REPRODUCTIVE HAZARDS IN THE WORKPLACE

SOME CASES

Lynn Kaye
National Action Committee on the Status of Women

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More information about the cases in this paper is available at the Ontario Workers' Health Centre, 1292 Barton St. E., Hamilton, L8H 2W1, (416) 544-1561.

This booklet is dedicated to the memory of Timothy Post who died in January, 1986. Donations to the Timothy Post Memorial Library on Reproductive Hazards can be made to the Ontario Workers Health Centre, 1292 Barton St. E., Hamilton, L8H 2W1.

This booklet has been jointly published by the Health Committee, the Employment Committee and the Southern Ontario Region of the National Action Committee on the Status of Women.

Cover photo of Saskia and Timothy Post by Janet Dwyer

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INTRODUCTION

Most people would assume that in Canada today we have the right to have healthy Children. Conditions in our places of work can be serious threats to our own health and to that of our offspring. Birth defects, miscarriages and other kinds of damage can be caused by substances that affect both men's and women's genes or by substances that enter the bloodstream and cross the placental barrier to the foetus. What are the potential hazards? How do they harm us? What can we do about it?

A good place to start is the examination of some individual cases. This booklet records some of the cases handled during 1984-85 by the Hamilton Workers' Occupational Health and Safety Centre* and poses questions for consideration. It is intended for use by study groups and committees who wish to explore strategies around this issue. These strategies must be developed through trial and error and by those prepared to advocate for the rights of workers. It is hoped that this booklet provides a useful resource for such a development.

* *(funded by the Steelworkers' Local 1005 of Hamilton.) The cooperation of Stan Gray, Director, is appreciated. Stan Gray is now Director of the Ontario Workers' Health Centre, 1292 Barton St. E., Hamilton with centres in Hamilton, Toronto, Sudbury and Windsor.*

The Ontario Workers' Health Centre is based in Hamilton with affiliated centres in other Ontario cities: It is supported by union and women's groups and offers multiple services to workers and unions. At the Centre, doctors, some of whom specialize in industrial medicine, care for workers who are victims of accidents or industrial diseases. As well, counsellors instruct workers about dangerous working conditions and help them to negotiate compensation with their employers or government representatives.

For some time, the Centre has played an important role in supporting safety struggles around health and safety in the workplace, sexual harassment, VDT's and other problems.

Independent of government and employers, the Centre is an important tool for the protection of workers against workplace dangers threatening their physical and mental health.

WOMEN

Case No. 1

Women working in the reservation offices of CP Air at a hangar near Lester B. Pearson International Airport, Toronto, were told that the office was to be painted. Worried about the possible effect on the foetus of exposure to paint fumes, several immediately consulted their doctors. When the doctors indicated that it would be best to avoid the paint fumes, the women approached their coworker, Sharon Clark, who was the health and safety representative for the Brotherhood (sic) of Railway and Airline Clerks (BRAC). She approached management for information about the contents of the paint. She was given sketchy information about the paint and was assured that it was odourless and would therefore be harmless. She doubted that lack of odour was an assurance of lack of toxicity, so she phoned the Hamilton Workers' Occupational Health and Safety Centre to get more information about the paint.

On the basis of the 4 or 5 words she had been given, the Centre began research about the possible paints which could be used and concluded that the paint which was to be used contained mineral spirits.

Discovering the presence of mineral spirits led to further research because it is an organic solvent, containing aromatic hydrocarbons. There is some evidence of birth defects in children born to mothers exposed to organic solvents during the first trimester of pregnancy.

The union objected to the scheduled painting, especially because the office has no windows that open. The employer, however, refused to delay or even investigate and painted during off-peak hours over a period of four or five days in January, 1985. After the union objection, it requested a visit from a Canadian Safety Officer of the Department of Labour, Canada without informing the union or employees or providing a data sheet on the paint. It allowed employees who thought that they would be adversely affected to arrange time off. Several women, most of them pregnant, stayed at home, losing pay for those days they were absent.

Some of the employees who stayed at work experienced adverse health effects such as nausea and headaches.

After the painting had begun, an inspector from Labour Canada visited the office but did not take tests and chose not to hold up the job until some data about the paint could be supplied. He did not compel the employer to produce the information. Rather, he returned on January 11, two days after painting had begun and took some tests. These tests were inadequate. Without data sheets about the ingredients, it was guess work to decide what to test for. He tested for a substance which was not known to be an

ingredient of the paint (toluene). He used an unreliable method. He took two grab samples at each end of the room not even sampling over a period of time which was long enough to satisfy the requirements of a scientific sample. In addition, he did not provide an adequate written report of his tests.

The employer defended its use of the paint by arguing that it was developed as an odourless paint for use in hospitals and nursing homes. The Labour Canada safety officer repeated this argument in his report at the same time as he acknowledged that the paint is prepared with mineral spirits. Yet without investigating the presence or effect of mineral spirits, he concluded the work site was safe.

Nevertheless, armed with the research the Centre was able to provide, the union representative filed a grievance objecting to the violation by the employer of the health and safety clause in the collective agreement which read:

> Article 27.06:
> The Company shall establish healthy and safe working conditions and shall take all reasonable precautions to protect the safety and health of its employees....

The employees were seeking paid leave for the time lost without having to use up their sick leave or vacation credits.

The grievance is still in process. At the first two stages, the grievance has been refused. At the second grievance hearing, representatives of the Hamilton Workers' Occupational Health and Safety Centre attended.

The following dialogue ensued:

Employer: *This paint was safe because it was available on the open market. Are we not entitled to assume therefore that it is safe? It is used in hospitals and old folks' homes. It has minimal fumes.*
Union: *You have to look at the conditions in which a product is used and have to investigate ingredients before you can know if it is safe to use. The fact that it was used in hospitals and nursing homes does not mean that it was used safely in those places.*

Union: *In going ahead with this painting you circumvented the safety committee.*
Employer: *We relied on the judgment of a Labour Canada safety officer.*
Union: *No, you went ahead first and then the inspector came in. He had no information provided to him on the ingredients of the paint so that he could make an evaluation.*
Employer: *No response.*
Union: *Given the information Ms. Clarke had obtained and the advice several*

employees received from their doctors, you had a responsibility to prevent damage. It's your responsibility to prevent damage.
Employer: *What proof do you have of the potential damage?*
Union: *The employees' symptoms. Several felt nauseous or vomited. There was a noxious odour for days. Why do we have to wait for the damage to occur? Consultation ought to have occurred so that preventive steps could have been taken.*
Employer: *The Centre's information is not neutral because the Centre is partisan for the workers.*
Centre Representatives: *We are the only unbiased interest because we are looking out for the worker's health and are responsible to the patients. Employers and the government protect other interests. Employers are interested in making a profit and the government is run by politicians.*
Eventually, the data about the ingredients of products was obtained by the union representative from the manufacturer in the form of "Material Safety Data Sheets." In this case, the data sheet was not very informative but it did confirm the presence of mineral spirits.

Special equipment should be available to the inspector from Labour Canada to test for the amount of this chemical in the air.

This case illustrates the difficulty for employees in getting full information about substances introduced into the workplace and the value of having an independent clinic from which workers can obtain information and assistance. As can be seen from the example above, a minimum amount of required information may be available from a data sheet produced by the manufacturer. Often, as in this case, further research will be necessary. The employer should be obliged, as a minimum requirement, to provide data sheets with the ingredients of chemical products before they are put into use in the workplace.

In addition, the women had to pay individually for the lost time. This cost should be assumed by the employer or by society through workers' compensation legislation or other insurance plan.

Discussion Questions

1. "Right to know" legislation would be the most effective way of ensuring that the ingredients of any new substance or unknown substance are known before being introduced into the work site. But is this enough protection? Can the safe use of any substance be guaranteed without testing in the actual workplace conditions? What difference would it have made if legislation was in place which required the employer to prove that the procedure was safe before it could be performed? What would be needed to enforce such legislation?

Example:

Section I—Product Identification:
Odourless White Semi-Gloss Enamel

Section II—Hazardous Ingredients

Material	%	TLV*
Odourless mineral spirits	31	300 ppm

Section III—...

Section VI—Health Hazard Data
Eye Contact: Irritation.
Skin Contact or Absorption: Irritation and dermatitis upon prolonged or repeated contact.
Inhalation: Central nervous system depression leading to loss of co-ordination, impaired judgment, stupor and coma.
Ingestion: Similar to inhalation.

Section VII—...

Section IX—Protection Information and Precautions
Ventilation: Good ventilation to maintain solvent vapour concentration below TLV.
Respiratory Protection: Respirator suitable for organic vapours if ventilation inadequate.
Eye Protection: Safety glasses or goggles.

** Threshold Limit Value (TLV) refers to a standard set by certain government bodies which they consider to be a safe exposure.*

2. Controls such as respirators, ventilation, redesign of the workplace should be in place when exposure to hazardous substances threatens the health of working people. What problems might be experienced in obtaining these controls? What tools would best help workers who want to ensure that these controls are in the workplace?
3. What difference would it have made if legislation was in place which required the employer to prove that the procedure was safe before it could be performed? What would be needed to enforce such legislation?
4. Employees who refuse to do unsafe work must now rely on the opinon of a government inspector as to whether the work is safe. Should the role of

the government inspector be strengthened? What changes could strengthen the right of the worker?

5. How could the clause in the collective agreement be improved?

6. Pregnant women were at greater risk in this case. What rights are required to ensure that women do not have to be individually penalized for carrying babies? Would a right to transfer to other work be sufficient in this case? Who should pay for the loss of time? Is the Quebec law a good model for protection of women's rights? (See Appendix 4.)

Case No. 2

T.E. was working in an unorganized battery factory. When she was 17 weeks pregnant, she approached the Clinic for assistance. She reported that, as a laboratory technician, she was told that she was working on a laboratory assay procedure to test "water quality." However, the samples she was given to analyse were samples of soil from around the work site. These samples indicated mercury contamination. She wanted information on the risk to the foetus posed by exposure to mercury vapour.

Mercury vapour is readily absorbed through the lungs and passes into the bloodstream very efficiently and can be readily transported across the placenta to the foetus. This can adversely affect the nervous system and/or parts of the developing brain, depending on the stage of neuroembryological development. On this basis, T.E.'s doctor advised her to have absolutely no more exposure to mercury throughout the rest of the pregnancy.

She asked for a transfer to a position in the plant where she would not be exposed to mercury. The alternative positions she had been offered such as the packing area and the fluid testing area did not guarantee a zero exposure level.

As a response to her request for transfer, the company Vice-President asked her to sign an indemnity clause. This would revoke any legal responsibility of damage to the foetus or herself from the workplace exposure if she continued working. She refused to sign and was successful in negotiating a transfer to a job in the office which had zero exposure to mercury until the completion of her pregnancy.

Mercury, however, could also contaminate breast milk. A right to transfer should extend to the end of the breastfeeding period.

Discussion Questions

1. Does your province have legislation which gives a worker a right to refuse unsafe work? Could a woman in an unorganized factory be protected from exposure to toxic agents during pregnancy by using this right?

2. What can be done to prevent the practice of asking employees to sign indemnity clauses against damage to herself or her foetus? Where can a woman turn for help?
3. How long should the right to transfer be available? What information should be available about contaminants and breast milk?

Case No. 3

Saskia Post was 19 years old when she quit art school to take a job in a plastics factory. In the factory, the unventilated environment resulted in workers breathing in fumes from the chemicals and their byproducts. Saskia was unaware that she was pregnant and quit 8 days later when she learned that she was. However, the week she worked in the plant was a crucial week in the neurological development of her baby and when Timothy was born, he was blind and mentally handicapped. During her work in the plastics factory, she was exposed to toxic chemicals, such as styrene and polyvinyl chloride.

Styrene is a chemical which was proposed for the list of "designated substances," the use of which the Ontario government regulates. It was not put on the list because the Conservative government bent to a vigorous lobby by the plastics industry. It has been linked to birth defects.

After being referred to the Hamilton Clinic by NDP leader Bob Rae whom Saskia had approached for help, Stan Gray researched the case and assisted her to file a lawsuit against English Plastics in her son, Timothy's name. The Ontario Workers' Health Centre is fundraising to assist Saskia to pay the costs of her cases.

This is the first lawsuit of this kind in Canada.

Discussion Questions

1. Some employers argue that because fertile women are potentially pregnant, they should be excluded from jobs where they might be exposed to toxic chemicals. Other ways of dealing with this situation include paid leave, paid by the employer, leave paid through worker compensation plans, clean up of the workplace. What are the best ways of dealing with this problem?
2. What kind of support systems and compensation should be available for families whose children suffer birth defects because of the mother's exposure to toxic chemicals?
3. What are the disadvantages of legislation which itemizes a list of "designated substances"? Wouldn't a general regulation be more effective?

Case No. 4

R.R. worked in a pesticides packaging plant, where she was exposed to reproductive hazards such as captan and diazinon. She and her husband had tried to conceive a child for some time without success, so she approached her supervisor to work elsewhere in the plant, where she would not be exposed to the harmful substances. He refused to grant a transfer so she had to quit, losing seniority and benefits to find a safer working environment. At first, the Unemployment Insurance Office penalized her with a 6-week waiting period but with the help of the Hamilton Centre, she successfully appealed this decision.

Discussion Questions

1. Who should bear the financial burden when a workplace jeopardizes the health of an employee or an employee's offspring? What arguments do you think would be put to place the burden on the employee? What arguments can be made to place the burden on the employer?

2. What can be done to assist workers who must prove that their health is jeopardized to take legal action in a case like this? For example, a suit for wrongful (constructive) dismissal requires proof of the employer's awareness of the threat to health and proof of his refusal to try and improve her working conditions. Certainly, where employers monitor the health of workers, an obligation to inform the employees of the results of the monitoring would be a first step.

3. It is difficult to prove that one's ability to conceive is being threatened. One of the limitations of the Quebec law is its application only after a woman knows she is pregnant. What forms of "conception leave" should be considered?

Case No. 5

When D.L. became pregnant, she was delighted. She was also conscientious. She quit smoking, gave away her cats, refused dental x-rays and took care to eat well and sleep more. In late July, when she was about 8 weeks pregnant, her employer, York University, began renovations in the area where she worked. She went to the management health and safety officer and asked repeatedly whether her exposure to paint fumes, varnish and lacquer fumes, airborne dust particles from old paint and drywall and glue applied to secure floor tiles and carpet could be harmful to her pregnancy. She was repeatedly assured that there was nothing to worry about. She requested information sheets (Material Safety Data Sheets) but was told none were on file or had been received.

About three weeks after renovations began, she miscarried. Her doctor

wanted to see the data sheets with chemical ingredients listed. When she requested these from the employer, she was told that the precautions on the safety sheets were meant for men working with the materials and did not concern those who were merely present while it was being used. Nevertheless the sheets were given to her. Toluene was one of the chemicals present in the paint. When her doctor noticed this he told her that he thought the miscarriage had been caused by exposure to the chemicals at work.

D.L. felt betrayed because she had asked for information about the fumes so many times and had been assured they were harmless. The negligence of the employer's health and safety officer so upset her that she became depressed and suffered difficulties in her marital relationship in coping with the loss.

With the help of the Hamilton Centre and the financial assistance of her union, she has charged the University for violation of the Occupational Health and Safety Act. The Act allows individual prosecutions (see OHSA, sections 37-40) and D.L. will prosecute by herself with the assistance of the Clinic.

Discussion Questions

1. What is an appropriate penalty for an employer or supervisor who knowingly allows an employee to be exposed to harmful chemicals?
2. Does it make any difference if the supervisor negligently fails to investigate the ingredients of paint or glue?
3. In this case, a prosecution was commenced under the Occupational Health and Safety Act. In Saskia Post's case, a civil suit was filed. Do you think that in a case of negligence like this one, a criminal prosecution is appropriate?

Case No. 6

Identifying hazards is a difficult task for workers and some hazards may have indirect effects. Regulations do not now take into account what the indirect effects may be.

J.B. was exposed to isocyanates at work while performing duties which the employer assigned, when he knew or ought to have known that such exposure can lead to asthmatic attacks and chronic sensitization. She filed a successful claim with the Workers' Compensation Board for chemically induced bronchitis due to TDI* exposure in February and for limitations on her working capacity from March to September. In September, she returned to work at the refrigerator plant. Although she did not know it,

**Toluene Diisocyante (a chemical used in paints and foaming material known to cause asthma).*

she was pregnant at the time. Every day she worked in the plant environment, she became sicker and sicker with symptoms of shortness of breath and asthmatic attacks. During the second week at work, she began to haemorrhage for about an hour each day. Finally, at the end of the week, she awoke covered in blood. Her doctor advised her to stay out of the plant. She was diagnosed as having a cervical infection. In November, it was confirmed that she was pregnant. When, in December, she had an ultrasound, it was suggested by the attending physician, that a small separate membrane could be an empty sac in keeping with a miscarriage of one foetus of a twin gestation.

While isocyanates are not known to affect the foetus directly, a theory was developed that this abortion could have been an indirect effect of the exposure to the isocyanates because a foetus could have been deprived of oxygen during one of the asthmatic attacks this employee suffered during October. Examination of the placenta at birth did not confirm the presence of a twin foetus.

Discussion Questions

1. Little is known about the cause of bleeding during pregnancy. Very little research has been done on the effect of chemicals on women's bodies. Why has there not been more research on this problem? What can be done to generate more research into the effects of substances on reproduction and into the process of reproduction? What remedy should be available for a woman who suffers a miscarriage possibly as an indirect effect of exposure to a toxic substance in the workplace?

Case No. 7

Office workers in Ottawa were exposed to isocyanates, aromatic hydrocarbons, solvents and other chemicals. The parking garage in the basement of their 23-floor building, the Lord Elgin Plaza, was sprayed with a polyurethane sealer to prevent salt erosion of the building's concrete foundation. The foul-smelling air passed through the ventilation system and travelled throughout the twenty-three floors. Symptoms of affected employees included vomiting, nosebleeds, sore eyes and unusual menstrual patterns.

Some supervisors advised pregnant women to go home, others said there was no reason for concern. Complaints were directed to the federal Health and Welfare department. Inspectors investigating the complaints tested the air with gas tec tubes and inadequate samples for one or two solvents without testing for isocyanate or glycol ethers. It is not clear if they communicated with the manufacturer or obtained data sheets before testing. They determined that the air was "safe."

The union representative approached the Hamilton Workers' Occupational Health and Safety Centre for help in obtaining information about the

ingredients and by-products of the sealer. She was concerned because she was asthmatic and had previously worked in a building with ventilation problems. In fact, after the painting episode, she became ill and was hospitalized with severe respiratory problems. She believed they were caused by the fumes in the office. An immediate initial check indicated the presence of isocyanates. Chemical data sheets, which were obtained later, also revealed the presence of glycol ethers, a known reproductive hazard. (see Appendix 7.)

Because employees in the building worked for several different employers, it was difficult to get information on symptoms experienced by them. However, discussions with them did result in their statement that they would have evacuated the building had they been informed of the potential risks.

A questionnaire was designed with the help of the Centre and was administered at the entrance to the building.

Discussion Questions

1. The sealer had no labelling of toxic substances, but indicated only that it should be used in a well-ventilated area. What kinds of labelling regulations would have helped in this case?

2. Employees who left the building were docked sick leave credits. They have filed grievances. What should the protections for workers be when time is lost in these cases?

3. How can employees follow-up after distributing a questionnaire? Other ways of documenting should be considered such as medical assessments of the workers involved by an independent health centre.

4. In a case like this, would the employer be held responsible? What should be done to ensure that employers and employees are informed of potential risks in situations like this one?

MEN

When we talk about reproductive hazards, the discussion often centres on the damage to women, especially those who are pregnant. Men and women are equally affected by mutagens which have a direct effect on our children. Part of the struggle for a cleaner workplace involves the identification of this issue as more than a woman's problem.

Case No. 8

In a plastics plant, C.F. worked in a print room with inks to mark plastic bags. Some of the inks contained glycol ethers. He would have been exposed in high dosages to glycol ethers there. While working in these conditions, he conceived a child. Some irregularities in the child's development have led to concern that the child has a brain defect, damage to the neural tube. It will take some time to confirm this. It may be difficult to determine that the damage was caused by the exposure to glycol ethers.

Discussion Questions

1. In many cases, the birth defect in a child whose parent has been exposed to a toxic substance will not be easily diagnosed. It may be difficult to prove "on the balance of probabilities" (the court standard in a civil suit) that the exposure of the parent was the cause of the defect. Should this mean that workers must accept exposure with the potential damage to health?

2. In this case, the most effective research may not prove the case because medical research has not been adequate to demonstrate a causal relationship. What kind of standard can deal with the fact that medical research may not be available for every chemical or compound in the marketplace?

Case No. 9

K.B. and his wife tried to have a child for several years. After four years, they went to the doctor and had tests to determine whether or not each was fertile and if not, who had the problem. During the medical examination, it was discovered that he had worked as a welder cutting steel with leaded paint. After blood tests, K.B. was diagnosed as suffering from lead poisoning, with the result that his sperm count was low. He applied for workers' compensation to be removed from the lead exposure until his blood tests showed the lead content in his blood had decreased.

The lead standard in Ontario permits men to attain a higher blood level of lead than women.

Discussion Questions

1. Are men being discriminated against because of the lower standard of protection for them?

2. How can we reconcile protection for the pregnant woman without exclusion and the government's willingness to permit more exposure for men?

CASES OF EXPOSURE TO P.C.B.'S (Polychlorinated biphenyls)

Case No. 10

A young man, working as a transformer assembler at Ferranti Packard, had frequent heavy exposure to p.c.b.'s in cooling oil during a period of almost 2 years. As a young man, after this exposure, he had testicular cancer. Later, a few years ago, one testicle was removed.

Case No. 11

T.S. claims that he has become impotent after working for 20 years in conditions which exposed him to p.c.b.'s while employed by a transformer manufacturer.

Case No. 12

P.T. worked with switchgear equipment over a period of years, involving medium exposure to p.c.b.'s. Before exposure, he and his wife had a few kids but afterward they were not able to conceive.

Case No. 13

At Ferranti Packard, a worker had heavy exposure to p.c.b.'s prior to conceiving a child. The child was abnormally small and grew only to 4'10" as an adult. Scientific studies have documented smaller birthweights in children of parents exposed to p.c.b.'s Is it possible that exposure might have a permanent effect on a child?

Discussion Questions

1. Which of these cases do you think will be successful in demonstrating the effect of reproductive damage from exposure to p.c.b.'s?

2. At the time of exposure, it is impossible to know what the effects of exposure are. Only recently has information about the harmful effects of p.c.b.'s come to the public's attention. What can we conclude about what risk is a reasonable one to assume when, as a worker, one is exposed to

chemicals and by-products in the workplace?
3. There are many causes of impotence. How can one be sure that exposure to p.c.b.'s was the cause in this case? What if it is the cause in this case, but other workers with the same exposure do not have the same damage? When an employee must assume a risk and then prove his case after the damage is done, the task can be too difficult to offer any real protection. Can this be changed? How?

Case No. 14

In a metal fabricating plant, in southern Ontario, a certain coating was put on steel coils which gave off a dust which was a bad respiratory irritant. It was boron which irritated the eyes and ears. It can also cause testicular atrophy. F.H. is a worker in the plant who was exposed to boron and had testicular atrophy.

Discussion Questions

1. What would you do about this if you were a union steward? How would you find out about the risk? How would you go about getting a medical assessment?

Case No. 15

The most well known effect of coal tar pitch volatiles is multi-site cancer. P.J. who worked at Domtar in Hamilton was exposed to coal tar pitch volatiles and was diagnosed as having testicular cancer. Coworkers have complained of numerous other testicular and scrotal problems which could be related, such as low sperm count.

Case No. 16

Exposure to chemicals can be environmental. For example, coal tar pitch volatiles, which come from the Domtar plant in Hamilton, are regularly blown into other worksites, and into the community. A worker at an adjacent site, suffered a testicular cyst.

Discussion Questions

1. Cases like that of the drifting coal tar pitch are good examples of the importance of building coalitions, especially with environmentalists. With whom could an alliance be built in this case?

Case No. 17

A number of men who have had exposure to pesticides have been con-

cerned whether cases of birth defects can be shown to be caused by this exposure.

Discussion Questions

1. Where can one best turn for research?
2. How can we persuade more physicians to take workplace hazards into account when evaluating our health?
3. How can we influence the research being conducted so that more studies are done to ascertain what chemical, physical, biological and psychosocial agents are harmful?

Conclusion

These cases provide a basis for reviewing the legal rights of women in the struggle for a safe workplace. There are two main routes for women to influence their conditions in the workplace: through collective bargaining and through legislated standards. Much of the discussion stimulated by this book will revolve around the kinds of legislation we should be pressing for and the kinds of clauses we need in collective agreements. In the appendices are included an example of a clause for collective agreements and a summary of the protections in the law which is in effect in Quebec. These are intended as a starting point for formulating strategies.

APPENDIX 1

How Workplace Hazards Affect Reproduction, from Health Alert, *November, 1978.*

Reprinted courtesy of *Healthsharing*, Fall 1986.

Unlike industrial accidents in which limbs are mutilated or severed by unsafe machines, or the more visibly disabling occupational diseases such as black lung, damage to a worker's reproductive system is usually insidious and unsuspected. Signs and symptoms may develop, but their cause will not usually be attributed to a person's occupation. This is especially true of agents such as x-rays, manganese, or PCB's (polychlorinated biphenyls) which exert adverse effects on the reproductive system *before* conception occurs (see chart). These substances can cause menstrual disorders in women, decreased interest or ability to engage in sex and lowered fertility or sterility in men and women alike.

Before conception, sperm and egg cells can be damaged by exposure to substances called *mutagens* (mutation-causing agents) such as vinyl chloride, used in the production of plastics. Depending on the severity of the genetic changes which result, mutagens can cause disease or birth defects in future children, or prevent fetal development and lead to miscarriage or stillbirth. Many mutagens are also *carcinogens* (cancer-causing agents).

Once conception takes place, the fetus is susceptible to damage by substances known as *teratogens* (defect-causing agents) such as lead, mercury, cadmium, benzene, organic dyes and halothane, which can filter through the placenta and produce miscarriage, stillbirth or gross abnormalities. Some teratogens, like radiation, *directly* affect and damage the fetus. Moreover, the pregnant woman is more susceptible to the damaging effects of teratogenic substances to her own health because of the physiological demands of pregnancy.

The effects of reproductive hazards don't stop at birth, since substances can affect an infant if her mother is breast-feeding while exposed to hazardous substances such as tetrachloroethylene (a dry cleaning solvent). And a child's development can be affected by substances such as asbestos dust or pesticides brought home on parents' working clothes.

(Excerpted from "Double Exposure: The Fight for Reproductive Rights in the Workplace" by Ruthann Evanoff, in HealthRight, *Volume V, Issue 3.)*

POINTS AT WHICH WORKPLACE HAZARDS MAY AFFECT REPRODUCTION

PRIOR TO CONCEPTION	AT CONCEPTION	DURING PREGNANCY	ON THE NEWBORN	ON THE CHILD
Menstrual disorders Interference with sexual functions Lowered fertility Mutations — genetic damage in male & female germ cells can be passed on to children and result in disease or birth defects. Can also cause miscarriage or stillbirths.	Difficulties in conceiving a child (e.g. by interfering with the sperm's ability to fertilize the egg)	Teratogens can cause miscarriage, stillbirth, cancer, disease, or birth defects as a result of substances crossing the mother's placenta and reaching the developing fetus (e.g. certain drugs, chemicals and viruses) or by direct action, such as radiation exposure	Toxic effects on development of baby as a result of chemicals transmitted to child in mother's breast milk	Toxic effects on development of child from exposure to substances emitted into the environment around a workplace, or brought home on a parent's clothes

(Excerpted from "Workplace Hazards to Reproduction" by Jennifer Penney, in Health Alert, *November 1978.)*

APPENDIX 2

Chart, from materials prepared for Workplace Reproductive Hazards Conference, September 6, 7, 1985

SOME HAZARDS THAT CAN AFFECT REPRODUCTION

HAZARD	OCCUPATIONAL EXPOSURE	EFFECTS*	COMMENTS
CHEMICAL Anesthetic gases (nitrous oxide, halothane, isoflurane, enflurane, methoxyflurane)	operating room personnel; dental technicians	*men:* reduced fertility; sperm abnormalities; wives report increased spontaneous abortion premature delivery and birth defects; *women:* increased stillbirths, spontaneous abortions, birth defects	Also causes cancer, liver and kidney disease, scavenging equipment can reduce levels by up to 90%; regular monitoring required
Carbon disulfide	degreasers, glue makers, viscose rayon manufacturers	*men:* decreased libido; impotence; sperm abnormalities; *women:* menstrual irregularities; decreased fertility; miscarriages	Also causes psychosis, suicidal tendencies, vision deterioration, gastrointestinal, renal, and liver damage. Increased risk of coronary heart disease
Carbon monoxide	wherever combustion products may be inadequately ventilated; eg. foundries, parking garages; second hand smoke	*women:* high levels toxic to fetus due to interference with ability of blood to carry oxygen, may result in decreased birth weight, brain damage	
Estrogens (e.g.	workers manufacturing	*men:* enlarged breasts; decreased lib-	Vaginal and cervical cancer have

DES, birth control pills)	synthetic hormones or extracts	ido; infertility *women:* menstrual irregularities; cancer of the uterus; birth defects	appeared in over 100 teenage daughters of women who took DES during pregnancy to prevent miscarriage
Lead	auto manufacturers, ceramic and pottery makers, electronics workers, farmers, pesticide makers, paint makers and users, typographers, ore smelters, battery workers, plumbers	*men:* decreased libido; atrophy of the testes; decreased sperm count; chromosome damage; wives report infertility; miscarriage stillbirths, low birth weight *women:* infertility, menstrual disorders; chromosome aberrations, increased miscarriages and stillbirths; contaminates breast milk	Can also affect the red blood cells (causing anemia) and the nervous system. Children can suffer from lead poisoning from exposure to their parents' lead contaminated clothes or from environmental exposure. Children who develop lead poisoning are more likely to be left with permanent brain damage
Mercury	battery makers, ceramic workers, dental technicians, textile workers, makers of fluorescent lamps, scientific instruments	(Organic mercury): *men:* reduced fertility *women:* reduced fertility, fetal exposure can result in severe brain damage and mental retardation. It is not clear whether other forms of mercury (elemental and inorganic mercury) may have similar effects	In the 1950's, as many as 3,000 of Minimata City, Japan, were born with brain damage. This was due to methyl mercury contamination of the waters of Minimata Bay, where waste was dumped from a chemical plant. During their pregnancy all the mothers had eaten fish from the bay.
Pesticides	agricultural workers, commercial and household gardeners, pesticide manufacturers	*men:* chromosomal abnormalities; impotence, loss of libido; decreased sperm counts, infertility *women:* chromosomal abnormalities, miscarriages; birth defects	Irregularities in the test results produced by a private firm, Industrial Biotest Laboratories, have recently led to a review of over 800 studies of 97 pesticides. Health and Welfare Canada has found that many of the studies are invalid due to incompleteness, carelessness or outright falsification

Polychlorinated Biphenyls (P.C.B.'s)	used as fluid in electrical equipment (e.g. transformers, capacitors). No longer used but may be present in old equipment or may be present as contaminant in transformer oil. Workers servicing equipment or in contact with leaking equipment may be exposed	*men:* animal studies suggest PCB's may cause infertility, reduced sperm count *women:* may affect the menstrual cycle, alter sex hormone levels, or cause infertility. May cause birth defects and low birth weight. Contaminates breast milk	May cause cancer, including testicular cancer
SOLVENTS *Organic Solvents* Benzene	workers using benzene as chemical intermediate, or exposed to benzene as contaminant in gasoline, solvents; laboratory workers	*men:* chromosomal abnormalities with possible genetic effects in offspring *women:* abnormal menstrual bleeding, bleeding during pregnancy, miscarriage	Linked to leukemia and anemia
Chlorinated Solvents (e.g. carbon tetrachloride, chloroform, methylene chloride, perchlowethylene)	degreasing, dry cleaning, adhesives, coatings	*men:* carbon tetrachloride may interfere with the hormonal functions of the testes and cause infertility *women:* carbon tetrachloride can pass through the placenta and cause liver damage in the fetus; chloroform can hinder fetal development	Many chlorinated hydrocarbons have been shown to cause cancer in animals (e.g. carbon tetrachloride, chloroform, perchlowethylene, methylene chloride, ethylene dichloride)
Glycol Ethers (2—	workers manufacturing	*men:* animal studies suggest that	The U.S. National Institute for Occu-

methoxyethanol and 2—ethoxyethanol, also called cellosolves)	or using solvents, paints, adhesives, cleaning products, thinners, etc. containing glycol ethers	glycol ethers may cause abnormal sperm production and infertility *women:* animal studies suggest that glycol ethers may cause birth defects if exposure occurs during pregnancy	pational Health and Safety (NIOSH) has warned that, based on animal studies, these 2 glycol ethers should be regarded "as having the potential to cause adverse reproductive effects in male and female workers..." and that exposure should be reduced to the lowest extent possible
Vinyl Chloride	workers involved in the manufacture of vinyl chloride, polyvinyl chloride, and related products	*men:* genetic damage; wives report increased spontaneous abortions, stillbirths, birth defects *women:* genetic damage; increased miscarriages, stillbirths, birth defects; cancer in offspring from exposure during pregnancy	Causes angiosarcoma (a rare form of liver cancer). Abnormally high rate of birth defects reported around vinyl chloride plants in Shawinigan, Quebec and Fort Saskatchewan.
Other Solvents	workers manufacturing or using solvents for degreasing, cleaning, extraction, or in paints, adhesives, thinners, etc.	various solvents have been linked to adverse reproductive effects in human or animal studies; however it is difficult to isolate the individual substance responsible. Therefore, caution is advised when handling solvents. Many solvents may contaminate breast milk.	
PHYSICAL			
Ionizing Radiation	hospital and health care workers, lab technicians, atomic workers	*men:* reduced fertility, gene mutations, premature aging of cells *women:* sterility; miscarriage, still-	In 1958, Dr. Alice Stewart at Oxford, England reported that children X-rayed before birth had about a 50%

		births, gene mutations; direct damage to fetus such as death, mental retardation, birth defects, and increased incidence of cancer	greater chance of dying from leukemia or other forms of cancer
Non-ionizing radiation (e.g. microwaves)	food service workers, flight attendants and pilots, radio, navigation and radar communications workers	*men:* alterations during sperm development; reduced libido; problems with erection and ejaculation, lower sperm count; abnormally-shaped sperm *women:* changes in menstrual cycle; miscarriages; possibly birth defects	In 1981, a New York woman was awarded compensation for her husband's death as a result of prolonged exposure to microwave radiation. The 58 year old telephone company supervisor who worked with TV-relay equipment at the Empire State Building died of abnormal and premature aging
Heat	workers in bakeries, canneries, laundries, factories, smelters	*men:* decreased sperm count; atrophy of the testes; abnormal functioning of the testes, prostate and seminal vesicles; *women:* increased embryo death, low birth weight in offspring	The testes are usually of a lower temperature (about 2°C) than core body temperature. A fever greater than 38.5° for two days will cause a low sperm count over the next two to three months
Noise and Vibration	machine and motor vehicle operators; flight attendants; assembly line workers, riveters, pneumatic drill operators	*men:* possible sexual dysfunction and decreased fertility *women:* congestion of the veins, especially during menstruation; reduced fertility, increased premature births, abnormal labour, and perinatal mortality; exposure to high noise levels during pregnancy may cause hearing loss in child	Can also cause hearing loss and increased stress levels

BIOLOGICAL			
Infectious Diseases (e.g. bacterial agents causing brucellosis or tuberculosis; viral agents causing rubella, mumps, herpes)	laboratory workers, laundry workers, dental technicians, day-care workers, teachers, waitresses, workers in pet shops, abattoirs, meat packing plans, farms, airports	*men:* herpes virus hominus causes transmissable genital infections; mumps can inflame the testes or ovaries leading to infertility or sterility *women:* as for men; fetus highly vulnerable to infection which can result in miscarriage, prematurity, developmental defects, neo-natal death	A 1971 Swedish study discovered that the rate of hepatitis among hospital personnel was 15 times higher than expected
PSYCHO-SOCIAL			
Stress	common to all workplaces but especially with conditions like shift work, piece work, assembly line, heavy video display terminal use; any boring repetitive, high demand job where production pressures take priority over human needs	*men and women:* drug and alcohol abuse, marital breakdown, strained relationships with children; hormonal imbalance; loss of sex drive	A 1980 NIOSH investigation found VDT operators in strictly clerical jobs had the highest level of job stress among all occupational groups. The 1980 Framingham study determined that clericals develop coronary heart disease at almost twice the rate of other women workers

* *NOTE: "Effect" refers to adverse reproductive effect that has been associated with this hazard in human or animal studies. This does not mean that this effect will necessarily occur in response to exposure. Response depends on a number of factors, including dose, and the point in the reproductive process at which exposure occurs.*

This section is adapted from the following sources:

- *Ontario Federation of Labour Module*
- *Barlow, S.M. and Sullivan, F.M.* Reproductive Hazards of Industrial Chemicals, *Academic Press, London, 1982.*

- *Canada Safety Council, Data Sheet on the* Effects of Chemical and Physical Hazards on the Reproductive Health of Male and Female Workers, *1982.*
- *Nancy Miller Chenier,* Men, Women, Work and Reproductive Hazards*: Close Encounters of a Dangerous Kind (Ottawa, Canada: Canadian Advisory Council on the Status of Women, 1982).*
- *The Coalition for the Reproductive Rights of Workers,* Reproductive Hazards in the Workplace*: A Resource Guide, (Washington, D.C., Coalition for the Reproductive Rights of Workers, 1980).*
- *Andrea Hricko with Melanie Brunt,* Working for Your Life *LOHP, Health Research Group, 1976.*
- *National Institute for Occupational Safety and Health, Current Intelligence Bulletin #39, Glycol Ethers, 1983.*

APPENDIX 3

Chart, "Risks" (from Protecting the Pregnant or Breast-Feeding Worker, Commission de la santé et de la sécurité du travail du Québec)

Economic sector	Risks	Potential effect on physical well-being of pregnant worker	Potential effect on physical well-being of the fetus
Personal services: laundries food services hairdressing housework	**Chemical** ▮ Solvents: benzene, trichloroethylene	Increased susceptibility to poisoning (liver, kidney, blood and central nervous system problems)	Spontaneous abortion (miscarriage), premature birth, congenital malformation
	Physical ▮ Excessive heat, cold, humidity	Increased susceptibility to respiratory, gynecological and urinary infection, and to hypertension	Premature birth

	Occupational ▮ Handling heavy loads, frequent bending/ stretching ▮ Heavy workload ▮ Extended working hours (more than 40 hrs/week ▮ Prolonged standing, prolonged sitting	Increased susceptibility to hypertension, varicose veins, hemorrhoids, backache and tiredness	Premature birth, spontaneous abortion, retarded growth
Medical services: hospitals, laboratories, radiology depts., dentist offices	**Chemical** ▮ Anesthetics		Spontaneous abortion (miscarriage) premature birth, congenital malformation
	Physical ▮ Ionizing radiation		Central nervous system abnormalities, mental retardation
	Occupational ▮ Handling heavy loads, frequent bending/ stretching ▮ Heavy workload ▮ Extended working hours (more than 40 hrs/week) ▮ Prolonged standing, prolonged sitting	Increased susceptibility to hypertension, varicose veins, hemorrhoids, backache, tiredness	Premature birth, spontaneous abortion retarded growth

Social medical services: hospitals, laboratories, dentist offices, schools, daycare centres, etc.	**Biological** ▮ Viruses: German measles, measles, mumps ▮ Bacteria		Abortion, congenital malformation
Manufacturing: electrical products	**Chemical** ▮ Carbon monoxide		Spontaneous abortion (miscarriage), premature birth, congenital malformation

Economic sector	**Risks**	**Potential effect on physical well-being of pregnant worker**	**Potential effect on physical well-being of the fetus**
Electrical products, chemicals, textiles, rubber, plastics	**Chemical** ▮ Solvents: benzene, tetrachloroethylene, trichloroethylene, carbon tetrachloride, vinyl chloride, chloroprene, epichlorhydrine, carbon bisulfide	Increased susceptibility to poisoning (liver, kidney, blood and central nervous system problems)	Spontaneous abortion (miscarriage), premature birth, congetinal malformation
Electrical products, chemicals, metal product manufacture	**Chemical** ▮ Toxic metals, lead, mercury, cadmium	Increased susceptibility to poisoning (liver, kidney, blood and central nervous system problems)	Spontaneous abortion (miscarriage), premature birth, congenital malformation

Electrical products, textiles, clothing, plastics, rubber, food (meat)	**Physical** ▮ Excessive heat, cold, humidity	Increased susceptibility to respiratory, gynecological and urinary infections and hypertension	Premature birth
	▮ Vibration	Increased susceptibility to blood loss	Premature birth
	Occupational ▮ Handling heavy loads, frequent bending/ stretching ▮ Prolonged standing, prolonged sitting	Increased susceptibility to hypertension, varicose veins, hemorrhoids, backache and tiredness	Premature birth, spontaneous abortion, retarded growth
	The examples given in the table only show those sectors where the greatest proportion of female help is found.	**Source: Commission de la santé et de la sécurité du travail du Québec, Les conditions de travail et la santé de la travailleuse enceinte, de l'enfant à naître et de l'enfant allaité. Guide, 1981, 122 p.**	

APPENDIX 4
Model for Legislative Change: the Quebec Law

Excerpts from "Protecting the Pregnant or Breast-Feeding Worker: the right to protective re-assignment" published by the Commission de la santé et de la sécurité du travail du Québec (1984).

PROTECTIVE RE-ASSIGNMENT

Protective re-assignment is a special right for the protection of workers who are pregnant or breast-feeding their child and is provided under the Act respecting occupational health and safety...

...A worker who is pregnant or breast-feeding has the right to stop work temporarily and receive payments from the Commission de la santé et de la sécurité du travail if she cannot be immediately assigned to other work where no physical danger is involved. This protection continues until such time as she is re-assigned, or she gives birth, or, if she is breast-feeding, her child is weaned....

The Act states that change in duties must take place immediately on presentation of a medical certificate to the effect that working conditions present a danger to the future mother or her child...

Any worker who is pregnant or who is breastfeeding her child is entitled to protective re-assignment if she carries out work for an employer under a contract of lease of personal service or of apprenticeship, even without remuneration. She may also be employed as a manager, supervisor, forewoman or the employer's representative in his relations with his workers, a director or officer of a corporation.

...if you are breastfeeding, your request will only be accepted if you are in contact with *toxic chemicals* which could contaminate your milk and thus threaten the health of your infant. No time limit is set on payments when breast-feeding is involved...

It should be noted that while you are exercising your right to protective re-assignment, you do not lose any of the benefits to which you were entitled before being transferred to new duties or stopping work. And, after delivery of your baby, you can take maternity leave with Unemployment Insurance benefits, if you are eligible.

PAYMENTS

Women who have to stop working because re-assignment has been refused or delayed and whose request for benefits has been accepted by the Commission, will receive their regular salary from their employer for the first five working days after they have stopped working. They will then be entitled to 90% of their retained net income for the next five working days. This sum will be paid by the employer, who will then be reimbursed by the Commission de la santé et de la sécurité du travail.

From then on until re-assignment, delivery of the baby or the end of the breast-feeding period, the payments will be made by the Commission. The benefits will continue to be 90% of the retained net income and are not subject to tax.

It should be pointed out that "retained net income" means gross salary less income tax, pension and unemployment insurance deductions. Under no circumstances will the gross income used for calculating payments exceed maximum insurable earnings.

Workers are not entitled to payments during assignment review.

KEEPING YOUR BENEFITS

When exercising her right to protective re-assignment, a worker retains all benefits (including her regular salary) related to the position she held prior to being transferred to other duties or stopping work, as provided for under the Act respecting occupational health and safety.

When the transfer ends or she returns to work, the employer is required to restore her to her former position, provided she *complies with the deadline set for such reinstatement*. The worker will remain entitled to the fringe benefits recognized at her place of work, provided the required payments are made, including that of her employer.

A collective agreement may contain provisions giving the right to a longer period of maternity leave following pregnancy than that stipulated in the Unemployment Insurance Act....

MATERNITY LEAVE AND UNEMPLOYMENT INSURANCE PAYMENTS

After giving birth, an eligible worker may receive unemployment insurance payments during maternity leave for a period of 15 weeks, under an agreement reached between the CSST and the Canada Employment and Immigration Commission. Under the Regulations covering Labour Standards, women who have worked for the same employer for at least twenty weeks during the preceding twelve months, and who are salaried employees covered by the Act respecting labour standards may take maternity leave as provided for under Sections 15 to 35 of the Regulations.

FOR MORE INFORMATION:
Regional Office of the Commission de la santé et de la sécurité du travail du Québec
2, complexe Desjardins, Tour de l'Est
27e étage
C.P. 3,
Succursale Desjardins
Montréal, Québec, H5B 1H1
(514) 873-3990

APPENDIX 5

Model for Collective Agreement Language

(a) The employer shall recognize its obligation to protect the employees and inform them of the ingredients and by-products of all agents used or proposed to be used in the workplace including carcinogens, teratogens and mutagens (proven or suspected). The employer shall provide employees working with such agents and the union with material data sheets and available scientific articles. Notification of these hazards shall be prior to being placed on that particular job.

(b) Where possible, the employer will provide substitutes for carcinogenic, teratogenic or mutagenic agents. Otherwise, the employer will provide protection at source from the hazard. A worker pregnant or seeking to become pregnant shall have the right to be transferred away from the hazard without loss of pay or benefits. Where work re-assignment is not available, a regular employee will be considered to be on leave of absence without pay until she or he qualifies for maternity leave or parental leave.

APPENDIX 6
References for Information

Canadian Centre for Occupational Health and Safety
250 Main St. E., Hamilton, Ontario, Canada L8N 1H6
(416) 572-2981

Ontario Workers' Health Centre
Hamilton, Toronto, Sudbury, Windsor
1292 Barton St. East
Hamilton, Ontairo L8H 2W1
(416) 544-1561

Windsor Occupational Safety and Health Council
1109 Tecumseh Road East,
Windsor, Ontario N8W 1B3
(519) 254-4192

Sandy Hill Health Centre,
250 Somerset St. E.,
Ottawa, Ontario K1N 6V6
(613) 232-5738

Healthsharing
101 Niagara St., Ste. 200A
Toronto, Ontario M5V 1C3
(416) 862-1791

TREMCO (CANADA) LTD. TREMCO (CANADA) LTEE.
220 WICKSTEED AVENUE TORONTO, ONTARIO M4H 1G7

APPENDIX 7
Data Sheet, Example

TELEPHONE: 416/421-3300
TELEX: 06524296

I - DESCRIPTION

TRADE NAME: T.B.S.-950 Base Coat, Part A

CODE NO.: 865-100

PRODUCT CLASS: Waterproofing

DATE: 9-24-84

OTHER COMPONENTS: 156-580
150-565

PREPARED BY: Dale Bondy

The hazard information herein is offered solely for consideration of the user, subject to his own investigation and verification of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

II - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	Weight Percent Max	Threshold Limit Value 8 hr time - weighted avg. ppm	mg/m³	Other	Explosive Limits Volume % in Air Lower	Upper	Vapor pressure mmHg at 20°C	Boiling Point °C	°F
Polyurethane Prepolymer (Contains trace amounts of Isocyanate Monomers (T.D.I., M.D.I.)	60	0.005 .02	0.04 (M.D.I.)	(Isocyanate Monomer)					
Aliphatic Petroleum Naphtha	7	200						186	367
Toluene	7	100		SKIN			38	110	230
Cellosolve Acetate	5	100	540	SKIN	1.8		1.7	156	313
1,2 Butylene Oxide	1			LD_{50} = 1400 mg/kg.					
Silane	2	Not Established							
Benzoyl Chloride	0.01	2		(Irritant) *					

ADDITIONAL HAZARDS: For additional data on hazardous ingredients refer to the latest editions of current, reputable technical reference books. *TC_{Lo}=2ppm/1m.

III - PHYSICAL DATA

SPECIFIC GRAVITY (KILOGRAMS/LITRE) 1.22

PHYSICAL STATE: High Viscosity Liquid

SOLUBILITY IN WATER: Low

IV - FIRE & EXPLOSION HAZARDS

FLASH POINT 51 °C 124 °F (Closed Cup) FIRE CLASS Combustible

EXTINGUISHING MEDIA: N.F.P.A. Class B extinguisher (CO_2, Dry Chemical, Foam)

UNUSUAL PRODUCTS OF IGNITION: HCN may form.

UNUSUAL FIRE & EXPLOSION HAZARDS: Heat may cause excessive pressure buildup.

SPECIAL PROCEDURES: Firemen should wear protective equipment against noxious fumes. Water may be sprayed on closed containers to minimize pressure buildup.

VII - SPILL OR LEAK PROCEDURES

CLEAN-UP: Remove sources of ignition indoors immediately. Ventilate to reduce the vapor concentration below the TLV. Absorb spill in vermiculite, sand or other inerts. Transfer to suitable container for disposal. Do not close until evolution of gas has stopped.
WASTE DISPOSAL: Subject to hazardous waste storage, transportation, and disposal regulations. May be deposited in secured landfill in compliance with Federal, Provincial and local regulations.

VIII - PERSONAL PROTECTION

VENTILATION: Use local exhaust indoors when the general ventilation is not sufficient to keep the vapor concentration below the TLV. Capture velocity of 150 feet per minutes is generally adequate.
RESPIRATORY PROTECTION: Use an approved organic vapor respirator indoors for short periods (up to 30 minutes) when the vapor concentration exceeds the TLV. Extended use of respirator may cause oxygen deficiency
SKIN PROTECTION: Impervious gloves may be used to guard against excessive skin contact.
EYE PROTECTION: Use chemical splash goggles when eye contact is likely to occur.

OTHER: Guard against contact with shoes and clothing.

IX - PRECAUTIONS

STORAGE, HANDLING AND APPLICATION: Store in closed containers under normal warehouse conditions. Keep away from heat and flame during transportation, storage, handling and application. Do not store in direct sunlight. Guard against ingestion, inhalation of excessive vapors, contact with eyes and excessive skin contact. Change soiled work clothes frequently. Clean hands thoroughly after handling. Keep containers closed when not in use. Do not smoke, weld, generate sparks, or use flame near containers. Precautions also apply to emptied containers. Keep away from children. Vapors may migrate to sources of of ignition. Ground container when pouring from a height in excess of a few inches.

APPENDIX 8

National Action Committee on the Status of Women Annual General Meeting May 10-13, 1985, Ottawa Reproductive Health Resolutions Passed

BE IT RESOLVED THAT NAC request that the Canadian Centre for Occupational Health and Safety disseminate more information on the potential, suspected and known workplace hazards which can affect the reproductive health of women, men and their offspring.

BE IT RESOLVED THAT NAC endorse the principle of prevention of adverse reproductive health effects in women, men and their offspring, by the most effective means possible which is the control of hazards at their source in the workplace.

In view of the new campaign to secure protections from reproductive hazards in the workplace focusing on the recent Saskia Post civil suit against English Plastics, BE IT RESOLVED THAT NAC:

(1) lobby federal and provincial governments to ban the use of agents that are known to cause, or are suspected of causing harm to the reproductive functions of workers or the health of workers' children. Where banning such agents is not possible, governments should require engineering controls such as local ventilation and enclosure, to reduce exposure to levels below the detection limits.

(2) lobby federal and provincial governments to adopt the following approach to new chemical, biological and physical agents to be used in the workplace;

- all persons be prohibited from manufacturing, distributing, using or supplying for commercial or industrial use in a workplace any new biological, chemical or physical agent without first applying for and obtaining permission from the appropriate health authority.
- application for permission must include:
  a) the intended use of the agent
  b) the formula of a chemical agent
  c) the results of toxicological assessments performed by independent competent persons
- before granting permission, the appropriate authority must be satisfied that the agent is not likely to harm the reproductive function of workers or the health of workers' children, nor to have carcinogenic or mutagenic effects.

BE IT RESOLVED THAT NAC lobby federal and provincial governments to enact strong and effective legislation guaranteeing working women and men the right to know what biological, physical, chemical and psychosocial agents and conditions they are exposed to at work including the suspected or known hazards associated with those agents and conditions, the right to refuse unsafe work and the right to participate in matters affecting health and safety in the workplace.

BE IT RESOLVED THAT although NAC recognizes the primary need to control reproductive health hazards at their source in the workplace, it recommends that where there are biological, physical, chemical or psychosocial agents and conditions, known or suspected to be hazardous to reproductive capacity, that, *as an interim measure only*, legislation be introduced which guarantees workers intending to reproduce and women who are pregnant and/or breastfeeding the right to protective reassignment to other duties without loss of income or benefits.
BE IT RESOLVED THAT NAC lobby the federal and provincial governments to provide more funding for research into occupational and environmental reproductive health hazards.

BE IT RESOLVED THAT NAC urge federal and provincial governments to enact legilsation that requires employers to provide personal protective equipment in appropriate sizes for all workers when this equipment is required.

BE IT RESOLVED THAT NAC support efforts to litigate test cases which, if successful, would force employers to remove hazards to reproductive capacity from the workplace.

BE IT RESOLVED THAT NAC support the dissemination of information about hazards in the workplace and the establishment of worker-oriented occupational safety and health clinics.

BE IT RESOLVED THAT NAC oppose exclusionary or other discriminatory policies against women or men based on their reproductive capacity and that the National Action Committee on the Status of Women (NAC) lobby to ensure that this is a prohibited ground of discrimination under human rights legislation.

Resolution Passed: March, 1980 AGM

RESOLVED that NAC, during the coming year strike a committee to investigate the occupational health and safety needs of women; that NAC support women's right to a workplace that is free from hazards to themselves or their future children; that NAC oppose the exclusion of women from any job or occupation on the grounds that it is hazardous to reproduction; and that NAC support the principle that where it is temporarily not feasible for a woman who intends to bear children to be assured a safe work environment, she be guaranteed the right to be transferred to a safe job without loss of pay, seniority, or benefits.

APPENDIX 9
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