.)

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product of fission and linear accelerators, and also require several inches of thickness for shielding.

WHAT ARE SOME SOURCES OF IONIZING RADIATION?

Ionizing radiation has always been a part of man's natural environment in the form of cosmic rays, or in the earth's surface. This is called *background* radiation. Man-made sources include: concentrated uranium from mining; yellow cake (highly refined uranium used in energy and weapons production); tailing (the waste product from this refinement process); compressed pellets and spent fuel rods from nuclear reactors; synthetic radioactive isotopes used in hospital and laboratory facilities; x-ray generating machinery; linear accelerators; fallout; and various detection devices.

WHAT ARE THE EFFECTS FROM IONIZING RADIATION

There are two kinds of dose-effects to consider. From immediate, *high level* doses such as might occur from a reactor accident or a bomb explosion, burns, drastic blood changes, internal hemorrhaging, and death can occur. Secondary effects, should the victim survive, are leukemia, other cancers, cellular changes, and lowered resistance to disease.

Long-term, low level exposures, such as the kind we receive in a lifetime from medical or dental x-rays, background radiation, fallout, and from occupational exposures also have serious biological effects which can take from *five to thirty years* or more to appear. Cancer, abnormal cellular activities, degenerative effects, heart disease, lowered resistance to illness, and genetic mutations are some of the observed health effects. A recent study of death certificates of workers at a nuclear weapons facility found an excess of deaths caused by leukemia. These workers were receiving *less* than the recommended annual radiation allowances. Other reports have revealed links between increases of breast cancer in

women and chest x-rays; thyroid cancers, leukemia, and brain cancers, and childhood therapeutic head and shoulder x-rays; and an excess of leukemias in children whose mothers received pelvic x-rays during pregnancy. Another study has indicated a pattern of increased miscarriages and stillbirths among residents of radioactive fallout paths; and the incidence of lung cancers is up to 50% greater in uranium miners than in the general population.

There is additional concern that the genetic disruptions that can be generated by low level ionizing radiation can remain hidden for up to twenty generations before appearing.

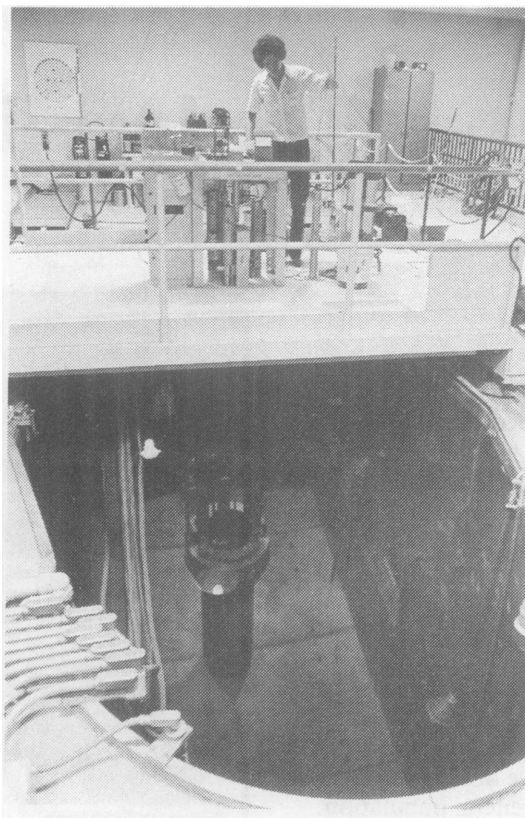
The National Academy of Sciences estimated that radiation will lead to 220,200 cases of cancer during the lifetime of today's population.

Because of the uncertainty existing with regard to low level doses, the Environmental Protection Agency has recommended a prudent position for radiation protection, suggesting that any amount of radiation exposure is potentially harmful and that any unnecessary exposure to ionizing radiation should be discouraged. It should be noted that current recommended levels have not been revised since 1960. So

while the regulating agencies are re-evaluating their criteria for safe permissible doses, workers should become very conscious of the potential exposure at their worksite.

HOW IS IONIZING RADIATION MEASURED? WHAT ARE CURRENT PERMISSIBLE EXPOSURES?

The *roentgen* measures the amount of ionization produced by a beam of unobstructed radiation as it passes through air. When radiation comes into contact with a mass (the body, or a piece of steel), energy is *transferred*. Another unit, the *rad* measures the energy transferred from the beam to the absorber. Since the rad measures the energy transfer through any matter, the *rem* was developed to measure the biological effect in man. The *rem* is the result of a mathematical calculation of an Absorbed Dose (in rads) times a Biological Factor to give a Dose Equivalent, and is called the *roentgen equivalent in man*. The rem (or fractions, such as a *millirem*, with is 1/1000 of a rem) is the unit most commonly used for setting permissible limits for therapeutic, diagnostic,



Nuclear reactor core. (Photo courtesy of Daily Californian.)

and general population doses.

Certain tissues and organ systems (including the reproductive organs, and the blood and lymph systems) and certain age groups (the unborn, pregnant women, young children, and young adults) have been found to be more sensitive to biological damage from ionizing radiation than others. Age and organ sensitivity, plus the source of radiation energy, are taken into consideration in setting dose limits for therapy, diagnosis and occupational exposures.

WHO IS AT RISK?

It is estimated that one million workers are exposed to on-the-job radiation; 85,000 are involved with the nuclear energy industry and another 490,000 are estimated to be health workers. With the widespread use of radioactive isotopes and x-ray sources in industry, ionizing radiation exposures may occur in a wide variety of occupations. It should be pointed out that personnel not directly in contact with radioactive generating materials or equipment are also at risk. All personnel in the vicinity of these work processes could potentially be exposed and should be aware of that possibility. The following are some occupations which

may encounter radiation exposure: atomic energy plant workers, health workers, inspectors, machinists, food preservers, veterinarians, tile glazers, and aircraft workers.

WHO SETS AND REGULATES RADIATION STANDARDS?

There is a complex network of Federal and state agencies responsible for establishing and enforcing safety regulations for handling of and exposure to radioactive materials and processes. Some of the more important

Federal ones are: The Nuclear Regulatory Commission (NRC), which is responsible for defining and enforcing radiation protection standards for commercial nuclear facilities and regulating source materials; the Department of Energy (DOE), which does research on biomedical, environmental, physical and safety aspects of radiation; the Department of Transportation (DOT), which, in conjunction with the U.S. Postal Service, the NRC, and the states, regulates commercial shipments; the Environmental Protection Agency's Of-

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Ionizing Radiation Detection Devices

Detector	Type Radiation Measured	Use
Scintillation Counter	Beta, X, Gamma	Survey
Geiger-Muller Counter	Beta, X, Gamma	Survey
Ionization Chamber	Beta, X, Gamma	Survey
Pocket Ionization Chamber	X, Gamma	Survey, Monitoring
Film (badges)	Beta, X, Gamma	Survey, Monitoring

"The Conqueror" with John Wayne

91 Cancer Deaths in Hollywood Film's Cast and Crew

According to a recent issue of **People** magazine, cancer has struck an unusually high number of the cast and crew members of a Hollywood movie, "The Conqueror," which was filmed from June through August, 1954 in Utah.

At least 91 of the 220 cast and crew members have contracted cancer, and at least 46 have died of the disease, the magazine said. Dr. Robert C. Pendleton, director of radiologic health at the University of Utah, said that only about 30 cancer cases would be expected to develop in a group this size since the time of the filming. Pendleton said that the case "could qualify as an epidemic."

Among those who died of cancer were the movie's stars, John Wayne and Susan Hayward, and producer-director Richard Powell. Cancer killed actress

Agnes Moorehead in 1974.

The movie was shot near Saint George, Utah, 137 miles downwind from the atomic testing range at Yucca Flat, Nevada, where a series of 11 nuclear weapons tests was conducted the year before. Pendleton, who formerly worked for the Atomic Energy Commission (AEC), said that fallout still would have been "abundant" in the area then, and that "some of the isotopes, such as strontium 90 and cesium 137, would not have diminished much."

More than 950 residents and former residents of Utah, Nevada, and Arizona have filed \$2 billion in claims against the federal government over cancers allegedly resulting from the tests. Some relatives of the film's stars are considering a lawsuit against the government also, according to **People**. Richard

Powell's son, Norman, told the magazine that a lawsuit by the relatives of movie stars could help draw attention to the plight of the 15,000 residents of Saint George. The people of the town "are just quietly dying out there and nobody cares," he said. Saint George has been demonstrated to have an extraordinarily high cancer rate.

Another concern of some of the stars' children is that 60 tons of earth from the Saint George filming site was moved to a Culver City, California movie lot to complete the filming. It is still in the studio neighborhood, and still measurably radioactive. Some of the children visited their parents on the Culver City lot.

A U.S. Senate subcommittee has scheduled hearings on the effects of the Nevada testing in January, 1981.

The Invisible Burn

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fice of Radiation Programs (EPA/ORP), which advises and guides in the forming of radiation standards and reviews toxic substances, waste, air, water, and marine protection; and the Occupational Health and Safety Administration (OSHA), which has enforcing jurisdiction over workers not covered by other agencies. States, also, regulate x-ray facilities and use, as well as certain radioactive materials. All the states and Puerto Rico have their own enabling acts for radiation protection.

Businesses intending to use radioactive materials must apply for a license and meet licensing requirements. In the State of California, for example, the application for such a license is made to the Radiological Health Section of the Department of Health. This application spells out such details as kinds of material to be used, quantity of the material, its location in the facility, and special handling requirements. Facilities are inspected periodically, and there are correction procedures for special problems that might arise.

WHAT CAN YOU DO?

You should find out what regulations apply in your particular state. Large facilities, such as hospitals, usually employ a Radiation Safety Officer, a radiologist, or a chief x-ray technician, who is in charge of radiation safety, education, monitoring, and record keeping for all x-ray and isotope activities. In California, personnel in danger of getting $\frac{1}{4}$ of the permissible occupational dose of 1.25 rem per yearly quarter, or 0.31 rem whole body per yearly quarter, are required to wear radio-sensitive film badges. These badges must be read and changed every three months (preferably every month). The on- and off- time of the badge is calculated, as well as exposure for the month, and accumulated exposure for the quarter. If an exposure is over the limit, it must be reported to the Radiological Health Section by the employer, and the company must investigate and correct the problem. If a company fails to meet these obligations,

its license can be suspended.

The following are some suggested precautions which will help minimize exposure to radioactive materials or processes. (These suggestions may or may not be legally required by a state; you should check with your own state agencies for specific legal requirements.)

Protective clothing (possibly identified with a specific color) and/or rubber gloves should be worn when handling radioactive materials. All waste products should be labeled, isolated, and treated separately. Storage areas should be marked and restricted.

You should learn what routes are used to move radioactive materials or wastes through the work facility. Housekeeping considerations (lighting, surfaces, etc.) should be evacuated so that accidents while handling these materials cannot occur. Work areas may require special venting hoods. You should be extremely cautious of cuts and puncture wounds when handling radioactive materials.

In hospitals where radioisotopes have been used on patients, health workers and housekeeping personnel should know that bodily excretions will be radioactive for the half-life of the isotope. Patient bathroom facilities, bedding, eating utensils and the like can become contaminated and should be handled separately. Radio-implanted patients should be identified so that all hospital personnel are aware that there

is radioactivity during the implant period.

X-ray units can have additional narrowing cones placed around the beam source to reduce the primary beam width; there is potential x-ray leakage around these units which may be high or low, depending on the age and maintenance of the machine. Radiation scatter can occur when the primary beam strikes an object so you should be shielded when the machine is being operated. Workers should be aware that mobile floor x-ray units tend to have wider primary beams and more potential for scatter.

Industrial processes which require radioisotopes and/or x-rays for inspection or assessment purposes should be identified. Employees should be warned of the process and how to protect themselves during the operations. Areas in which radioisotopes or radiation-producing processes occur should be clearly identified. Shipments of radiological materials must be labeled, and you should be cautioned as to what you are handling.

Clearly, precautions should be extreme. Since ionizing radiation is invisible, it is far too easy to be unknowingly exposed. Every effort for immaculate housekeeping, radiation identification, shielding, and monitoring, as well as an active employee education program, should be implemented to assure that you are receiving as little radiation exposure as possible.

Maximum Permissible Dose for Occupational Exposure

Whole Body	5.0 rem per year after age 18
Skin	15.0 rem per year
Hands	75.0 rem per year; 25.0 rem per quarter
Forearms	30.0 rem per year; 10.0 rem per quarter
Other Organs	15.0 rem per year
Pregnant Women	0.5 rem during gestation
General Public (from background radiation, routine medical and dental x-ray)	0.5 rem per year

—Source: National Council on Radiation Protection and Measurements Recommendations



Massachusetts Decision

State Court Says Spouses May Sue Employers

A landmark decision by the Massachusetts Supreme Judicial Court in September, 1980 could open the way to third party suits throughout the U.S. in which spouses and children of injured workers recover damages from employers even though the workers themselves are barred by law from suing.

Although U.S. courts have generally held that spouses have no cause of action if an injured worker is collecting workers' compensation benefits, the Massachusetts court cited a 1914 deci-

sion which held that while an employee waives his own right to a common law remedy against an insured employer, he cannot waive the rights of third parties such as spouse, children, or parents.

The case (*Ferreter v. D. O'Donnell's Sons, Inc.*) involved a carpenter who was severely injured when a load of wooden beams accidentally fell from a sling about 50 feet in the air at a construction site. He became paralyzed from the neck down, and is currently receiving \$211.37 a week in workers'

compensation benefits.

His wife and children brought an action against the allegedly negligent employer, pleading a loss of "consortium and society."

Despite defense claims that such a loss is difficult to measure and may perpetuate "extortionate litigation," all seven judges on the court agreed that both spouses and children may recover for loss of the companionship and society of an injured worker.

—Workers' Compensation Law Bulletin

D.C. Institute Will Train Workers in Comp.

The Washington, D.C.-based Workers' Institute for Safety and Health (WISH) has received a \$1 million contract from the U.S. Department of Labor to conduct a demonstration program in seven states to train workers how to handle their own workers' compensation claims.

WISH is a non-profit research, education, and service organization established by the Industrial Union Department of the national AFL-CIO, and the Ohio AFL-CIO. Its object is to help all workers—organized and unorganized—and their families with the problems associated with work injuries and diseases.

According to IUD President Howard D. Samuel, "The workers' compensation system was designed as a no-fault system, but it has become very complex as employers and insurance carriers use their economic leverage to deny, delay, or litigate claims. As a result, sick or injured workers often are forced to accept

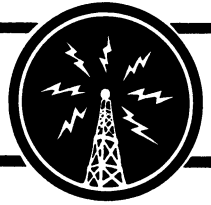
small lump sum payments as a compromise under which the firm or carrier is then released from further liability." Samuel said that over 40 percent (\$3.3 billion) of the \$8.5 billion paid per year by U.S. employers is spent on legal and administrative costs.

A typical compromise settlement for a totally disabled worker involves a lump sum payment of only \$23,400 for an injury case and \$9,700 for an occupational disease case, according to Samuel. "These are pitifully low amounts," Samuel said, "when you consider that this is the total lifetime benefit received by the worker, an amount supposed to replace two-thirds of the worker's lost income and pay for medical and legal costs."

The compensation training programs will be similar to a highly successful model program developed by the AFL-CIO in Ohio. Warren J. Smith, secretary-treasurer of the Ohio AFL-CIO and chairman of the board of WISH,

said that the Ohio program now trains nearly 2,000 workers per year. In the Ohio program, he added, the state's compensation laws, regulations, and procedures are described in a layman's training manual. Workers attend one week of training, where they learn to be compensation advisors. Then they assist their colleagues with any problems they may be having in filing a claim. As a result, Smith said, "Ohio workers avoid financially disastrous compromise settlements, and millions of dollars that otherwise would have gone to attorneys is available to the state's sick and injured workers."

Under the terms of the Labor Department contract, the federal funds will pay for the preparation of compensation manuals in selected states. The training programs will be developed with the help of state AFL-CIO affiliates and university-based labor studies centers. There will also be outreach efforts in each state to serve both union and non-union workers.



OSHA Under Reagan

Change in OSHA Emphasis Expected

With a new, Republican president-elect of the U.S., Ronald Reagan, and a Republican majority in the incoming U.S. Senate, much of the health and safety community anticipates significant changes in the future direction of federal OSHA and of federal health and safety legislation.

The 1980 Republican Party Platform stated that: "OSHA should concentrate its resources on encouraging voluntary compliance by employers, and monitoring situations where close federal supervision is needed and serious hazards are most likely to occur. OSHA should be required to consult with, advise, and assist businesses in coping with the regulatory burden before imposing any penalty for noncompliance. Small businesses and employers with good safety records should be exempt from safety inspections, and penalties should be increased for those with consistently poor performance."

Although the Reagan Administration has not as yet announced detailed policy proposals in the area of health and safety, nor made key appointments such as OSHA head, most observers expect that the party platform reflects the themes which will guide the new Administration's approach.

In mid-November, the Heritage Foundation released a 3000-page report, "Mandate for Leadership: Policy Management in a Conservative Administration," which the new Administration has said it will rely upon as its principal guide to policy. The report advises a change in OSHA's direction from an "adversarial" to a "cooperative" role. It claims that OSHA's emphasis on being a "policeman" and punishing employers has made the agency ineffective, citing a "25 percent increase in serious injuries since OSHA was created."

Specific recommendations of the Heritage Foundation report include:

- OSHA should encourage cooperative programs involving govern-

ment, business, and labor; and stimulate formation of such programs through awarding of OSHA education and training grants to them;

- The National Advisory Committee on Occupational Safety and Health should be reconstituted and given meaningful policy input;
- Incentives should be established for formation of advisory safety committees and expert consultation programs in workplaces;
- OSHA should target for enforcement those workplaces with poor safety records or demonstrably hazardous processes, avoid employers with good records, and attempt to resolve most employee complaints without inspections;
- OSHA should "simplify and streamline" its standards, prioritize new standards so as to deal with the most serious hazards, and issue "cost-effective" and "performance-based" standards in the future;
- States with their own OSHA plans should be "full partners" with federal OSHA in implementing health and safety regulation, so that there should be less federal monitoring of state plans.

REPUBLICAN SENATE

Meanwhile, restraints on OSHA, sought in the past by some Senate conservatives such as retiring Senator Richard Schweiker (R.-Pa.), appear to have a better chance of passage in the Republican-dominated Senate of the 97th Congress.

Schweiker's 1980 "OSHA reform" legislation never progressed past the committee stage, but meanwhile several committee chairmanships have changed. A key change is the replacement of Sen. Harrison A. Williams (D.-N.J.) by Sen. Orrin G. Hatch (R.-Utah) as head of the Senate Labor and Human Resources Committee.

Two members of the Labor Committee (both supporters of OSHA) were defeated this year—Sens. Jacob Javits (R.-N.Y.) and Gaylord Nelson (D.-Wisconsin.) Williams, Schweiker and other Committee members sponsored the 1980 "OSHA reform" bill which was widely criticized by the labor movement. But the new leadership of the Committee will probably have greater success in approving similar legislation. Hatch has insisted that "there will be" an OSHA bill in 1981.

California Work Deaths Drop

Work-related deaths in California dropped to 6.3 per 100,000 workers—a 43 percent decline—between 1969 and 1978, according to a report issued earlier this year by the State Division of Labor Statistics and Research.

The number of deaths dropped 23 percent over the ten-year period, although employment rose almost 25 percent. The rate in 1978 was the lowest of any year on record, Dr. Sara Behman, the Division's Chief, said.

Over the ten-year period, dramatic declines occurred in fatalities caused by falls from heights (65 percent), deaths involving heavy equipment (29 percent), and deaths caused by explosions (49 percent.)

J.P. Stevens Signs Contract; Boycott Ends

After a 17-year struggle, the Amalgamated Clothing and Textile Workers Union (ACTWU) has won a major battle in its campaign to organize J.P. Stevens & Co., the second largest textile firm in the U.S.

On October 19, 1980, union and company officers signed a 2½-year collective bargaining agreement covering 3500 workers at ten plants in Roanoke Rapids and High Point, N.C., Allendale, S.C., and West Boylston, Alabama. The contract has been overwhelmingly ratified by workers at the plants. ACTWU won representation rights for workers at some of the plants

as long ago as 1974, but the company has not agreed to a contract until now.

The agreement provides for a 19.5% retroactive pay increase, averaging \$1300. per employee; checkoff of union dues; a seniority system governing job transfers and promotions; a grievance procedure which includes binding arbitration; reinstatement and back pay for some union supporters who were previously fired; and automatic extension of the contract to any other Stevens plants where the union wins recognition.

The union agreed to call off the worldwide consumer boycott of Stevens

products, to end the "corporate campaign" which had aimed for removal of Stevens officials from boards of other corporations, to refrain from considering Stevens as its "primary organizing target," and to drop several pending legal cases.

Included in the contract provisions are several health and safety advances. Health and safety committees will be established at each union plant, and safety rules are subject to the grievance procedure.

Stevens employs a total of 44,100 workers at 160 plants in the U.S.

107 Substances

OSHA 'Candidates List' of Carcinogens Announced

On August 2, 1980, federal OSHA released a list of 107 chemical substances which it said warrant further scientific review to determine whether they should be considered potential occupational carcinogens.

The list, issued in accordance with OSHA's January, 1980 occupational cancer standard, has no immediate regulatory effect but serves instead to guide research by the scientific community. The new cancer standard requires that such a list be updated and published annually.

According to OSHA head Dr. Eula Bingham, "We are offering the public the opportunity to get involved in setting priorities and selecting substances appropriate for regulation at the earliest possible point in the process. We are

also interested in getting input from workers and employers on health effects of these substances."

Placement on the list indicates that OSHA's initial screening of a substance has determined that there is some evidence of carcinogenicity, but it does not imply that a scientific determination of carcinogenicity has been made.

The second stage of the regulatory process will be the development of lists of Category I and Category II potential carcinogens. Finally, OSHA will initiate rulemaking on individual substances selected from these lists. OSHA has said that it will develop the Category I and Category II lists both from the 107 substances on its own new "Candidates List" and from the approximately 150 substances on the Carcinogen Assessment Group (CAG) list issued by the

Environmental Protection Agency (EPA).

As required by the cancer standard, OSHA will consider a variety of factors to target the "worst first" substances for regulation. Some of these factors include: (1) the estimated number of exposed workers; (2) the estimated levels of worker exposure; (3) the molecular similarity of a substance to a known carcinogen; and (4) the availability of safer substitute substances. OSHA will more thoroughly analyze the relevant available scientific data related to the potential carcinogenicity of substances which meet these "worst first" criteria.

OSHA's new cancer standard establishes a system for identifying and classifying carcinogens based on the nature and extent of the scientific evidence of their cancer-causing potential.

Minority Workers' Health Conference in Washington in March

A National Conference on Occupational Health and Safety Issues Affecting Minority Workers, sponsored by NIOSH, will be held from March 4-6, 1981 at the Shoreham Hotel in Washington, D.C.

The conference will bring together representatives of academia, private in-

dustry, labor unions, unorganized workers, federal and local governments, civil rights organizations, public interest groups, and health care providers to exchange scientific information regarding future research and training needs in the area of minority health.

The aim of the conference is a com-

prehensive initiative by NIOSH and other agencies, directed at the needs of minority workers.

For further information, please contact: Diane Williams, KAIB Technologies, 3222 N St., N.W., Suite 400, Washington, D.C. 20007.

Clearinghouse



PAMPHLETS

The Chemical Handlers is a 12-page tabloid reprint of a series of articles which appeared in the San Jose (California) *Mercury News*, April 6-8, 1980, by staffers Susan Yoachum and Michael Malone. Examining worker safety in the electronics industry of the "Silicon Valley" near San Jose, the articles focus on workplace chemical exposures and what government agencies and workers themselves are doing about them. More than 160,000 people in "Silicon Valley" work in electronics, particularly semiconductor manufacturing. According to the articles, "the industry uses some of the most hazardous chemicals that exist, including corrosives such as hydrochloric and hydrofluoric acids, toxic solvents such as xylene, and dangerous poisons such as arsine gas and cyanide." Statistics are cited which show that the electronics industry has one of the highest incidences of occupationally related illness of any industry in California. Recently, NIOSH has been investigating conditions in the industry.

Free copies of the reprint may be obtained from: Public Relations Department, *The Mercury News*, 750 Ridder Park Drive, San Jose, CA 95190.

OSHA: Your Workplace Rights in Action is a federal OSHA series, consisting of a poster and seven booklets, which spell out ways in which workers can use their legal rights to reduce job hazards. The entire series is now available in both English and Spanish.

All these materials are available free from: OSHA Publications, Frances Perkins Building, Room S1212, Third St. and Constitution Ave., N.W., Washington, D.C. 20210.

The series includes: *You Have a Right to Protect Your Life on the Job* (OSHA 3032); *You Can't Be Punished for Insisting on Job Safety and Health* (OSHA 3033) (the poster); *OSHA Inspections: You Can Help* (OSHA 3024); *OSHA Health Inspections: How You Can Help* (OSHA 3024); *Job Safety and Health: OSHA Inspections*

are Only the Beginning (OSHA 3029); *Workers' Rights Under OSHA* (OSHA 3021); *Job Safety and Health: Answers to Some Common Questions* (OSHA 3034); and *Health and Safety Committees: A Good Way to Protect Workers* (OSHA 3035.)

Please specify English or Spanish.

Noise Control, a 119-page paperback guide for workers and employers interested in reducing workplace noise, is now available from the U.S. Dept. of Labor's Occupational Safety and Health Administration.

"Approximately 14 million workers are exposed to hazardous levels of noise in their workplace," OSHA head Eula Bingham said in announcing the publication. "This booklet will help make employers and employees more aware of the adverse health effects of noise and hopefully show them ways to minimize their risks."

"The booklet was edited and adapted from a Swedish Work Environment Fund publication," Dr. Bingham explained, "but will be equally useful in American workplaces."

Five major topics are covered: (1) the effects of noise on human health; (2) definitions of key words and concepts used in the book; (3) specific principles of noise control which readers can apply to their workplaces; (4) techniques for controlling noise; and (5) ways in which OSHA can help workers and employers with noise control.

Single, free copies are available from OSHA area and regional offices, as well as from: OSHA Publications Office, Room S1212, Frances Perkins Building, 3rd St. and Constitution Ave., N.W., Washington, D.C. 20210.

CALENDAR

The American Labor Calendar for 1981 is entitled *United We Stand* and is available for \$3.95 per copy, including postage and handling, from: American Labor, 1835 Kilbourne Place N.W., Washington, D.C. 20010. Quantity discounts are available.

The new calendar shows the working people of America in photographs by well-known photographer Earl Dotter. All proceeds go to support the journal, *American Labor*.

CONFERENCE

Health Risks in the Arts, Crafts, and Trades is a national conference to be held April 2-4, 1981 at the Blackstone Hotel in Chicago. Co-sponsored by several occupational health organizations including federal OSHA and NIOSH, it will acquaint artists, art teachers, arts administrators, scientists and manufacturers with potential safety risks and health hazards accompanying their work. Conference participants will receive medical background and practical information necessary for improving safety of their work environments.

A panel will discuss legal issues surrounding product labeling. Exhibits, audiovisual programs, and a reference room will also be included.

For information and reservations, contact: Dr. George Scherr, 2405 Bond St., Park Forest South, Illinois 60466.

AUDIOVISUAL

Signed, Sealed and Delivered: Labor Struggle in the Post Office is a 40-minute color videotape by Tamerik Productions, 237 Second St., Jersey City, N.J. 07302. It is available for purchase from that address at \$250., and for rental at \$45. (general), \$25. (community organizations), or \$75. (libraries and universities.) It is available in beta, VHS, 1/2" reel to reel, and U-matic formats.

The tape traces the history of the late 1970's at the Post Office's Bulk Mail Facility in Jersey City, including the 1978 "wildcat" postal strike, the firing of many workers at that and other facilities, the controversy within the various postal unions over demands for amnesty, the death of a postal worker in late 1979 in a conveyor belt accident at Jersey City, and its repercussions. Health and safety conditions at the facility are emphasized.



Scenes from *The Life and Times of Rosie the Riveter*. (Photos: OWI, Ann Rosener, Douglas Aircraft.)

The Life and Times of Rosie the Riveter is a new one-hour, 16mm. color documentary film on the experience of women workers during World War II in the U.S.

Already shown this year at the New York and San Francisco Film Festivals, the film shows the widespread entry of women into industrial jobs during the War due to national necessity. According to the narration, "Notions of what was proper work for women changed overnight. Thousands of posters and billboards appeared calling on women to 'Do the Job He Left Behind.'"

Rosie the Riveter was the symbol of working women during World War II, but after the war, the film shows that women were once again relegated to home and children. The story is told by five former women workers who recall their histories working in Detroit, Los Angeles, New York, and San Francisco during the war. Their testimony is interwoven with rare archival recruitment films, stills, posters, ads and music from the period.

The film is available for purchase at \$695., and for rental at \$75. (general), \$65. (unions), or \$100. (if paid admission charged) from: Clarity Educational Productions, Inc., P.O. Box 315, Franklin Lakes, N.J. 07417.

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Educational Materials: Packets, Papers, and Miscellanies

Although the Labor Occupational Health Program produces a variety of books, pamphlets, films, and audiovisual materials on worker health and safety which are available for sale and these materials have been described in detail in previous issues of Monitor, many readers are unaware that our ongoing work has led to the production of many miscellaneous materials oriented toward specific topics. We have compiled packets of clippings, reprints, and other information on such topics as noise, video display terminals, clerical workers, and the building trades; our staff members have written papers on many subjects; and LOHP conferences have led to the production of special materials geared toward the interest of the conference attendees. All of these materials are available from LOHP, 2521 Channing Way, University of California, Berkeley, CA 94720. Phone (415) 642-5507 for more information. Prepaid orders are preferred; make checks payable to: The Regents of U.C. All prices are postpaid.

GENERAL PACKETS

Hazards of Video Display Terminals\$1.75

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ments in Union Liability" by Morris Davis and
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CONFERENCE MATERIALS

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August, 1978\$4.75

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