

# WOHRC NEWS

WOMEN'S OCCUPATIONAL HEALTH RESOURCE CENTER

## Congress Holds Hearings on Genetic Screening

### WOHRC director calls some companies' policies a "frightening portent."

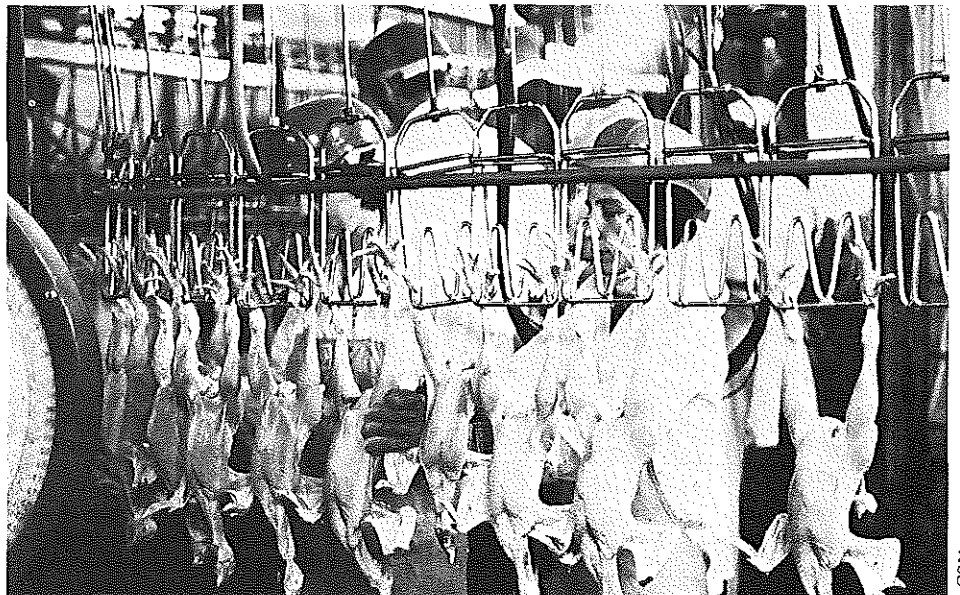
Genetic screening, or the emphasis on the susceptible worker rather than on environmental toxins, "turns public health policy on its head," WOHRC director Dr. Jeanne Stellman told a Congressional subcommittee in October.

She characterized as a "frightening portent" a growing trend by industry to attempt to seek out and bar from jobs workers who might be susceptible to certain substances. Dr. Stellman, who is associate professor of public health at Columbia University, told the subcommittee that not enough is yet known about the dynamics of reproduction as they are affected by environmental toxins to write definite and sweeping policies affecting all workers.

What is known, she said, is that some substances, such as ionizing radiation, affect the sperm more than the egg before conception, and that the overwhelming number of women workers plan their pregnancies, so that they cannot be treated as a "permanently potentially pregnant class."

"The safest and surest" policy, she asserted, "would be to allow both future mothers and future fathers to have a pre-pregnancy planning time when they could avoid exposure to toxic substances. And when they are pregnant," she continued, "I don't see any reason why we, as a society, could not provide medical retention plans to allow them not to be exposed."

The WOHRC director was one of several witnesses appearing before a subcommittee of the House Committee on Science and Technology which is investigating practices by some corporations that subject prospective employees to genetic and other medical screening and that bar women from certain jobs on the grounds of protecting unborn children.



These women workers in a Quebec poultry slaughterhouse are typical of those studied for the cause of a high prevalence of warts. (See page 3.)

Representative Albert Gore, Jr., of Tennessee, chairman of the subcommittee, said that it was concerned about the legal and ethical implications of medical screening, and wanted to investigate if removal of fertile women from the workplace was the most effective way to protect their children. He indicated that

the subcommittee was considering legislation to regulate such practices.

Dr. Vilma Hunt, a noted occupational health specialist who appeared on a panel with Dr. Stellman, said that the most recent and extreme example of workplace exposure for women was of

*continued on page 4*

## Copy Paper Can Cause Skin Irritations

Carbonless copy paper, whose fumes have already been reported as an irritant, can also cause allergic contact dermatitis, according to a recent report in the *Journal of the American Medical Association*.

The June 12 edition of the *Journal* reported the case of a clerk in a college registrar's office who developed a rash of the face and neck at specific times of the year when carbonless copy forms were used for student registration. Tests showed that the allergy was to the color former in the paper composed of paratoluene sulfinate of Michler's hydrol

(PTSMH).

"As was the problem in this patient and previously reported cases," said the JAMA article, "the dermatitis initially may not be perceived to be caused by paper. Only with a thorough history and extensive patch testing will the allergen be identified."

Earlier this year, University of Washington researchers had discovered that the formaldehyde fumes from carbonless copy paper can seriously irritate workers' skin, eyes, noses and throats (See WOHRC NEWS, July/August, 1981.) □

# Preventing the

## The danger of fires in office buildings is heightened

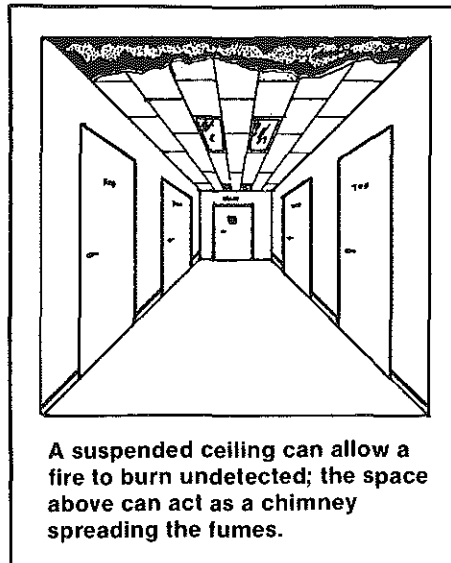
The movie, *The Towering Inferno*, dramatized for lay people what safety experts have been worrying about for many years. How can we plan ahead to avoid the destruction and loss of life caused by fires racing through large office buildings?

Today's buildings seem to be constructed to increase the threat of fire disasters. Not merely the height that prevents easy egress is dangerous, but their very method of construction and the materials used in them. Plastic is pervasive in their walls, electrical wiring and furniture, and it is toxic fumes from burning plastic that usually kill more people than the flames themselves.

### A fireplace with fuel

One expert recently described the modern office building as "a fireplace with fuel in it." That, he admitted, is an oversimplification. But it does serve to dramatize the way fire safety engineers must look at buildings in order to prevent fire disasters.

Buildings are fireplaces, he explained, because they rarely burn themselves, but they do serve to contain fires — some better than others. Old-style concrete buildings with masonry walls, huge fire stairways and high ceilings are far



A suspended ceiling can allow a fire to burn undetected; the space above can act as a chimney spreading the fumes.

Margaret Desmond

safer than new buildings with vinyl covered walls and dropped ceilings. The latter — designed not only for better lighting but to hide overhead wiring and pipes — are particularly dangerous because fires can start above them undetected. To some degree, he said, they create "a fireplace within a fireplace."

### The perils of plastic

The "fuel" in these modern fireplaces consists of office furniture, rugs, wiring and papers.

Plastics burn differently than wood. Sometimes they are treated so that they won't burn, but will smoulder and give off a great deal of smoke. It is the smoke that is dangerous because it decomposes into such chemicals as hydrogen cyanide and hydrogen chloride. In a recent telephone company fire in lower Manhattan, many people were injured from inhaling polyvinyl chloride, and in the Las Vegas and Stouffer Inn fires last year, many people were killed by inhalation of chemical fumes.

The lowly wastebasket is an excellent example of a modern fire hazard. In the old-fashioned metal wastebasket, a discarded, smouldering cigarette butt would usually just go out by itself, the flame contained by the metal. But a modern, plastic wastebasket can easily "melt" and help to spread the fire as well as give off toxic fumes.

Neither did old-style wooden desks,

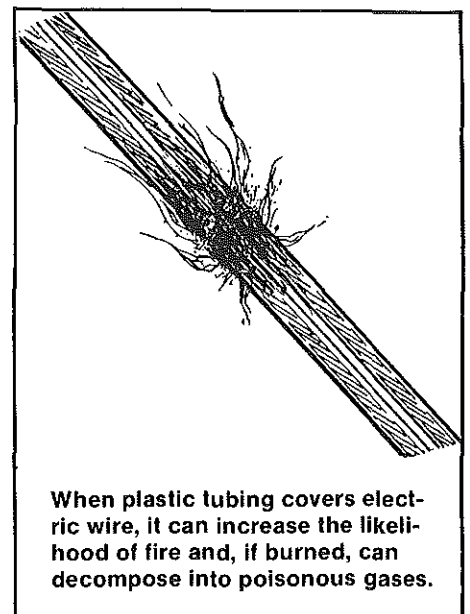
metal file cabinets and wool rugs burn as quickly and dangerously as do modern materials. Even today's desks that are made of wood frequently have bases bonded by plastic resin.

### Fires from electrical systems

One third of fires in office buildings start in electrical systems. The reasons — and which are most common — have not yet been established, but some corporations have developed computer tracking systems in order to find out. What is known is that a loosening National Electrical Code now allows the sheathing of electrical wires to be made of plastic which burns more easily than the old metal material and gives off toxic wastes.

When transformers in electrical systems explode, a great number can exude particularly poisonous substances called polychlorinated biphenyls (PCBs). These can cause chloracne, a severe form of acne that covers the entire body — as well as cancer.

When a transformer containing PCBs is exposed to fire, the resulting soot contains PCBs as well as the dioxins which were contaminants in Agent Orange. These can be particularly hazardous for people sent in to clean up, and, indeed, some burnt-out buildings are too contaminated ever to clean up.



When plastic tubing covers electric wire, it can increase the likelihood of fire and, if burned, can decompose into poisonous gases.

Margaret Desmond

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(Subscription information on page 6.)



## News from Canada

### VDT Education Program

The labor council of Metropolitan Toronto is starting a program to educate office workers on the health and safety aspects of using video display terminals. Initial plans call for a regular newsletter and a training film.

The program is a result of an October VDT health and safety conference at which 300 workers from more than 10 unions emphasized their need for more information and education. The conference was sponsored by the Labor Council of Metro Toronto and the Humber Centre of Labor Studies, and addressed by a number of public health experts including WOHRC executive director Dr. Jeanne Stellman and former staff member Mary Sue Henifin, now an assistant professor of biology at Hampshire College.

In addition to newsletters, conference workshops suggested a central VDT library for the use of trade unionists. They also called for the documentation of physical problems caused by VDTs by means of union sponsored medical monitoring, and lobbying for protective legislation. Union leaders were urged to include the question of VDTs in future contract negotiations and to press for the right to refuse VDT work that might be detrimental to health.

In other workshops, participants testified to the health problems that many shared as a result of working with VDTs. High on the list was acute stress, with others mentioned ranging from eyestrain to skeletal and muscular problems. The stress was attributed by operators to a combination of poor work station design, glare, excessive heat and noise, work speedup and production monitoring. "I'm not a person, I'm an extension of a machine," said one unionist, "and I think it's driving me crazy."

The opening night speaker at the conference, Paul Brodeur, an environmental reporter for the *New Yorker* magazine, set the tone by warning participants to beware of catch phrases and pat answers to health questions given by government and industry representatives.

An afternoon session on low-level radiation emitted by VDTs was conducted by Sister Rosalie Bertell, Ph.D.,

an expert in radiation now working at the Toronto Jesuit Center. Mary Sue Henifin discussed design and lighting problems in work with VDTs and stressed the need for consciousness raising among union members as well as management. "People tend to blame their symptoms on something other than the workplace," she noted.

Dr. Stellman, wrapping up the program, warned the office workers that "you are losing skills and being turned into factory workers."

### Safety for Customs Workers

Customs inspectors working at the 275 ports of entry into Canada are subject to serious danger of physical assault as well as poisoning from exhaust fumes, according to a health and safety study conducted by the Customs Excise Union and the Public Service Alliance of Canada.

More than 100 of the inspectors surveyed reported that they had been threatened or attacked either verbally or with weapons such as knives and guns. Often working alone, the inspectors are responsible not only for stopping contraband goods from entering the country but for identifying criminals and illegal immigrants trying to cross the border. Concern for their safety has heightened since one inspector was found dead in August 1980.

There are about 3,000 customs inspectors in Canada. Only 100 are women, but their number is increasing rapidly.

Carbon monoxide and nitrogen dioxide are among the chemicals from exhaust fumes to which the inspectors are subjected, said the union report. It found a high incidence of heart ailments, arteriosclerosis and pulmonary disease, all of which are known to be caused by these chemicals.

A high level of stress was also reported by the inspectors because Canada, unlike the U.S., has no Border Patrol, and customs workers who need help must rely on Royal Canadian Mounted Police who often are not near at hand or easy to reach.

The union recommended that at least two inspectors be stationed at each location, that improved communications be made available, that inspectors have

the right to refuse dangerous work, and that they be given health and safety training.

### Warts Among Poultry Workers

An unusually high incidence of warts was found among workers in poultry slaughterhouses by a research team from the University of Quebec headed by Dr. Donna Mergler.

Although the prevalence of warts in the general population is only 7 to 10 percent, 28.5 percent of poultry slaughterhouse workers are afflicted with them, the study found. Those showing the highest prevalence were workers between the ages of 25 and 29 (38.7 percent) and those who had been working in the slaughterhouse from 4 to 6 years (40.8 percent).

Investigations showed that the predisposing factors include wearing steel-mesh gloves that are too large and that therefore cause skin abrasions, and high humidity levels that encourage the growth of viruses. Workers also use saws and handle cold objects which provoke constriction of blood vessels and which therefore may hinder an immune reaction.

Dr. Mergler and her research team are recommending adequate gloves and the control of humidity levels and air temperature in the slaughterhouses.

### New Guide Published

A new and valuable **Worker's Guide to Health and Safety** has been published by the Occupational Safety and Health Council of Windsor, Ontario.

The 78-page, pocket-size guide contains clear information on common workplace hazards and their identification, correction and control. Also included are charts showing the effects of some metals and chemicals, and a list of other resources, including books, films and other groups.

Copies of the guide may be ordered from the Windsor Occupational Safety and Health Council, 824 Tecumseh Road East, Windsor, Ontario, Canada N8X 2S3. Single copies are \$2, and bulk prices are available.

## First Appeals Court Challenge To Be Heard on Policy That Bars Women

In the first such case to reach an appellate court, the U.S. Equal Employment Opportunity Commission and two women employees of the Olin Corporation are challenging a company policy that bars women from certain jobs on the grounds of protecting unborn children.

Seventeen *amici*, including major labor unions, civil rights organizations and WOHRC staff members, joined in the appeal after a lower court ruled in favor of the chemical company. Written by Joan Bertin of the American Civil Liberties Union and Carin Ann Claus of the University of Wisconsin Law School, their brief calls discriminatory a company policy that classifies some jobs as "restricted" — barring all fertile as well as pregnant women — and some as "controlled" — barring pregnant women and requiring those who are fertile to sign a form which states that such jobs present "some risk, although slight." Women in controlled jobs are required to notify their employer "immediately" if they should become pregnant.

The brief asserts that "the policy excludes women of child-bearing capacity from numerous jobs, and opportunities for advancement. Five out of eleven lines of progression in the Film Division contain controlled or restricted jobs . . ."

### No age limitation

It also notes that Olin has no age limitation on its exclusionary policy since, "according to its Corporate Medical Director, females ranging in age from 5 to 63 have been known to bear children."

Two women have already been rejected for jobs because they were not sterile, the *amici* argue, and the language of the policy makes probable exclusion even broader since it states that the decision of a nonfertile woman to work at a restricted job should be made "only after consultation with the medical doctor to confirm that she cannot bear children and that she will sustain no other adverse physiological effects from the environment."

The brief further argues that even though Olin is aware of hazards to male parents, and actually counsels men on the dangers of lead, as required by law, it does not exclude men from working

with lead or any other potentially harmful substance.

The policy is illegal under Title VII of the Civil Rights Act, the *amici* argue, because "it overtly limits or conditions the employment opportunities of all women, regardless of their child-bearing intentions, and reflexively accepts the unfounded stereotype that women are the only appropriate objects of policies designed to protect the health of future generations, and that women's employment rights can and should be sacrificed to attain that goal."

At least 100,000 hazardous jobs are barred to women because of policies such as Olin's, according to estimates by federal officials. "Such policies therefore threaten to curtail the employment opportunities of significant numbers of women, often denying them access to lucrative employment in industries which have only recently become sex-integrated," notes the brief.

In the original case, the EEOC and the two plaintiffs, who are black, alleged pervasive sex and race discrimination at the plant, which is Pisgah Forest, North Carolina.

*Amici* include the ACLU Women's Rights Project, the American Federation of State, County and Municipal Employees, the Coalition for the Medical Rights of Women, Planned Parenthood Federation of America, and the Oil, Chemical & Atomic Workers International Union, among others. □

*continued from page 1*

those working in their own homes in Niagara Falls, near the Love Canal.

In addition to ionizing radiation, Dr. Hunt said, there are certain chemicals that are known to harm the male more than the female parent. Both dibromochloropropane (DBCP), used in pesticides, and kepone which comes from the breaking down of the pesticide, mirex, are known to have a devastating effect on the development of sperm, she noted.

The barring of women from certain jobs in factories is a serious form of economic discrimination, said Joan Bertin of the American Civil Liberties Union, who was another witness.

Genetic screening has been mainly used to find out if prospective black employees carry a gene for sickle cell anemia which might make them more

susceptible to certain chemicals. Dr. Bruce Karrh, the medical director of E.I. Du Pont de Nemours & Company, told the subcommittee that his company conducts such screening for the "education and edification" of black employees, but denied that it was in any way used to discriminate against them in employment or promotion.

Dr. Karrh also testified that Du Pont does not permit women to work with seven different chemical compounds, even though one of them, hexafluoroacetone, has been shown in laboratory tests to interfere with the production of sperm.

When Representative Gore noted that many women workers, even though fertile, might have no intention of bearing children, Dr. Karrh agreed, but noted that pregnancies can occur unintentionally.

Asked if there had ever been an unexpected pregnancy for a Du Pont employee in an area of risk, the Du Pont medical director said that he did not know of one, but was sure there were some.

*Copies of Dr. Stellman's testimony will be available after it appears in the Congressional Record. For reprints, write to WOHRC, and enclose one dollar to cover expenses.*

Professionals in public health and related sciences will be interested in an excellent new volume covering basic principles in assessing the effects of mutagenic substances on reproductive health.

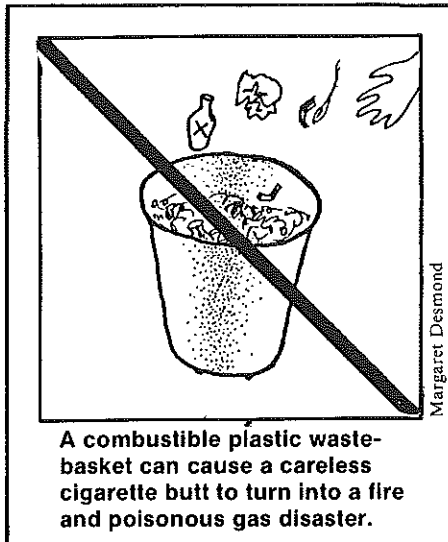
**Guidelines for Studies of Human Populations Exposed to Mutagenic and Reproductive Hazards** is the result of a conference held in Washington in January 1981 sponsored by the Center for Disease Control, the U.S. Environmental Protection Agency, the March of Dimes Birth Defects Foundation, the National Institute of Environmental Health Sciences and the Occupational Safety and Health Administration.

The study is dedicated "to residents past and present of the Love Canal of New York State."

Copies may be ordered for \$10 apiece from Professional Education Department, March of Dimes Birth Defects Foundation, 1275 Mamaroneck Avenue, White Plains, N.Y. 10605.

# Towering Inferno

by modern construction practices and materials.



**A combustible plastic wastebasket can cause a careless cigarette butt to turn into a fire and poisonous gas disaster.**

## Fire codes

Older cities tend to have stricter fire codes than new ones. Safety experts often call them "tombstone codes" because they are written after experiences of disaster. They also note that one of the last things to gain attention in new communities is the fire code.

## Evaluating office safety

These are the two most important questions to ask in assessing safety from office fires:

- Is the area you are in built to contain a fire?
- Is there little enough flammable material in that enclosure so that a fire would burn itself out before it could spread?

If you can keep the "fuel" level down to below fifteen pounds per square foot, there is a good chance that you can get the people out, close the door, and let the fire burn itself out. This is what happened at a recent spectacular Park Avenue fire; though the heat was intense enough to melt a metal railing, it did not spread beyond a certain area, and no lives were lost.

Estimating the fuel level is not as hard as it might seem. These are approximate weights for common office furnishings:

Desk	100 lbs.
Five-drawer metal filing cabinet	100 lbs.
Square foot pile of paper	3 lbs.
Carpet	1 lb. per square foot
Wood door	56 lbs.
Wastebasket	3 lbs.
Wooden picture frame	5 lbs.

Chairs estimate by lifting

When you have arrived at a total, divide that number by the area of the space that encloses the material. If it comes out to fifteen or more pounds per square foot, make changes.

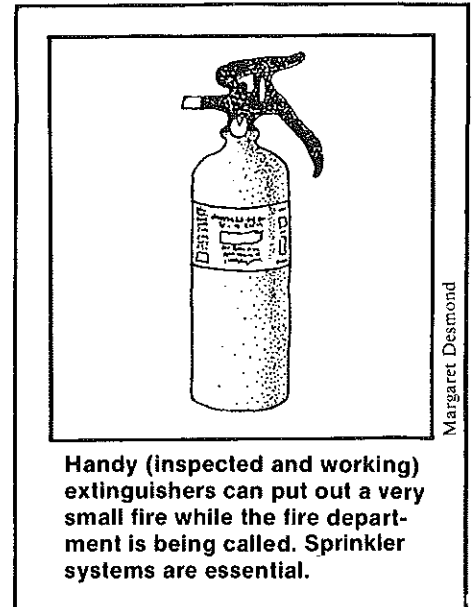
If most of the materials are plastic, and therefore more toxic, some experts advise lowering the fuel load even further. They recommend multiplying the weights by 2.



**Safety exits, alarms, smoke detectors and fire drills must be provided to save lives.**

## A checklist for fire safety:

1. Has your office a plan to avoid chaos in a fire? Do you know where fire extinguishers and exits are and how you will use them? Do you have regular fire drills?



**Handy (inspected and working) extinguishers can put out a very small fire while the fire department is being called. Sprinkler systems are essential.**

2. Do you have a good communication system to keep people informed of what is happening in a fire? Will you be able to tell those in real danger to leave, and to keep others from clogging the stairwells?

3. Does your building manager have good communications with the local firehouse or fire department so that firefighters know the layout of your building and where workers are at different times? A well run building will have practice sessions with the fire department.

4. If your building manager does not seem to have established adequate safeguards, have you and your coworkers met to determine how to initiate appropriate action?

5. Does your building have a sprinkler system? Is it inspected, turned on and working?

6. Have you assessed your office for "fuel load" and gotten rid of unnecessary combustibles such as plastic plants and wastebaskets?

*This article was based on an interview with Joseph Will, assistant vice-president in the corporate safety and fire department of New York's Citibank. It was broadcast on the WOHRC radio hour on WBAI-FM, produced by Dr. Jeanne Stellman and Mary Sue Henifin. A cassette of the broadcast is available from WOHRC for \$10.*

## New Play on Job Safety By Mass Transit Theatre

*Hasn't Hurt Me Yet*, the Mass Transit Street Theater's new play about job health and safety brings a new dimension to theater. It's a story about people who are in the midst of coping with and trying to improve their working conditions. What makes the production unique is the process by which it has evolved. The impetus for all of the drama, poetry, song and dance has come directly from real life experiences. For over a year, *Hasn't Hurt Me Yet* was performed for students, educators, union members and health and safety professionals. After each performance, the Mass Transit Street Theater engaged the audience in informal discussions to gain reactions and learn personal stories.

The most recent performance of *Hasn't Hurt Me Yet*, performed on November 19 at District 65 Headquarters, in New York, is proof that the Mass Transit Street Theater is not just a talented group of performers. They are also good listeners. They have succeeded in telling an important story, with a rare blend of seriousness, sensitivity and humor.

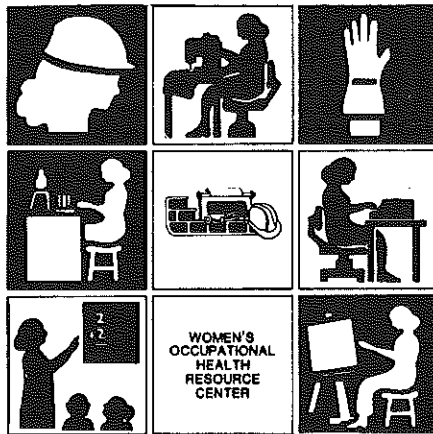
A number of important and timely issues are dramatized in the play. Most notable is the recurrent theme of the difficulty of combatting job hazards. In one scene, we are introduced to Jim, a nuclear energy technician. He is courageously boasting to a co-worker, "I've been working here fifteen years and it hasn't hurt me yet."

The complex feelings evoked by

working amidst these dangers, and the subtlety by which job frustrations and fears are often transported home at the end of the workday are carefully recreated on stage.

Several performances are planned during January and February. For further information on booking or attending a performance, please call or write to the Mass Transit Street Theater, P.O. Box 347, Bronx, New York 10468, 212-882-2454.

— Susan Klitzman



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## Two Mutagenic Chemicals In Photocopying Toners

Two mutagenic chemicals have been found in the toners of photocopying machines, warns a new WOHRC fact sheet. A toner is a powder that helps to produce the image on the copy paper.

The two chemicals — one of which has already been removed from use — are nitropyrene and trinitrofluorenone (TNF). In laboratory tests, both were shown to cause genetic changes in bacteria. Since there is a high correlation between chemicals that cause mutations and those that cause cancer, both are also suspected of being carcinogens.

The Xerox Corporation, whose toner contained nitropyrene, removed the chemical when the danger became known. TNF, however, is still present in IBM toner powder, although the company is considering removing it.

WOHRC emphasizes that this discovery does not mean that people who use photocopiers will get cancer, since only about 3 millionths of a gram will usually adhere to the finished page. However, used toner should be handled cautiously.

Direct handling of the toner in servicing the machine poses the greatest danger, says the fact sheet, and every precaution must be taken to avoid touching or breathing in the substance. If dark toner dust appears at any time, machine usage should be stopped immediately.

This and further information on health hazards for clerical workers is available in WOHRC's Clerical Factpack. For a copy send \$3 to WOHRC.

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