

TOXIC REAL ESTATE IN BRITISH COLUMBIA: IDENTIFICATION OF ISSUES



Waldemar Braul James Russell & William J.
Andrews

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PREFACE

The West Coast Environmental Law Research Foundation (WCELRF) is a non-profit, charitable society devoted to legal research and education aimed at protection of the environment and promotion of public participation in environmental decision-making. It operates in conjunction with the West Coast Environmental Law Association (WCELA) which provides legal services to concerned members of the public for the same two purposes.

Since the founding of the WCELA in 1974, both organizations have dealt with toxic contamination issues on innumerable occasions. The problem is not new. What is new is the widespread concern about toxic contamination among the general public, in business and in government. This concern reflects society's rapidly expanding environmental awareness, as well as a growing recognition of the potentially enormous financial costs of failing to properly handle our toxic waste.

What gives the toxic contamination issue a special urgency now is that **'Who pays?'** is so unclear. Unless this uncertainty is resolved by law reform, at both the federal and provincial levels, it will instead be resolved through years of expensive litigation.

This report is intended to identify the key issues, setting the stage for the law reform necessary to deal with toxic contamination. The report should be considered 'work in progress'. We are aware that the B.C. government is currently considering specific legislation to address certain aspects of the toxic contamination problem and is awaiting presentation of a consultants' report on the government's options. Also, a lengthy study is in draft form before the Law Reform Commission of Canada and, in due course, the views of the Commission will be known. Neither of these documents has been available to us in the preparation of this report. However, we look forward to participating further in the law reform process as it unfolds. We also encourage readers to send comments and suggestions to the authors, at the WCELRF (located at 1001 - 207 West Hastings Street, Vancouver, BC, V6B 1H7).

In addition to law reform, **education** is the second key purpose of this report. We trust that by introducing readers to this complex area, this report will help people in all aspects of the real estate industry--as well as related professionals, government officials and citizens--to conduct their affairs so as to prevent and, where necessary, to solve potential toxic problems.

We gratefully acknowledge funding for this report from the [Real Estate Foundation of British Columbia](#). We also thank the Law Foundation of British Columbia for core funding for the WCELRF. The views expressed in this report are those of the authors and the WCELRF, and are not necessarily those of the Real Estate Foundation or the Law Foundation.

We stress that this report is for educational purposes only. Individuals with specific legal problems are urged to seek legal advice from a lawyer.

Waldemar Braul, James Russell, William Andrews
Vancouver, September 1989

Chapter 1 - INTRODUCTION

It has been estimated that 10,000 underground storage tanks are currently leaking in Canada, and that as many as 28,000 will leak over the next five years. [1 -- I. S. Viswanathan, Underground Storage Tanks: Regulation and Risk, Clayton Environmental Consultants, March, 1989.

] The removal of one ordinary tank can cost upwards of \$10,000, and removal and clean-up of a leaking tank can cost millions. Unlike Ontario, B.C. has not legislated a requirement that a seller of property inform a buyer of the existence of an underground storage tank.

The estimated cost of cleaning up just one portion of the contaminated Expo '86 land ranges from \$17 million to \$477 million. In the United States, the U.S. Environmental Protection Agency collected over \$1 billion (U.S.) last year from businesses liable for hazardous waste clean-up under the U.S. Superfund legislation. Unlike the U.S., however, British Columbia has no legislation to clarify the legal liability for the cost of dealing with toxic contamination.

The City of Vancouver's policy on rezoning or subdivision of sites exposed to toxic substances states, "The City of Vancouver undertakes no responsibility for advising applicants as to the condition of soil or construction materials present on any site. Authority for assessing potential hazards associated with soil contamination lies with the Provincial Ministry of Environment." The Ministry has no statutorily-based standards to govern contaminated sites.

After spending over \$40 million on cleaning up the PCB warehouse fire in St. Basile le Grand, the Quebec government was forced by the lack of local disposal facilities to send PCB-contaminated wastes from the fire to Britain for incineration. Public protests forced the return of the wastes to Quebec, where despite further public protests they were put into "temporary" storage until proper disposal facilities can be built. Like Quebec, B.C. has no facility for destroying PCBs or other toxic wastes.

The Parliament of Canada in the preamble to the new Canadian Environmental Protection Act stated, "...the presence of toxic substances in the environment is a matter of national concern."

In British Columbia, the government's Special Waste Advisory Committee concluded in May, 1988, that,

Mismanagement of special (toxic) wastes represents a growing threat to the local and global environment. To ignore them completely or dispose of them carelessly is no longer a reasonable option for society. Special wastes have the potential to contaminate our air, water and soil, accumulate in the food chain and threaten society with a variety of diseases. [(2) -- 2. Special Waste Advisory Committee, Development of the Special Waste Program for British Columbia: Towards a Healthier Environment, Vancouver, May 31, 1988, at p. 7.]

Toxic contamination can be looked at as a **social** problem: how to adapt our ways of living to avoid 'fouling our own nest'. Alternatively, it can be looked at as a **technical** problem: how to contain or destroy certain molecules.

However, toxic contamination is also very much a **legal** problem: who must take the steps--and pay the bills--to clean up the contamination? The resolution of this legal problem will have an enormous impact on the real estate industry.

Real estate derives its value from the 'livability' of our urban and rural communities. To the extent that toxic contamination diminishes the livability of our communities, it diminishes the value of real estate. All of us have some connection to real estate; we live on it, rent it, own it, buy it or sell it. Certainly each of us must take the small steps that will collectively make a big difference. But dealing responsibly with toxic contamination also involves many big steps--expensive steps.

The law in B.C., however, is currently quite **uncertain** as to who must pay these costs, who will be held 'liable'. This is reflected in the fact that the liability for the cost of dealing with toxic contamination of land in B.C. is, for the most part, **unfunded** in the sense that it has not been absorbed into anyone's financial planning. There is an urgent need for the law to restore certainty to this situation, so that individuals can rationally plan their real estate transactions, and so that constructive solutions--which do exist--can be implemented.

The purpose of this paper is to identify the key issues regarding toxic contamination of real estate in B.C. Chapter 2 outlines the nature of the problem. It discusses toxicity and related terms, and it sets out the main sources of toxic contamination in B.C. It also reviews the recent history of attempts to provide proper facilities for the treatment and disposal of hazardous materials in B.C.

"Let's treat Canada as if we plan to stay."

Susan Holtz, member, B.C. Task Force on Environment and Economy

Chapter 3 addresses liability. It outlines a hypothetical scenario in which land becomes contaminated and is later slated for residential development. This scenario is used to illustrate how the current law in B.C. assigns liability to the various parties involved.

Chapter 4 presents legislative approaches adopted in certain other jurisdictions that may provide lessons for law reform in B.C.

Lastly, Chapter 5 concludes this report by identifying the key issues we face regarding toxic contamination of real estate in B.C.

Chapter 2 - THE PROBLEM

This chapter provides an overview of the problem of toxic contamination of real estate in B.C. First it introduces the concept of **toxicity** and discusses several related terms. Then it sets out the main **sources** of toxic contamination of real estate in British Columbia. Finally, this chapter identifies a number of key areas of **uncertainty** which impair our ability to deal effectively with toxic contamination problems.

"Hazardous waste may be the single most significant health issue of this decade."

U.S. Senator Albert Gore

2.1 TOXICITY

Toxicity in this paper is used to refer to "the capacity of a substance to cause temporary or permanent adverse effects in living organisms or their offspring, such as behavioral abnormalities, cancer, genetic mutation, and physiological or reproductive malfunctions". [(3) -- 3. . See P. Muldoon and M. Vallante, Toxic Water Pollution in Canada: Regulatory Principles for Reduction and Elimination, The Canadian Institute of Resources Law, 1989, at p. 10.] Thus, real estate is **toxic** if it is contaminated with substances that pose a significant threat to natural ecosystems or to human health and well-being.

There are many different toxic substances, and these substances have a wide range of toxicity. [(4) -- 4. . Many studies attempt to develop classifications of toxic pollutants. See S. Epstein, L. Brown, and C. Pope, Hazardous Waste in America, 1982, Sierra Club, at p. 30.] Some toxic substances are capable of causing significant harm at infinitesimally small concentrations. The dioxin 2,3,7,8-TCDD, for example, has had survival, growth and behaviour effects on rainbow trout at levels down to 3.8 parts per **quadrillion**. [(5) -- 5. . Mehrle, P.M., D.R. Buckler, E.E. Little, L.M. Smith, J. D. Petty, P.H. Peterman, and D.L. Stalling, Toxicity and Bioconcentration of 2,3,7,8-Tetrachlorodibenzodioxin and 2,3,7,8-Tetrachlorodibenzofuran in Rainbow Trout. National Fisheries Contaminant Research Center, U.S. Fish and Wildlife Service.] Mercury and lead also cause serious health effects even at extremely low levels.

Some toxic substances **bind** to other materials such as soil and stay with the soil. Other toxic substances are **mobile**, transported through the environment by water, wind, gravity or other organisms. For example, an air pollutant may be deposited on soil. Subsequent **leaching** into the water table, may transport the pollutant to a water body. Leaching is a serious problem: buried hazardous waste or leaking oil can leach through almost all types of soil and can ultimately contaminate underground water supplies.

"Questions involving the environment are particularly prone to uncertainty. Technological man has altered his world in ways never before experienced or anticipated."

Justice Wright, U.S. Court of Appeals

Some toxic chemicals **bioaccumulate**. That is, they build up in the bodies of organisms, often working their way up through the food chain. This is especially true for chlorinated hydrocarbons and heavy metals, which, as discussed below, are common constituents of the toxic substances which contaminate sites in B.C. Humans, as the ultimate consumers on the food chain, accumulate toxic substances in their bodies. [(6) -- 6. . Ryan, J.E., et al., "Chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans in Canadian human adipose tissue", Chemosphere, 1985, 697-706.]

Another factor relevant to toxic real estate is that some chemicals interact **synergistically**. That is, the toxicity of one chemical is enhanced, or decreased, by the presence of another. For example, some chemicals, while not carcinogenic themselves, enhance and speed up cancers triggered by carcinogens. [(7) -- 7. . Van Strum and Merrell, No Margin Of Safety: A Preliminary Report on Dioxin Pollution and the Need for Emergency Action in the Pulp and Paper Industry, Greenpeace, 1987, pp. II-3 to II-9,

note 3, at p.II-6.] The possibility of synergistic interaction of chemical contaminants seriously exacerbates the uncertainty involved in estimating the risk posed by real estate contaminated by more than one chemical.

In addition to moving physically through the environment and the food chain, many chemicals **break down** into other chemicals known as break down products, which may themselves break down further. The toxicity of breakdown products can be greater or less than the toxicity of the original chemical, adding to the **uncertainty** involved in estimating the risk posed by contaminated sites.

2.2 SOURCES OF CONTAMINATION

2.2.1 Old Industrial Sites (Orphan Sites)

"You could see the acid dripping from the batteries when they carried them. And when they had rain, you could see the ground bubbling."

St. Jean, Que. resident Germain Gerard, describing a battery plant that contaminated a neighbourhood with toxic lead

Many contaminated sites in B.C. have been used by industry for almost a century, with ownership and use changing many times. The most publicized case is the former Expo 86 site in Vancouver, where soils were found to be contaminated from decades of industrial use. See Appendix A for a Quebec government list of activities considered likely to contaminate soil.

While few studies of the chemical contents of old industrial sites have been undertaken, one can expect to find a wide range of toxic substances on old industrial sites. One study found polychlorinated biphenyls (PCBs) buried in airport lands, which were likely used in the airport's lighting system or in aircraft maintenance. [(8) -- 8. . T.S. Spearing and Associates, Study of Inactive and Active Waste Disposal Sites at Federal Facilities in British Columbia, prepared for Environment Canada, 1984.] Another found high levels of arsenic, copper and chromium in industrial yard soils and in a ditch receiving surface runoff. [(9) -- 9. . C. Garrett, Arsenic: Chemicals in the Environment, Environment Canada, 1988, at p. 16, noting a study conducted in 1986.] A third study concluded that lands used for treating wood products probably contain pentachlorophenols (PCPs) and other chlorinated phenols which had been spilled or leached. [(10) -- 10. . C. Garrett, Chlorophenols: Chemicals in the Environment, Environment Canada, 1988, at pp. 21-22.] High levels of toxic polycyclic aromatic hydrocarbons (PAHs) are found at former coal gasification sites.

Studies of water quality near wood protection and preservation facilities suggest that these lands contain and release highly toxic chemicals, including chlorophenols, PAHs, phenolics, creosote, chromium, arsenic and copper. [(11) -- 11. . C. Garrett, Summary Report of the Pacific and Yukon Region Toxic Chemicals Profile, Environment Canada, 1982.] The types of chemicals released into the water depend on the types of chemicals used in the wood preservation process. As well, the waters near metal processing and finishing industries have been found to contain toxic organic or inorganic substances, namely primary metals and cyanide, again raising the possibility that these substances may also be found on-site. [(12) -- 12. . Ibid.]

2.2.2 Community Landfill Sites

"The PCBs of St. Basile have become a symbol. Everyone wants the environment they live in to be safe, and St. Basile made it easy for everyone to imagine a disaster in their own backyard."

Daniel Green, President, La societe pour vaincre la pollution

Landfill sites have traditionally been the main method of disposing of solid wastes in British Columbia. [(13) -- 13. . We were not able to find studies of the amount of waste that is disposed of properly. According to the U.S. Environmental Protection Agency, 90% of all wastes are disposed of improperly--in unsecured landfills, by improper incineration, or by midnight dumping: see Epstein, et al., supra, note 2.] Throughout the province they bear testimony to the huge volume of our domestic, commercial and industrial waste. [(14) -- 14. . It is estimated that the North American daily per capita production of refuse is 2.5 kg: "Pollution", Canadian Encyclopedia. A recent report prepared for the Greater Vancouver Regional District provided estimates of regional principal waste categories and municipal industrial/ commercial/institutional waste composition: see MacLaren Engineers, Waste Reduction and Recycling in the GVRD: A Blueprint for Comprehensive Resource Management, 1989.] Virtually every community in British Columbia has a garbage dump or landfill site.

Landfill and dump sites are operated mostly by municipalities and regional districts, but the federal government also has a significant role in managing sites. Sites in the federal jurisdiction are located at such places as armed forces bases, airports, and Indian reserves. [(15) -- 15. . A 1984 study of federal facilities in British Columbia identified as high priority concerns Bella Bella Indian Reserve, CFB Holberg, and Penticton Airport: supra, note 6.]

Many sites have been in operation for decades, with landfill methods remaining virtually unchanged over that time. Other sites have been closed, but unless adequate measures have been taken to properly contain these closed sites, environmental problems persist. Very few sites, if any, have adequate lining to prevent leaching.

A significant portion of the toxic waste buried in landfill sites comes from households. Notable items are old weed killers or pesticides left from gardening, acid-laden batteries, highly corrosive drain cleaners and other cleaning fluids.

Landfill sites contain an almost infinite number of hazardous wastes. They have become the dumping ground for more than half of the PCBs produced (e.g., plastics, paints and electrical equipment). [(16) -- 16. . See Canadian Council of Resource and Environment Ministers, The PCB Story, 1986.] The sites also contain a wide variety of solid and semi-solid waste from industrial, commercial and institutional sources. Without adequate measures to secure a landfill site, over time these contaminants leach into surface and ground waters. In addition, developments that have been built over old landfills have been plagued by methane gas pollution.

2.2.3 PCBs

One of the most widespread land pollution problems has arisen from the use of polychlorinated biphenyls (PCBs). PCBs have been used extensively since their introduction in 1929, primarily as a coolant in electrical systems, but also in a variety of products from adhesives to paints to sealants. [(17) -- 17. . For a review of PCBs in the British Columbia context see C.L. Garrett, "Polychlorinated Biphenyls (PCBs)", Chemicals in the Environment--Pacific and Yukon Region, Environment Canada, 1985. Garrett notes a number of data limitations but finds that high PCB levels have been found

near certain industrial facilities, probably due to leaks or spills from PCB-containing electrical or hydraulic equipment.] Although banned for new installations in the late 1970s, they are still in use in many locations because removal proceeds slowly. Until they were banned, PCBs were specified by fire safety regulations for transformers in high rise buildings and other high occupancy areas, and consequently they exist throughout the urban environment. PCBs also find their way into ecosystems as a result of spills or leaks from electrical transformers and capacitors, and from dumping or disposal into sewage drains.

PCBs do not decompose under normal conditions. Rather, they readily adhere to other materials and thus disperse easily. They are soluble in oils and animal fats, including human fat. Like many other pollutants, they concentrate as they pass up the food chain.

Owing to their resistance to heat, PCBs cannot be eliminated safely in conventional incinerators. As proper facilities for their disposal do not exist in B.C., PCBs are stored after their removal and persist as a potential threat long after they have ceased to be in use.

The most serious problem associated with PCBs arises when they are involved in a fire, since the products of PCB combustion include the much more dangerous dioxins and furans. [(18) -- 18. . This is discussed elsewhere in this report in connection with the PCB warehouse fire at St. Basile le Grand.] As buildings and facilities age, the potential threat of fire increases.

For decades factory workers were exposed to PCBs on a daily basis, but the long-term effects of this low-level exposure remain largely unknown.

The B.C. government recently published a list of known PCB sites in British Columbia. [(19) -- 19. . Ministry of the Environment, British Columbia Inventory of Waste Sites containing PCBs, June, 1989.] The inventory listed 246 sites with a "high priority" designation and 201 sites with a "low priority" designation. The high priority group included schools, hospitals, food establishments and other storage sites, each housing greater than 5 kg or litres of special wastes containing PCBs.

2.2.4 Asbestos

Asbestos is a commonly used material that has grave health effects as a result of long-term exposure. Owing to its high resistance to heat and electricity, asbestos has been used in a wide variety of facilities. It has been used as insulation for electrical wiring, hot pipes and furnaces, and in the manufacture of theater curtains, residential siding and acoustical plaster.

As long as asbestos remains in an undisturbed state it is only a potential threat. When asbestos breaks down, however, tiny fibres become airborne and can remain so for extended periods of time. When inhaled, these fibres adhere to moist lung tissues. Exposure to asbestos has been shown to cause asbestosis, lung cancer and mesothelioma, a disease in the chest cavity. The onset of symptoms may be twenty years or more after exposure, making causality a difficult issue to demonstrate in industrial cases. Nevertheless, lawsuits have forced the giant Johns-Manville Corporation to seek protection under the U.S. bankruptcy provisions.

"One man's poison...is another's meat or drink."

Love's Cure, Francis Beaumont and John Fletcher

The value of property contaminated with asbestos has plunged dramatically as a result of the litigation. American asbestos litigation has also prompted insurance companies to severely limit the coverage available for potential damages arising from the use of asbestos and from other environmental hazards. It has been reported that "[r]eal estate ads in the U.S. are promoting asbestos-free buildings, and prospective buyers are asking for asbestos discounts - amounting to 10% or 15% of the purchase price - to compensate for asbestos contamination." [(20) -- 20. . Glenn, Shier, Sisson and Willms, Toxic Real Estate Manual, Corpus Information Services, Don Mills, 1989, at p.90.] Many property owners have been forced to undertake expensive asbestos removal programs due to airborne asbestos fibres in their buildings.

2.2.5 Leaking Underground Storage Tanks (LUSTs)

Underground storage tanks represent another major source of soil contamination. Environment Canada recently estimated that there are approximately 200,000 underground storage tanks in Canada, 50% of which are in retail service stations, with the remainder in other types of property. [(21) -- 21. . Ibid.] It is also estimated that some 5 - 10% of the tanks are currently leaking and that an additional 28,000 tanks will start leaking in the next five years, thus creating significant risks for further soil and groundwater contamination. Many tanks, especially those constructed before the mid-1970s, were constructed out of steel and, frequently, their construction provides little protection against corrosion and tank failure.

Dealing with an underground tank, especially when it is leaking, is a very costly undertaking. Simple removal of an underground tank may cost in the range of \$10,000, but removal of a tank which is leaking, and remediating the polluted soil, can cost much more.

2.2.6 Mining and Smelting

Land used for base metal mining, milling and smelting operations in British Columbia contains a wide variety of chemical waste products, although the exact amounts cannot be established with any certainty. An overview study done in 1982 identified, in a very general way, concerns about toxic chemical contamination at the three active smelters in B.C.: mercury emissions from a smelter at Kamloops; fluoride and PAH emissions from the Kitimat smelter; and heavy metal releases from the smelter at Trail. This study also expressed the concern that toxic substances would also be found in the soil if the soil was tested.

Cyanide and mercury releases have been identified in connection with gold mining operations in B.C. and give rise to further concern about toxic contamination from these substances.

Arsenic is used in mining and smelting operations in many locations in the province and may also create a health hazard. In the Trail area, arsenic contamination has been found to exceed the federal health limits. The concentration is higher in root vegetables than green vegetables, although there has been no sampling of the soils *per se*. [(22) -- 22. . C. Garrett, Arsenic: Chemicals in the Environment, Environment Canada, 1988.] Very high arsenic levels also have been found in soils in the vicinity of two abandoned mine sites in the Yukon. [(23) -- 23. . Ibid.]

2.2.7 Pulp Mills

In recent years scientists have discovered in B.C. waters small amounts of one of the most deadly artificial chemicals, a dioxin, 2,3,7,8-TCDD. [(24) -- 24. . Department of Fisheries and Oceans Backgrounder, Crab, Prawn and Shrimp Fishery Closures, December 1, 1988; Health and Welfare Canada, Health Protection Branch, Backgrounder to Health Hazard Assessment of Dioxins and Furans in Fish Sampled in Various Locations in British Columbia, May 19, 1989; Environment Canada, Pacific Region Pulp and Paper Industry Effluent Annual Summary, 1987; Department of Fisheries and Oceans, National Dioxin/Furan Fish Sampling Program: Additional Salmon Information, May 19, 1989; Mah, F.T.S., MacDonald, D.D., Sheehan, S.W., Tuominen, T.M. and Valiela, D., Dioxins and Furans in Sediment and Fish from the Vicinity of Ten Island Pulp Mills in British Columbia, Inland Waters Directorate, Pacific and Yukon Region, Environment Canada.] Dioxins are an unwanted by-product of all pulp mill production processes using chlorine bleaching. They have been identified near several B.C. pulp mill sites. Dioxins are one category of chlorinated hydrocarbons produced during the chlorine bleaching process that is used in most B.C. pulp mills. [(25) -- 25. . Van Strum and Merrell, supra, note 5.]

"More than half the drinking water supplies used by New Brunswick municipalities failed to meet national standards."

New Brunswick government document

Dioxins are capable of moving through the environment by attaching to other substances such as soil and ash. As a result, the extent of dioxin contamination is unknown. There is scientific disagreement in regard to the rate at which dioxins biodegrade. [(26) -- 26. . Ibid.]

2.2.8 Pesticides and Herbicides

Pesticide and herbicide use may lead to contamination of property. Previous improper disposal (e.g., burial) of such chemicals may have tainted the soil. Previous chemical applications may have poisoned well water. For example, a 1985 study found that half of 351 wells tested in the southwestern Ontario corn belt were polluted with atrazine and other chemicals. [(27) -- 27. . Greenprint for Canada Committee, Greenprint for Canada, 1989, at p. 10.] In addition, use of such chemicals causes the soil to break down by leaching vital minerals, destroying micro-organisms, and contributing to soil erosion. Also, prior spraying may make land unsuitable for certain uses, such as organic or fish farming.

2.2.9 Atmospheric Emissions

Atmospheric emissions have led to widespread land pollution. **Cadmium** has been found in elevated levels near the lead/zinc smelter in Trail, in high concentrations in soils collected near a battery smelter in Richmond, and in moderate levels in agricultural soils collected in Delta, with the highest overall levels occurring in sites close to Vancouver. [(28) -- 28. . C. Garrett, Cadmium; Chemicals in the Environment, Environment Canada, 1985.]

Similarly, **lead** emissions have settled in soils in Vancouver and the surrounding area, with Vancouver samples containing the highest overall concentration of lead, probably as a result of automobile exhausts. [(29) -- 29. . C. Garrett, Lead; Chemicals in the

Environment, Environment Canada, 1985.] Lead contamination has also been detected in soil in the vicinity of the Trail lead/zinc smelter and in soil samples collected near a phosphate fertilizer plant near Kimberley. The highest levels of contamination found in B.C. were detected in soils collected near a battery smelter in Richmond. [(30) -- 30. . Ibid.]

Lead poisoning can result in many human health problems, including birth defects and mental retardation. Young children are particularly vulnerable. The level of lead in the environment which has been called safe has continually decreased as repeatedly studies identify the harmful effects of exposure to smaller and smaller amounts of lead.

2.2.10 Water Contaminants

Discharges of toxic substances, leaching and surface runoff from toxic land all contribute to the contamination of water throughout the province. Not surprisingly, the most severely polluted bodies of water are located next to, or near, industries and activities known to be heavy polluters. In particular, mines, agricultural farms, forestry operations, pulp and paper mills, wood preservation plants, paint factories, coal handling facilities, petroleum refineries and landfill sites all yield heavy pollution.

A 1982 study identified the following locations as having "high priority" concerns about toxicity levels in water: Lower Fraser River and Estuary, False Creek, Vancouver and Victoria harbours, the Columbia River near Trail, Okanagan and Lower Fraser Valley, Kamloops, Howe Sound, Buttle Lake, Kitimat Arm, and Alice Arm. [(31) -- 31. . C. Garrett, Summary Report of the Pacific and Yukon Region Toxic Chemicals Profile, Environment Canada, 1982.] Heavy metals, such as mercury, lead, cadmium, arsenic and zinc, and organic toxins, such as PCBs, PAHs, chlorophenols, and chlorobenzenes--all of which are commonly used or produced in industrial processes--were among the main contaminants at these sites.

A 1988 study ranked the water quality of the Lower Mainland water bodies according to the then-current provincial Ministry of Environment Water Quality Objectives. [(32) -- 32. . Greater Vancouver Regional District, Greater Vancouver Liquid Waste Management Plan, Stage 1, Draft, July 1988, at p. 53.] Vancouver Harbour was given a poor rating: sediment samples were found to be highly toxic and contained particularly high amounts of PCBs, metal, and organotin concentrations. Other water bodies with poor ratings were the Serpentine, Nicomekl and Little Campbell Rivers in the Boundary Bay system, Still Creek in the Brunette system, and False Creek. All of which have extensive industry and urban development within their watersheds.

2.3 THE PROBLEM OF UNCERTAINTY

When considering the problem of toxic real estate, one is faced with **uncertainty** relating to a number of relevant issues. Perhaps the most glaring problem is the lack of information about the number or nature of sites which have been used as dumps. Often, the only reliable method of determining the contents of dump sites is to take core samples, but this method can involve hazards as well. [(33) -- 33. . Epstein, supra, note 2, illustrates this point by referring to a case where an EPA investigator was injured when examining the dumpsite implicated. (U.S. v. Midwest Solvent Recovery, Inc., 484 F. Supp. 138 (N.D. Ind. 1980)).] Even if the contents of dump sites are known, it is often very difficult and costly to determine how leaching will occur.

Uncertainty also arises due to the lack of reliable **measures of toxicity** for many chemicals. Toxicity varies under different environmental conditions. For many chemicals, there is no scientific consensus about how much exposure is safe, and indeed whether exposure to some pollutants, such as dioxins, is safe at any level. [(34) -- 34. . See Senkan and Stauffer, "What to do with Hazardous Waste", Technology Review, Nov./Dec. 1981, 34, at 40.]

"...reasonable medical concerns...long precede certainty. Yet the STATUTES--and common sense--demand regulatory action to prevent harm, even if the regulator is less than certain that harm is otherwise inevitable."

Justice Wright, U.S. Court of Appeals

Another difficulty is in determining the **latent effects** of exposure to various toxic substances. Adverse health effects of many toxic substances may not appear for decades after exposure, so it is difficult to carry out meaningful tests. In addition, many substances remain active over a long period of time and are present in combination with other substances, adding to the difficulty in distinguishing their individual effects.

Business and industry increasingly rely on **new** chemicals. In 1979, Samuel Epstein, an expert on chemical pollutants, estimated that 700 new chemicals are being added annually to the 55,000 already in use in North America. He stated that many of these chemicals are "not just familiar ones, but exotic ones which have never previously existed on earth and to which no living thing has previously had to adapt." [(35) -- 35. . The Politics of Cancer, rev. ed., New York: Anchor Press/Doubleday, 1979, at p. 27.]

The resources committed to the production of new chemicals and new products have, to date, far outstripped the resources allocated for testing their environmental and health effects. In light of this, it is extremely difficult to determine the long-term impact of a substance and to assess synergistic effects of combined new substances. This type of assessment becomes more necessary at the same time as that it is becoming more complex due to the continual introduction of new chemicals.

2.4 Changes in Land Use

An important impetus for the development of waste disposal facilities arises from widespread changes in land-use patterns in urban areas of B.C. The reclamation of former industrial sites for residential purposes shows no signs of slowing down, ensuring a growing inventory of contaminated sites requiring restoration. This trend illustrates the need to dispose of toxic materials safely in the first place.

In 1985, it was projected that 20% of the existing industrial plants in Canada would be shut down between 1984 and 1990 for economic reasons. [(36) -- 36. . Guide to the Environmental Aspects of Decommissioning Industrial Sites, unpublished paper of the Industrial Programs Branch, Environment Canada, Ottawa, 1985.] Many of these plants were in operation when regulations governing the handling of waste products were hopelessly inadequate and poorly enforced. The sites of these plants frequently became dumping grounds for the wastes produced on them by industry. Most of these sites are in urban areas making them prime locations for residential redevelopment. However, past use of the sites often requires that extensive decontamination procedures must be undertaken before residential development can occur. This shift in land use is likely to continue through the 1990s as urban cores become repopulated and industry moves out to the periphery.

2.5 DEALING WITH TOXIC CONTAMINATION

The only completely safe method of handling toxic materials, both from environmental and human health perspectives, is to not produce them in the first place. Once toxic materials are produced, all methods of disposal or containment have some degree of risk attached. There is no technological 'quick fix' that will magically resolve the dilemma brought about by the fact that the myriad products consumed in our society have the capacity to harm us--both through the by-products created in their manufacture and by their disposal.

Future toxic contamination problems are best dealt with today by making reduction, recycling, re-use and recovery of waste materials integral aspects of all production processes. In the final analysis, we may have to make different or fewer products. New products must be closely screened and their introduction delayed or prohibited until it can be positively demonstrated that they do not add to society's mounting waste disposal problems.

While this prescription may improve the situation in the future, it does not provide assistance in coping with the present problems of toxic contamination. If society continues to sanction the production of toxic materials, safe methods of disposing of toxic wastes must be employed.

2.6 Hazardous Waste Facilities in B.C.

In B.C. this problem has not been resolved in spite of more than a decade of discussion. In 1980, the B.C. Minister of Environment appointed a Hazardous Waste Management Advisory Committee to advise him on steps which should be taken to develop safe, acceptable methods and facilities for disposing of hazardous wastes in B.C. The Committee produced a report in 1981 calling for the formation of a Crown corporation to provide the overall leadership and planning of hazardous waste disposal facilities in B.C. The government rejected that recommendation and for many years focused on establishing a privately operated facility in the province, without success. **Siting** of such a facility has continuously remained the single largest obstacle to developing the facility.

"The mismanagement of special wastes represents a growing threat to the local and global environment. To ignore them completely or dispose of them carelessly is no longer a reasonable option for society."

B.C. Special Waste Advisory Committee

In 1987, the provincial government established a Special Waste Advisory Committee to review options for a comprehensive waste management system. In 1988, this Committee recommended [(37) -- 37. . Special Waste Advisory Committee Report (SWAC Report), Development of the Special Waste Program for British Columbia: Towards a Healthier Environment, May, 1988.] the creation of an integrated "special" (hazardous) waste management facility, capable of disposing of all wastes produced in B.C. that require special treatment. [(38) -- 38. . With the exception of radioactive or explosive wastes.] This Committee also selected a proponent to construct a facility in the Ashcroft-Cache Creek area. But, in the face of mounting public opposition, the government abandoned the proposal in the fall of 1988.

Recently, the Minister of Environment has suggested that B.C. ought to follow Alberta's lead and establish a Crown corporation to construct a facility to deal with hazardous

waste, and to operate it in conjunction with private industry. [(39) -- 39. . Vancouver Sun, August 21, 1989, "Minister wants to establish Crown toxic waste company".] However, the problems of siting the facility must still be addressed.

This decade-long series of attempts to contend with hazardous wastes has not resulted in the establishment of proper facilities. Opposition by local citizens is based on legitimate concerns that will not be resolved without a process of meaningful public consultation.

Two additional factors could enhance the prospects for the government's toxic waste proposals. First, public confidence would be boosted by a strong government initiative to reduce the amount of toxic waste produced. Second, citizens will have more reason to believe government assurances that a facility will be properly regulated when the government has achieved full compliance with its existing environmental standards.

2.7 Methods of Dealing with Toxic Waste

Broadly speaking, there are three possible methods for dealing with toxic materials and restoring contaminated sites:

- 1) **treatment**, with some combination of on-site or off-site treatment of waste through thermal, physical, chemical or biological processes;
- 2) **landfilling** in secure landfill sites, for materials that cannot be treated or for residues of treatment such as incinerator ash; and
- 3) **containment** of the contamination on site using a process known as capping. [(40) -- 40. . Ministere de l'Environnement, Contaminated Sites Rehabilitation Policy, Ministry of the Environment, Quebec, February, 1988, at p. 15.]

The first two methods are used more frequently in the disposal of wastes from current production, but all three are employed in detoxifying contaminated sites.

Factors that must be taken into account in deciding which of these methods is to be used include the type of material to be disposed of, its concentration, the geological and hydrogeological characteristics of the site, and the cost of alternative methods in relation to planned future use of the site.

2.7.1 TREATMENT

Thermal treatment, or incineration, is used to destroy many wastes. Currently there are low temperature incinerators (500 degrees Celsius) operating in B.C. that are capable of destroying some sludges and tars. However, in order to destroy chlorinated hydrocarbons, such as PCBs, consistent operating temperatures in the area of 1200 degrees Celsius are required. [(41) -- 41. . See Appendix IX of the SWAC Report, supra, at note 35.] Wastes contaminated with PCBs or chlorophenols (used extensively in the wood preservation industry) are sometimes disposed of in low temperature incinerators in B.C., creating concern that they provide a possible entry point into the environment for dioxins. [(42) -- 42. . Van Strum and Merrell, supra, note 5, at p. II-16.]

Biological processes can be used in degrading some toxic wastes and are currently used in many municipal sewage systems. Wastes are exposed to micro-organisms through the use of activated aeration tanks, special filters, aerated lagoons, stabilization ponds and composting.

"The use of waste management technologies to recycle, treat, and destroy highly toxic wastes is feasible, affordable, and safe."

California State Office of Appropriate Technology

Landspreading--spreading wastes or partially treated wastes on top of the soil--also uses biological processes. [(43) -- 43. . Special care must be taken with landspreading in order to prevent further contamination from taking place. Landspreading is on the list of activities distributed by the Quebec Environment Ministry that triggers a special review process to ensure suitability when development permits are applied for in Quebec municipalities. See Appendix A for the full list.] Exposure to the elements--air, rain and sunlight--degrades the waste. The topsoil is then turned over and the process repeated. This method is often used in disposing of biological sludges such as sewage. [(44) -- 44. . SWAC Report, supra, note 35, at p. 10.]

Physical and chemical treatments are often used on or off site to reduce waste prior to additional treatment. Physical treatments include filtration, evaporation, precipitation, and absorption by activated carbon. The most common chemical treatments are neutralization of acids and bases, and oxidation/reduction reactions. These chemical reactions are used to form less hazardous or less bulky substances which can then be treated by other methods.

British Columbia has no facilities for disposing of some waste products--and completely inadequate means for disposing of others. Until recently, PCBs were sent to Oregon for disposal. [(45) -- 45. . Ibid., at p. 8, Alberta's new hazardous waste disposal facility at Swan Hills has refused to accept PCB shipments from B.C.] However, the U.S. no longer accepts these shipments due to the inherent risk involved in their disposal. Some PCBs from B.C. have been shipped to Pontypool, Wales, for incineration, but the recent well-publicized rejection of PCB wastes from Quebec destined for that facility would seem to eliminate Pontypool as a viable option for disposing of B.C. wastes. The result is that PCBs are stored in hundreds of locations throughout the province as well as in the numerous locations where they are still in use. [(46) -- 46. . On June 26, 1989, the provincial government issued a list of 447 sites where PCBs are stored under provincial jurisdiction. There are also a number of sites in the province not included in their list as they are under federal jurisdiction.] The longer that PCBs are stored or continue to be used, the more likely it is that B.C. will have a serious PCB - dioxin fire. [(47) -- 47. . At the time of this writing, it is being reported that more than a year prior to the St. Basile le Grand fire, the Quebec Environment Minister proposed a complete review of all existing storage sites in the province. Some four months prior to the fire itself, the Quebec cabinet rejected this proposal as too costly.]

At the same time as the U.S. barred the import of PCB wastes, the cost of exporting other hazardous materials to the U.S. increased dramatically. [(48) -- 48. . SWAC Report, supra, note 35, at p. 8.] Consequently, the demand for facilities willing to accept waste shipments is beginning to exceed the supply. Meanwhile, attempts in B.C. to develop a facility that would be used for the treatment and disposal of all hazardous wastes have been unsuccessful. While many people are agreed about the need for such a facility, the siting problem has not yet been overcome. [(49) -- 49. . B.C. is not alone in facing this problem. The PCB contaminated wastes removed from the site of the warehouse fire at St. Basile le Grand were to be shipped to an incinerator in Wales. When the port of Liverpool refused to off-load the shipment, it was forced to return to Montreal. Most recently, the Quebec government has announced that the PCBs will be stored at a Hydro Quebec facility near Baie Comeau for 18 months until arrangements can be made for their destruction at some unidentified, unbuild facility in Quebec.]

2.7.2 SECURE LANDFILL

Advocates of this method of disposal quite confidently append the adjective 'secure' to the noun 'landfill'. However, to some this expression is a contradiction in terms. A recent study in California concluded that none of the state's hazardous waste dump sites met existing standards. [(50) -- 50. . Toxics Assessment Group, Nowhere To Go: The Universal Failure of Class I Hazardous Waste Dump Sites in California, The Environmental Defence Fund, Sacramento, California, June, 1985.] All sites leaked and all sites were out of compliance with regulations designed to guarantee that wastes be securely maintained. B.C., at present, has no landfills licensed for special wastes. Regulations in B.C. are similar to those in California, so any such facility developed in B.C. would have to be significantly better than those currently in operation in California.

"The only way to deal with toxic chemicals is to stop producing waste."

Barry Commoner, Director of the Centre for the Biology of Natural Systems

An increasing number of technical experts are of the opinion that landfilling is unsatisfactory for most types of refuse disposal and especially for industrial chemicals. [(51) -- 51. . See Epstein, supra, note 2, at pp. 336-7 and Jackson and Weller, Chemical Nightmare: The Unnecessary Legacy of Toxic Wastes, Toronto, Between the Lines, 1982, p. 99. The SWAC Report, supra, note 35, at p. 10, envisaged landfill use being limited to wastes that had already received some other method of treatment to insure that they were "neutralized and stabilized".] Conventional landfilling methods, such as covering the disposed material with layers of dirt, do little to mitigate the aesthetic problems, odours and, worst of all, allow the release of potentially dangerous pollutants into surface and underground water supplies. [(52) -- 52. . Groundwater pollution is a particularly serious problem because the lack of exposure to the elements prevents natural degrading from occurring. The difficulty in gaining access for remediation procedures also increases the costs of clean-up.] A 1981 provincial government study found that 60,000 tonnes of waste per year "may be receiving insufficient treatment to provide adequate long-term protection for human health and the environment." The study concluded that this inadequacy was caused by the lack of treatment/disposal facilities for hazardous wastes. [(53) -- 53. . Ministry of Environment, Special Waste Management Report, 1981, at p. 2-1.]

Even secure landfills are a **temporary** solution in that they do not eliminate toxic materials, they only store them. In a stored state they continue to be a potential risk to neighbouring lands, underground aquifers and water supplies generally. Given contemporary technology, secure landfills may be a necessity for dealing with some toxic wastes--those that cannot be treated, as well as residues from incinerators. However, the use of secure landfills must be restricted to these limited purposes as part of an integrated waste disposal system. This was, in fact, the recommendation of the Special Waste Advisory Committee, but as discussed before, the government has not yet implemented this recommendation.

2.7.3 CONTAINMENT

On-site containment for contaminated sites in some situations is an attractive alternative to some of the other possible solutions. This method reduces the possibility of spreading toxic materials through our communities during transportation to a disposal facility. Containment also eliminates the need to relocate toxic materials from one landfill to another as inadequacies are revealed in specific sites, which has been a problem in

California. [(54) -- 54. . See Toxics Assessment Group, *supra*, note 48.] While containment on site is often considerably less costly than alternative methods, [(55) -- 55. . An example of the comparative cost is provided by the estimates presented for clean-up of one of the parcels of Expo land. Capping was estimated at \$17 million while the projected cost of removal for treatment was in excess of \$400 million. (Globe and Mail, June 29, 1989)] some of the same criticisms can be made of this method as were noted with landfills.

Containment is a temporary solution in that the toxic material is not eliminated, it is stored. Where it is necessary to prevent the atmospheric release of contained materials, a barrier material is put into place over the site. This is referred to as capping. Capping a site may prevent the oozing of toxic materials to the surface as well as prevent most discharges of toxic materials into the atmosphere. It may also prevent lateral movement of material near the surface, but only to the depth of whatever barrier is installed. However, it may not necessarily prevent the downward migration of toxic materials into the water table, followed by deep lateral movement.

Capping toxic materials may not be a desirable option as it limits the range of uses of the land for future development. Any structure built on the site could interfere with or prevent access to the barrier material and make repairs to the barrier difficult or impossible. Also, the downward pressure brought about by any large building may itself damage the barrier material used for capping and thereby place its occupants at risk. Where capping is being considered at the former Expo 86 site, planned future use has been restricted to a park.

2.8 THE CURRENT SITUATION IN B.C.

When we examine the current situation in B.C., it is clear that decisive action is urgently needed. As long as adequate disposal facilities do not exist, the political will to strictly enforce regulations will be lacking. The option of out-of-province disposal has virtually disappeared. [(56) -- 56. . The debacle orchestrated by the Quebec government over the disposal of the St. Basile le Grand PCB-fire wastes will inevitably be repeated as long as disposal facilities are not available.] This means that we are continuing to produce toxic wastes for which we have no means of disposal. These wastes will either be stored or be released into the environment. Since neither of these options is satisfactory, facilities to properly dispose of the toxic waste stream must be constructed in B.C. The growing stockpile of stored waste represents a risk that no prudent community should be willing to take.

Chapter 3 - LIABILITY

3.1 THE BLACKACRE SCENARIO

Numerous complex legal principles govern liability for cleaning up toxic real estate. The principles can best be illustrated in the context of a typical scenario which is set out in the following paragraphs. (Figure 1 is a summary of the scenario.)

In 1940, A purchases Blackacre which is clean land on the outskirts of Big City. On this site, A builds and operates a sawmill. The plant includes asbestos siding and PCBs for its

electrical system. Large amounts of PCP are used to prevent sapstain on the lumber, and an underground storage tank is installed for gas for the company vehicles.

A's neighbours in 1940 were farmers, but the surrounding farmland in the 1940s and 1950s gradually became subdivided into hobby farms. A dumps liquid waste into the river, and either buries the solid and semi-solid waste on-site (the 'back 40') or brings it to the local dump. These were the conventional methods of waste disposal at the time.

In 1960, A retires and sells the land and sawmill to B. B continues the operation.

In 1970, B sells to C using a standard contract that does not address environmental issues. From then on, the neighbours become more and more concerned as their well-water quality deteriorates, and they suspect that it may have something to do with C's factory.

In 1975, C obtains a permit to discharge limited pollution. It is illegal to discharge more but, despite using commonly used technology, sometimes C does. The regulatory agency turns a blind eye to these occurrences.

In 1980, PCPs in storage were accidentally dumped causing a fish kill in the river. Commercial fishermen claimed they had suffered loss as a result.

In 1982, C shuts down the operation. The site is dormant, but the water problems of local residents and farmers persist. C considers developing the land for new housing as it is now within Big City.

After 1982, Blackacre becomes attractive as a residential site to meet Big City's housing demand. In 1984, C enters discussions with D, a would-be residential developer.

"I was one of the suckers." Norman Cerillo, who bought a home at Love Canal

al to convert Blackacre from industrial to residential use.

In 1989, D's proposal is reviewed at City Hall. All goes well until the Planner (just having returned from a conference on Toxic Real Estate in New Jersey) determines that the site may contain toxic materials. If unremediated, these may have adverse health effects for later residents. A major dispute ensues: neither D nor City Hall knows with any certainty the contents, the volume, or the potential health or environmental effects of the dumped material. In any case, City Council rejects D's proposal after a heated public hearing.

Later in 1989, D retains an environmental consultant who reports that the cost of cleaning up will exceed the price D paid for the land.

Meanwhile, the local residents are becoming increasingly concerned about the existence of the neighbouring 'toxic dump'. The neighbours then launch a civil suit against D and the former owners (A, B, and C) for damages arising from the pollution, hoping also that the court will order the defendants to clean up the mess. They are buoyed by their consultant's study that suggests that the contaminants in their well water are "quite similar" to those found on the industrial site, although the study also noted the presence of other local activities which could contribute to contamination of the groundwater.

How does the law of British Columbia apportion blame and assign responsibility for this situation? The web of liability can be very wide. Liability is not limited to the purchaser

and the vendor. Realtors, lawyers, environmental consultants, municipalities, former property owners, land assessors, lenders, suppliers and transporters of polluting material are some of the many parties who are potentially liable in the above scenario.

There are two fundamentally different sources of the law that governs these issues: statutes and the common law.

[Figure 1]

3.2 LIABILITY OF POLLUTERS UNDER STATUTE

It is beyond the scope of this report to set out the full range of statutes that can affect toxic contamination issues in B.C. However, important statutes in this respect include the B.C. *Waste Management Act* [(57) -- 57. . SBC 1982, c.41.], the *Environment Management Act* [(58) -- 58. . SBC 1981, c.14.], the federal *Fisheries Act* [(59) -- 59. . RSC 1985, c.F-14.], and the new *Canadian Environmental Protection Act* (CEPA). [(60) -- 60. . SC 1988, c.22. For a review of these and other statutes see K. Roberts, "An Overview of Environmental Regulation in British Columbia", Environmental Law and Practice, The Canadian Institute, 1988; P. Jarvis, "Environmental Litigation", Environmental Liability and Hazardous Waste Management, The Continuing Legal Education Society of British Columbia, 1989.]

"It was felt that the sky was so vast and clear nothing could ever change its colour, our rivers so big and their water so plentiful that no amount of human activity could ever change their quality, and there were trees and natural forests so plentiful that we will never finish them."

Honourable Victoria Chitepo, Government of Zimbabwe

The *Waste Management Act* is the main B.C. statute that controls pollution. Basically, it prohibits people from putting pollutants into the environment except with a permit or approval issued by the Waste Management Branch. In the above scenario, C's pollution permit would have been issued under the *Waste Management Act*. Had charges been laid against C at the time of his violations of the Act, he would have been subject to a fine of up to \$50,000 (recently increased to a maximum of up to \$1,000,000 per day [(61) -- 61. . Waste Management Act Amendment Act, 1989, Bill 58, proclaimed in force August 11, 1989, B.C. Reg. 235/89.]). Typical fines have been only a few hundred dollars, however.

Recent reports of widespread non-compliance with waste discharge permits under the Act [(62) -- 62. . Professor Murray Rankin's recent study of the Waste Management Branch's enforcement policies, for example, found that it has traditionally relied "heavily upon persuasion to bring offenders into compliance with the law, but persuasion leaves a large enforcement deficit": see M. Rankin, "Issues of Compliance and Enforcement", Environmental Liability and Hazardous Waste Management, The Continuing Legal Education Society of British Columbia, 1989, at p. 1.4.13. Also, April, 1989, figures from the Ministry of Environment show that 16 out of 23 B.C. pulp mills are in "significant non-compliance" with their water pollution permits and are causing "high environmental impact". Thirteen out of 23 mills are in the same category for their air emissions permits.] have resulted in a Ministry of the Environment policy initiative to adopt stricter enforcement procedures [(63) -- 63. . Environment Minister Bruce Strachan states, "Regional staff of my Ministry...have been instructed to take a more vigorous approach on permit enforcement than in the past...(E)ach region is undertaking a special investigation of the 10 most serious Class I Permits (significant non-compliance, high environmental impact) to get them into compliance as quickly as possible." Letter dated

July 14, 1989, to William J. Andrews, West Coast Environmental Law Association.]. The British Columbia Special Waste Advisory Committee in 1988 highlighted the importance of enforcement when it stated that "enforcement of regulations is the most important driving force for the successful clean-up of our environment." [(64) -- 64. . Development of the Special Waste Program for British Columbia: Towards a Healthier Environment. May 31, 1988, at p. 40.]

At the federal level, the *Fisheries Act* is the main pollution control statute. The Act prohibits depositing, or allowing the deposit of substances deleterious to fish directly or indirectly into fish habitat. An exception is that certain industries are allowed to discharge pollution into fish habitat if they meet standards set out in regulations. [(65) -- 65. . Regulations have been passed for the following industries: pulp and paper mills, metal mining, petroleum refineries, potato processing, meat and poultry products, and chlor-alkali mercury production.] In the above scenario, C could have been charged under the *Fisheries Act* for the PCP spill into the river.

CEPA is another important federal pollution control statute. It has incorporated existing federal controls on ocean dumping, international air pollution and a handful of toxic substances including PCBs. CEPA authorizes a program now underway to review top priority toxic substances with a view toward regulation, and to assess new chemicals for toxicity prior to their introduction in Canada. CEPA also authorizes regulations to apply to areas within federal jurisdiction where no other Act of Parliament authorizes regulations to protect the environment. These provisions of CEPA have not yet been used.

But many areas under federal jurisdiction, such as Indian reserves, are not covered by a full system of environmental regulations. Such a system must be developed, utilizing federal statutes, such as the *Indian Act* and CEPA, where no other federal statute is sufficient.

Charges under both the *Fisheries Act* and the *Waste Management Act* are subject to a defence of **due diligence**, that is, the defendant will be acquitted if it is accepted that all reasonable steps were taken to prevent the occurrence of the pollution. In the above scenario, C would likely assert a defence of due diligence by arguing that the fact that he used commonly accepted technology showed that he had taken all reasonable steps to prevent the pollution. Whether this argument would succeed would depend on the specific facts.

Parties who are not **actual** polluters but who exert some **control** over the polluter may also be liable under various environmental statutes. *Waste Management Act* offence provisions refer not only to persons who **cause** pollution but also to those who **allow** pollution to occur. The *Fisheries Act* has similar language, and CEPA has even broader provisions, [(66) -- 66. . CEPA, s.122.] imposing liability on corporate officers who **acquiesce** in the commission of an offence under CEPA.

The broad scope of liability under the *Waste Management Act* is illustrated in *BCR v. The Crown*. [(67) -- 67. . Unreported decisions of the Supreme Court of British Columbia, Action Nos. A 880329 and A 882352 (Vanc. Registry).] In two related proceedings, the issue was which party was liable for a pentachlorophenol (PCP) clean-up--the landlord, the party who owned the toxic material, the party who assisted in burying the material, or the party who brought the buried material to the surface. [(68) -- 68. . The relevant section was s.22(1) of the Waste Management Act, S.B.C. 1982, c.41: "Where a manager is satisfied on reasonable grounds that a substance is causing pollution, he or she may order the person who had possession, charge or control of the substance at the time it

escaped or was emitted, spilled, dumped, discharged, abandoned or introduced into the environment, or any other person who caused or authorized the pollution to do any of the things referred to in subsection (2)." Subsection 2 sets out the nature of an order.] The landlord, BCR, was the only party to escape liability for the costs of the cleanup (on the basis that it had no knowledge of the other parties' activities).

"Whatever befalls the Earth befalls the sons of the Earth. Man did not weave the web of life; he is merely a strand in it. Whatever he does to the web, he does to himself...the whites too shall pass; perhaps sooner than all other tribes. Continue to contaminate your bed, and you will one night suffocate in your own waste."

Chief Seattle, Dwamish Indian Leader, 1854

Courts in other jurisdictions also have cast a wide net of liability to cover not only actual polluters but also those parties which exert some control over a polluting activity, for example, **operators** and **suppliers**. [(69) -- 69. . Re: Mac's Convenience Stores Inc. and Minister of the Environment for Ontario (1984), 48 O.R. (2d) 9 (Ont. D.C.).] **Lenders** should, therefore, also be aware that they may become liable for environmental offences if they participate in the day to day management of the borrower. [(70) -- 70. . Although preliminary research discloses no Canadian case finding a lender liable for toxic clean-up, U.S. courts have increasingly cast the liability net wide enough to include lenders in spite of statutory exemptions for holders of "security interests". For a review of the relevant U.S. cases, see G. Thompson, "Environmental Liability: The Growing Risks for Lenders, Receivers and Trustees", Insight, March 2, 1989. Thompson notes that a 1985 decision by the US District Court for the Eastern District of Pennsylvania found a lender liable for environmental costs because he had undertaken a direct influence on the day to day operations of the borrower. One practical effect of this wide scope is that a new party--often the one with the deepest pockets--will assist in clean-up problems.] This potential source of liability compounds the concern of lenders that the discovery of contamination on a borrower's property could jeopardize the **value** of the lender's security interest.

Whether environmental charges are laid or not is within the discretion of the Crown prosecutor, under either federal or provincial legislation. In the scenario, therefore, the neighbours could request that charges be laid against D, but they would not likely be able to **force** the Crown to lay charges. They could, however, lay charges themselves by a 'private prosecution'. But the provincial Attorney General has the discretion to 'stay' a private prosecution, preventing it from continuing.

Neither the *Waste Management Act* nor the *Fisheries Act* are aimed at polluting activity which has occurred in the past. Time limitations prevent charges from being laid after one year from the happening of the offence in the case of the *Waste Management Act* [(71) -- 71. . Waste Management Act, s.34(14).], and two years in the case of the *Fisheries Act* [(72) -- 72. . Fisheries Act, s.82.]. In the scenario, therefore, the neighbours would not be able to pursue charges under either of these Acts against A, B or C.

Neither of the two Acts provides a mechanism for neighbours to obtain **compensation** for damages caused by pollution. The *Fisheries Act* [(73) -- 73. . Fisheries Act, s.42(3).], however, does provide that commercial fishermen may bring an action for compensation for lost income against a person who violates the Act.

CEPA provides that a person who suffers loss due to a violation of CEPA or regulations under CEPA may bring a civil suit against the offender for damages. This means the plaintiff does not have to rely on the complicated and uncertain common law causes of

action discussed below. But the plaintiff must still prove that the offender's acts **caused** the plaintiff's loss. The usefulness of this CEPA provision is limited at present, however, by the fact that it so far has few regulations in effect.

The B.C. *Environment Management Act* and CEPA each provide various powers to the provincial and federal authorities to take action to deal with environmental emergencies. However, neither of them was drafted from the perspective of dealing comprehensively with toxic contamination of real estate, especially where the contamination is the result of the long-term build-up of pollutants rather than a sudden spill or accident.

"Despite its tremendous importance to our lives, our health, and economy, we have almost recklessly damaged our groundwater."

U.S. Congressman Toby Moffett

To summarize, B.C. environmental legislation provides fairly comprehensive regulation of current activities, although enforcement is the key problem. Federal legislation is less comprehensive and is likewise focused on current activities. Neither level of government has legislation--or regulations--aimed directly at sites contaminated by long-term pollution. Thus, the key legal question of liability for compensation for damages and for the costs of clean-up are left in the main to the common law.

3.3 COMMON LAW LIABILITY: NEIGHBOURS V. LANDOWNER

Where statutes leave off, the common law begins. The common law is judge-made law that has evolved through centuries of legal history beginning in England and continuing in Canada. Given the paucity of B.C. or federal statutory provisions governing liability for compensation and clean-up regarding toxic contamination, the common law is a critically important source of guidance.

The common law allows one person to sue another person for damages if the defendant has committed a **tort** (a `civil wrong'). A new property owner may face tort litigation, even though he or she neither caused the pollution nor even knew of its existence at the time of the sale. In the Blackacre scenario, D's neighbours would use tort law to sue for damages caused by the pollution.

The neighbours have also sued A, B and C, but the common law regarding actions by neighbours against previous owners who initiated pollution that continues to cause problems is a relatively unexplored area and is beyond the scope of this report. The following discussion focuses on the common law actions available to neighbours against the **current** owner of polluting property, in the scenario, D. [(74) -- 74. . For comprehensive reviews of possible tort actions, see J. Fleming, *The Law of Torts*, 7th ed. and A. Linden, *Canadian Tort Law*, 3rd ed., 1982.]

3.3.1 Nuisance

A landowner could face an action in `nuisance' if pollution from his or her land unreasonably interferes with an owner or occupier's enjoyment of his or her property, or if the pollution causes actual damage to the plaintiff's property. A nuisance may be caused, for example, by a leaking underground oil tank, [(75) -- 75. . *Brewer v. Kayes* (1973), 2 O.R. 284.] burning garbage, [(76) -- 76. . *Plater v. Collingwood* (1968), 1 O.R.

81.] or noise pollution. [(77) -- 77. . Banfai v. Formula Fun Centre (1984), 51 O.R. (2d) 361 (H. Ct.)]

Where a landowner was not aware of the pollution or the damage being caused to others at the time of purchase, he or she will become liable for the nuisance if he or she **adopts** the nuisance by failing to take reasonable means to prevent the pollution. Thus, even if D was unaware of the pollution problem when he bought the property, he would have been liable for the nuisance if he had failed to take reasonable steps in response to complaints by his neighbours.

3.3.2 Negligence

If a landowner or occupier manages a pollution problem in a manner which is below a reasonable standard in a situation where damage is reasonably foreseeable, then that landowner or occupier may become liable under the law of negligence. Although under this tort he or she does not have to prevent absolutely the discharge of any pollutants, he or she must employ reasonable methods to deal with the problem. Moreover, a current owner must use reasonable care even though the former owner was careless. Courts have imposed liability in negligence where defendants failed to prevent pesticides from drifting onto neighbouring land, [(78) -- 78. . Bridges Bros. Ltd. v. Forest Protection Ltd. (1976), 72 D.L.R. (3rd) 335 (N.B.Q.B.)] buried garbage without due regard for its effects on a neighbour's enjoyment of his or her land, [(79) -- 79. . Gertsen v. Metropolitan Toronto and Borough of York (1973), 2 O.R. (2d) 1 (H.Ct.)] and allowed leaks from pipes or tanks to enter neighbouring subsurface soil. [(80) -- 80. . Beaulieu v. Riviere Verte (1970), 13 D.L.R. (3d) 110 (N.B.C.A.)]

3.3.3 Strict Liability (Rylands v. Fletcher)

"It is not possible to have a sound economy without a healthy environment."

Tom McMillan, former federal Minister of Environment

This cause of action originated with the case of *Rylands v. Fletcher*. [(81) -- 81. . (1868), 3 L.R. 330 (H.L.)] In that case water escaped from a holding facility and flooded a neighbouring mine. This cause of action is called a 'strict liability' tort, in the sense that the polluter cannot use as a defence the fact that precautions were taken. Liability here depends not on carelessness but on mere proof of **damage** as a result of the escape of a dangerous substance. The initial presence of the substance must have constituted a non-natural use of the land.

3.3.4 Riparian Rights

A purchaser of land which borders on a watercourse should be aware of the common law rights of downstream users. The owner of land abutting a watercourse has a right to the continued flow of the water in its natural quantity and quality, subject to the ordinary reasonable use of the upper riparian owners. [(82) -- 82. . See Scarborough Golf and Country Club v. City of Scarborough (1987), 55 O.R. (2d) 193 (H.Ct.)] For example, in the scenario, at common law a downstream brewery or other water user relying on clean water could sue A, B, C, or D. The purchaser must therefore investigate whether the subject property is adversely affecting a downstream riparian owner. Note, however, that the *Water Act* [(83) -- 83. . RSBC 1979, c. 429.] and licenses issued under it, may have substantially modified the common law of riparian rights, a subject which is beyond the scope of this report.

3.3.5 Defence of Statutory Authority in Tort Actions

Where the government gives statutorily-based approval for activities that cause pollution, a landowner can use this approval as a defence in a tort action. In the Blackacre scenario, if the neighbours sued C in tort, C could argue that his pollution permit constituted a defence to a tort action. Whether the court would agree depends on the facts. The defence would not apply, though, where C's activities exceeded his permit.

3.3.6 The Limits of Tort Law

The principles of tort law do apply to environmental problems, and thus give pollution victims a considerable legal basis for suing past and present owners of polluting land. Would-be plaintiffs should, however, recognize the inherent limitations of tort law. One significant limitation arises from tort law's requirement that the plaintiff show that pollution from the defendant's activities or property **caused** the damage. Causation can be very difficult to establish, especially where, as in the scenario, pollutants from one source may mix with pollution from other sources, and injurious effects may not appear for many years. In addition, there may be a lack of scientific consensus on the toxic effects of certain substances (a problem noted above in Chapter 2). These factors may hamper the plaintiff's ability to prove his or her case 'on the balance of probabilities' (the standard of proof in civil actions). Also, litigation involving complex scientific questions is very lengthy and expensive, so a plaintiff may be reluctant to initiate such a suit even if he or she has a meritorious case.

3.3.7 The Insurers' Response to Toxic Torts

In the 1960s and 1970s, the common practice of industries such as B and C in the scenario was to purchase "comprehensive general liability" (CGL) insurance. This has triggered a great deal of litigation, especially in the U.S., over whether these standard CGL policies cover environmental clean-up costs. Some insurers now offer "environmental impact coverage" insurance, at rates reflecting the high damages which could arise from environmental problems. But even this coverage is difficult to obtain, because insurers are so wary of the potentially enormous costs of environmental damages.

3.4 The Real Estate Transaction: Who is Liable For Toxic Real Estate?

"The buck stops here."

U.S. President Harry Truman

It was noted above that, a wide range of parties could be liable under statute or tort law for damages from pollution or for actual clean-up. Another arena of liability is the real estate transaction, where the main players are the vendor and purchaser and their advisors, namely realtors, environmental auditors, assessors, and lawyers.

3.4.1 The *Caveat Emptor* Rule

The traditional legal basis for most real estate transactions is the *caveat emptor*--or buyer beware--rule. [(84) -- 84. . Under the caveat emptor rule, there is no implied warranty that the purchased property will be free of defects or that the land can be used for any

particular purpose. Nor does the vendor have to disclose all defects. In the leading case Sutton v. Temple (1843), 152 E.R. 1008 (H.L.), the purchaser sued the vendor after the agreement when his cattle began to die from the poisonous effects of paint mixed into the manure heap by a previous vendor. The Court held that the vendor was not liable.] There are important exceptions to *caveat emptor* (discussed in 3.4.2 below), but the general effect of this rule is that the purchaser must be wary of buying property having on it undisclosed PCBs, asbestos, underground storage tanks, or other toxic materials.

A prudent purchaser therefore ought to take steps to protect against incurring costs for environmental clean-up. For example:

1. **Investigation** A purchaser could make completion of the transaction conditional upon an investigation to find out what toxic materials, if any, are on the subject property. An environmental audit would disclose the nature of the contamination and an understanding of the attendant risks, as discussed in 3.6 below.

2. **Assurances** A prudent purchaser could include in the purchase agreement express assurances from the vendor that there are no toxic materials on the subject property. At present in B.C., the commonly-used standard form agreement of purchase and sale contains a warranty from the vendor that the subject house does not contain urea formaldehyde foam insulation (UFFI) [(85) -- 85. . A case illustrating the importance of a UFFI clause is De Michelle v. Peterkin (1985), 37 R.P.R. 173 (Ont.H.C.)]. But it does not contain any provisions covering other environmental problems. While this standard form is primarily used for residential transactions, it is not uncommon for vendors and purchasers to use it for commercial transactions as well.

Obtaining express assurances from the vendor may be difficult. A vendor understandably may be reluctant to take on added liability by including warranties about the property. Case law suggests that the vendor's warranty must specifically refer to a particular substance if the purchaser is to be protected. In Jonert v. Rothmans [(86) -- 86. . Unreported decision of the Ontario High Court, May 12, 1989; under appeal. The court also found that the vendor had repudiated the contract.], the vendor warranted that there was no asbestos on the property. After the interim agreement was signed but before the closing, the purchaser discovered not only asbestos, **but also PCBs**, on the property and insisted that both be removed. The court held that the purchaser's insistence on removing the PCBs in the absence of an express warranty respecting PCBs represented an unfounded repudiation of the contract. [(87) -- 87. . See also Scott-Poulson v. Hope (1958), 25 W.W.R. 427 (B.C.) which points out the dangers of general language. The vendor warranted that the house was "well insulated". After the closing, the purchasers discovered difficulties in warming the house and extensive moth infestation in the walls. The vendor was unaware of the moth infestation at the time of the sale. The court held that, there being no fraud and no defect respecting good title, the purchaser would have to rely on an express or implied warranty that the property should have the quality in which it was deficient, i.e., that it not have moth infestation. The court also held that even though the purchasers were forced to leave their home on account of the moth problem, there is no implied warranty that a residential property be fit for human habitation. These facts differ from those in Rowley v. Isley (1951), 3 D.L.R. 766 (B.C.) where the vendor knew about but failed to disclose infestation by cockroaches. In this case, the important difference was that the vendor knew but did not disclose the infestation problem. The court found a failure in the duty to disclose.]

"When you destroy a blade of grass, you poison England at her roots."

Gordon Bottomley

The purchaser also could receive little comfort from a warranty stating that "no toxic substances or contamination exist". Any purchaser attempting to rely on such a warranty after discovering what was believed to be 'toxic substances or contamination' would face the difficult evidentiary task of proving in court that toxicity or contamination actually exists. As discussed in Chapter 2, considerable uncertainty exists regarding the exact toxic effects of particular substances. Even more uncertainty exists regarding the long-term and possible synergistic effects of toxic substances. In any case, a vendor would likely be very reluctant to give a blanket warranty that no toxic problems exist, especially if the vendor has owned the property only for a short period of time and does not know the full history of the site. [(88) -- 88. . See M. Hardin and J. Edwards, "Business Transactions: Environmental Law Problems and Possible Solutions", Chapter V in Environmental Law and Practice Volume II, the Canadian Institute, 1988, for a review of the important considerations of setting out warranties and indemnifications.]

3.4.2 Relief for the Purchaser

While the general rule is *caveat emptor*, the law incorporates certain exceptions which may provide relief to purchasers of toxic real estate. [(89) -- 89. . See Redican v. Nesbitt, (1924) S.C.R. 135 at pp. 144-7: although caveat emptor generally applies, the "vendee may rely after completion upon warranty, contractual condition, error in substantialibus, or fraud."] Relief, for example, may be available in the following circumstances:

1. **Fraud** Fraud includes concealment or fraudulent misrepresentation of a latent defect. [(90) -- 90. . See E.A. Suderman, "Fraud", Real Estate Litigation--1987, Continuing Legal Education Society of British Columbia, 1987.] Numerous cases illustrate situations where vendors or their agents resorted to fraud in an attempt to avoid the high costs of environmental clean-up. [(91) -- 91. . See Sevidal v. Chopra (1987), 64 O.R. (2nd) 169 (H.Ct.) (the 'McClure subdivision' case) and McGrath v. MacLean (1979), 95 D.L.R. (3d) 144, at 152 (Ont. C.A.). A B.C. case which illustrates both fraud and in substantialibus is C.R.F. Holdings Ltd. v. Fundy Chemical International Ltd. (1983), 21 B.C.L.R. 345; aff'd 39 B.C.L.R. 43 (C.A.). The vendor was aware that certain commercial property contained a radioactive contamination, yet he advised the purchaser in a conversation that the property had "excellent fill" without telling him of the contamination. The court held the vendor liable in deceit and misrepresentation on the basis that the circumstances gave rise to a duty to disclose the fact of the contamination to any subsequent purchaser. This case was distinguished from Sorenson v. Kaye Holdings Ltd. (1979), 14 B.C.L.R. 204 (C.A.), where the vendor had told the purchaser in general terms about a problem relating to a swimming pool: while stated in general terms, this information was sufficient to enable the vendors to assess their legal position.]

2. **Error 'in substantialibus'** This involves a material problem which is not evident at the time of the sale but which fundamentally alters the nature of the bargain. In these cases, there is an innocent misrepresentation or a mutual mistake about some fundamental aspect of the contract and, accordingly, the purchaser may **rescind** the transaction and have the purchase monies returned, notwithstanding *caveat emptor*. [(92) -- 92. . Alessio v. Jovica (1973), 42 D.L.R. (3d) 242 (Alta. C.A.); Groneau v. Schlamp Investments Ltd. (1974), 52 D.L.R. (3d) 631 (Man. Q.B.); Mann v. Raiton Holdings Ltd., (1984), 3 W.W.R. 42 (B.C.).] However, if the defects are not material, the vendor generally has no duty to disclose them. A recent case stated that the test to be applied is whether the purchaser is faced with having to accept property which is '**materially different**' from that bargained for, and that the purchaser was induced to make the deal on the basis of the material representation. [(93) -- 93. . Stieglitz and Prestolite Battery Division v. Eltra of Canada Ltd. et al (1980), 119 D.L.R. (3d) 672 (Ont. H.C.).] A classic example of a material defect is radioactive soil. [(94) -- 94. . C.R.F. Holdings Ltd. and McGrath v. MacLean at p. 152, supra, note 35.]

There does not have to be a total failure of consideration to trigger the *in substantialibus* doctrine. [(95) -- 95. . Hyrsky v. Smith (1969), 5 D.L.R. 385 (Ont. H.C.). This case cautioned, however, that there are strong policy consideration against unsettling executed coveyances, especially where the purchaser had ample opportunity to search the vendor's title to the entire parcel and neglected to do so, but these considerations must yield to the desirability of doing equity where there has been error in substantialibus.] Presumably, to be able to rescind the contract the plaintiff purchaser would have to suffer substantial damages, but not necessarily to the extent of losing everything bargained for in the agreement.

Since the doctrine of *in substantialibus* depends so heavily on the facts of each case, it is difficult to specify with any precision when the doctrine is triggered. The vendor, therefore, must tread a fine line. Although the vendor may not wish to undermine the financial value of the subject property by disclosing all defects, the vendor still must be careful to disclose information that could result in rescission of the agreement under *in substantialibus*.

"There is a considerable investigation going into...the question of what sort of law you put into place when you are tracing back--who built the barrel, who had the stuff in the first place"

B.C. Environment Minister Bruce Strachan

The *caveat emptor* rule has been criticized where builder-vendors escape liability for defects in new homes. [(96) -- 96. . See DiCasti, The Law of Vendor and Purchaser, chapter 7, paragraph 241.] In B.C., some residential builders voluntarily offer a limited warranty plan covering defects up to \$3,000 in value, which partially offsets the *caveat emptor* rule. [(97) -- 97. . New Home Warranty Program of British Columbia and the Yukon, "Schedule A", Rev.07/88.] Other jurisdictions such as Ontario have mandatory new home warranty plans which effectively reverse the *caveat emptor* rule. [(98) -- 98. . New Home Warranties Plan Act, R.S.O. 1980, c.350.]

Another difficulty arises from the fact that the vendor may, quite naturally, fear that if he or she does carry out an investigation, it might reveal a `material defect' and thereby trigger a duty to disclose that defect. Vendors will be very reluctant to do any research on their property. The perverse effect, therefore, is that the party who generally is in the best position to determine the presence of toxic materials--the owner--is discouraged from carrying out this research. The *caveat emptor* rule, therefore, contributes to the problem of scarce information about toxic real estate.

3.4.3 Liability of Real Estate Agents

In litigation respecting real estate transactions, the liability of the **realtor** is usually based on the **contractual** relationship between the realtor and the client, or on the **tort** of negligent misrepresentation (also known as the *Hedley Byrne* principle). [(99) -- 99. . Hedley Bryne v. Heller, (1963), All E.R. 575 (H.L.).]

3.4.3.1 The Principal-Agent Contract

In addition to the express and implied terms of a **contract** between a realtor and the realtor's principal (usually the vendor), the relationship imposes a **fiduciary** duty on the realtor. Essentially, the realtor has the duty to disclose all material facts to the principal. The exact nature of the fiduciary duty varies with the circumstances, but in the context of

toxic real estate transactions, it is important to note the duty to convey to the principal any information which might materially influence the principal's judgment. [(100) -- 100. . Wood v. St. Jules (1976), 69 D.L.R. (3d) 481 (Ont. C.A.).]

3.4.3.2 The Realtor's Representations (the Hedley Byrne Principle)

The realtor, although usually acting for the vendor, has a key role in providing information and professional opinions to the public, especially to the purchaser. The tort of **negligent misrepresentation** imposes a duty on the realtor to act honestly and exercise reasonable care and skill when providing information and opinions which reasonably might be relied upon by third parties to their detriment. These third parties might not even be known to the realtor (for instance, a lender may rely on information given to the purchaser). [(101) -- 101. . This duty is reflected in the Canadian Real Estate Association Code of Ethics Article 3 which states "The Member has an obligation to discover facts pertaining to every property for which he accepts an agency which a reasonably prudent realtor would discover so that he may fulfill his obligation to avoid error, misrepresentation, or concealment of pertinent facts". There are numerous texts on duties of realtors. For example, see Di Castri, Law of Vendor and Purchaser (3rd), chapter 7 and P. Watt, Real Estate Practitioners Guide (1986), chapter 7.]

If a real estate transaction 'goes sour', an unwitting purchaser of property containing toxic materials may seek a remedy from the **realtor** who provided the purchaser with information about the quality or value of the subject property. In the Blackacre scenario, the purchaser D might allege that the realtor breached his or her professional duty of care in failing to describe the true nature of the subject property.

"It's an area of law that we want to canvass and that we are going to have to adopt policy on..."

B.C. Environment Minister Bruce Strachan

The question of **realtor** liability under the *Hedley-Byrne* principle becomes especially important if the **vendor** is successful in defending an action in negligent misrepresentation. [(102) -- 102. . The vendor will normally argue, as a defence in toxic real estate litigation, either that caveat emptor applies or that the agent acted without authority when giving the information to the purchaser or other third party.] A realtor should exercise care to avoid the following pitfalls:

1. The realtor for the vendor might **innocently misrepresent** the environmental quality of the subject property. The realtor may lack the professional training to understand certain technical concepts, or the realtor may convey information in such a way which might be misinterpreted by others.
2. The realtor's actions may amount to **turning a blind eye** to a possible problem. The realtor would probably be held to have made a false representation where he "deliberately shuts his eyes to the facts, purposely abstains from investigation or consciously lacks sufficient information to support an affirmation couched in positive and unqualified form..." [(103) -- 103. . Fleming, The Law of Torts, 6th edition, p.598.]
3. The realtor might **fail to verify** any information about which he or she has any doubt. The realtor may be subject to liability if he or she innocently repeats the client's false statement and makes no reasonable effort to verify the pertinent facts.

3.4.3.3 The Realtor's Liability for Fraud

The realtor must also take care not to make representations about the subject property that amount to **fraud**. Some important principles respecting fraud are:

(a) the agent is personally liable for his or her fraud; [(104) -- 104. . Parna v. G. & S. Properties Ltd. (1968), 15 D.L.R. (3d) 336 (S.C.C).]

(b) the agent is not liable for the fraud of the principal *per se*; [(105) -- 105. . Reichl v. Rutherford-McRae Ltd (1965), 51 D.L.R. (2d) 332 (B.C.).] and,

(c) where it is reasonable to do so, the agent can rely on the statement of the principal, but where the realtor acts both as the listing agent and for the purchaser, the realtor takes on the higher duty of checking the accuracy of the information supplied by the vendor. [(106) -- 106. . Sedgemore v. Block Bros. Realty Ltd. (1985), 39 R.P.R. 38 (B.C.).]

3.4.4 Liability of Other Professionals

The *Hedley Byrne* principle applies equally to other professional advisors. The following are some other parties to whom the purchaser typically might look to share or offset the costs associated with unwittingly purchasing real estate contaminated with toxic materials:

1. **Lawyers** may be held liable if they misstate the legal status or other qualities of the subject property, for example, in connection with searches regarding regulatory compliance of the property. In addition, if a lawyer retains an environmental consultant to conduct an environmental audit on the property and if the audit is negligently prepared and relied on, the lawyer may be liable. Indeed, the 'deep pockets' of the lawyer's insurance fund will likely be very attractive if the environmental consultant is underinsured.

2. **Environmental consultants** may be held liable if they provide inaccurate information or reach incorrect conclusions in connection with an environmental audit.

3. **Land assessors** may be held liable if they do not accurately estimate the effect of toxic substances on the value of real estate in circumstances where this information should be known to them. [(107) -- 107. . Roberts v. Montex Dev. Corp. (1983), 100 D.L.R. (3d) 660; Esselmont v. Harker (1979), 14 B.C.L.R. 116 (S.C.); Raylon Investments Ltd. v. Bear Realty Ltd. (1981), 20 R.P.R. 288 (B.C.).]

3.5 MUNICIPAL LIABILITY

Municipalities are subject to broad liability related to toxic contamination of real estate. [(108) -- 108. . Municipalities already are often defendants in tort actions respecting environmental problems (e.g. nuisance, negligence, riparian rights arising out of their management of public dump sites, etc.).] There are two main areas: how municipalities disclose information in their possession concerning toxic substances and how they regulate land use.

3.5.1 Liability for Municipal Disclosure of Information

B.C. legislation generally does not impose a duty on municipalities to disclose information. [(109) -- 109. . Unlike Ontario's Municipal Act s. 78(1), which states that any person may inspect records or documents in possession of the municipal clerk, subject to certain exceptions (e.g. inter-departmental memos and communication with lawyers).] Recent judicial decisions, however, have supported increased public access to information in the possession of municipalities. If the municipality is **negligent** in disclosing information, or in omitting to disclose information in its possession, it may be found to be liable to the persons relying on the information. A good example is the recent case of *Hartnett v. Wailea Construction et al.*, [(110) -- 110. . Unreported Decision of the Supreme Court of British Columbia, March 22, 1989.] where the municipality of Delta was found to have a duty to disclose information in its possession, even if the information was not readily accessible for public distribution. In this case the information was the subject of an internal memorandum which would have had a bearing on the requesting person's decision on whether he should develop a particular piece of land.

There is no substance which, under certain circumstances, could not be dangerous and unsafe. There is no battery of tests, however elaborate, which can prove beyond challenge the complete safety of a chemical."

U.S. National Academy of Sciences

The courts will also order a municipality to disclose information when it is in the interests of **procedural** fairness to do so. This may arise in the context of a public meeting or hearing where a municipal council fails to disclose information in its possession. If this information is to be considered when accepting recommendations respecting a subject property, the objective of the public meeting may be frustrated and may be tantamount to a denial of the opportunity to be heard. [(111) -- 111. . Karamanian v. Richmond (1982), 38 B.C.L.R. 106 (S.C.).]

The *Hartnett* and other decisions illustrate the need for municipalities to carefully review their policy and activities respecting disclosure of information. For example, municipalities need to consider what types of information members of the public might normally request, review what is in the files (even going back decades), and educate staff on how to obtain and distribute the requested information.

Municipalities may, however, fear that liability arising from their disclosure policies is too difficult to predict. After all, municipalities have accumulated reams of information over the decades, and may not even know what they have in their files. They may be concerned that an 'information policy' cannot possibly address all possible requests for information which may pertain to the toxic contamination of lands within their boundaries. Municipalities might view an information policy as a magnet for liability. In any case, there is a need to clarify, particularly by legislation, the duties of municipalities in disclosing information to citizens.

3.5.2 Municipal Liability for Land Use Regulation

Municipalities have a wide statutory discretion to consider environmental criteria when reviewing subdivision, zoning and development permit applications. [(112) -- 112. . E.g. Land Title Act, RSBC 1979, c. 219; Municipal Act, RSBC 1979, c.290.] While these criteria do not expressly refer to problems concerning toxic contamination of land, a municipality may be liable to a developer (and likely a subsequent purchaser) if it negligently approves a subdivision plan or zoning proposal, and contaminated lands later cause damage to the purchaser.

Municipalities, in fact, recognize the potentially high cost of liability concerning real estate contaminated with toxic materials. The City of Vancouver, for example, provides would-be developers with an Administration Bulletin stating that

"The City of Vancouver **undertakes no responsibility** for advising applicants as to the condition of soils or construction materials present on any site. Authority for assessing potential hazards associated with soil contamination lies with the Provincial Ministry of Environment." (emphasis added) [(113) -- 113. . City of Vancouver Planning Department, Administration Bulletin, May 16, 1989.]

Other municipalities adopt similar positions. As a matter of practice, many municipalities will not approve a development application until they have received input from the Ministry of the Environment. [(114) -- 114. . As a result of this practice, the Waste Management Branch of the Ministry of Environment is becoming very busy reviewing referrals from municipalities. When dealing with referrals, the Branch's usual process is to insist that the would-be developer retain a consultant to prepare a report covering the investigation of the site. Where, in the opinion of Branch staff a remedial plan is needed, it is requested, and then reviewed with the standards which apply to the Expo site (the "Pacific Place Standards") and applicable Special Waste Regulations (pers. comm., with J. Wiens, Waste Management Branch, September 7, 1989). The Branch reviews the developer's report and advises the municipality as to whether the development proposal meets the standards and applicable regulations. The Branch does not provide a 'certificate' or other such notice that the site is 'clean'. The Waste Management Branch is, in many cases, working without statutorily-based standards. In those cases, it is not carrying out a formal regulatory function.]

The municipal practice of referring applications to the Waste Management Branch reflects, in part, an attempt to deflect liability. Whether this strategy shields the municipalities from liability is unclear. It seems logical that the 'toxic land problem' needs to be addressed by both municipal and provincial regulation, with municipalities regulating land use and the province regulating pollution. In any case, there is little doubt that the municipal and provincial responsibilities for dealing with contaminated land need to be clarified by legislation.

3.6 Environmental Audits in Real Estate Transactions

Environmental audits can reduce, to some degree, the **uncertainty** of purchasing or developing land which may be contaminated. An environmental audit assesses environmental risks such as the presence of asbestos, leaking underground storage tanks, hazardous chemicals, buried waste, and PCBs. It can range from a cursory site inspection to an elaborate sampling and laboratory testing program and preparation of a remediation plan.

"Delays have dangerous ends."

William Shakespeare, King Henry VI

An environmental audit can be used by either or both the purchaser and the vendor as a basis for developing their respective business strategies, and to protect themselves against future liability. [(115) -- 115. . See, for example, M. Hardin and J. Edwards, "Business Transactions: Environmental Law Problems and Possible Solutions", Environmental Law and Practice, The Canadian Institute, 1988, ch. 1.] Prudent lenders no doubt will also recognise the importance of environmental audits.

The purchaser, for example, could use an environmental audit to determine what types of **warranties** should be negotiated with the vendor. An environmental audit could also assist the purchaser in obtaining financing, since lenders are increasingly concerned about environmental liability. A prudent purchaser should also consider including in the purchase agreement the right of access to a corporate vendor's business records, the right to enter the property for testing purposes, and the right to terminate the transaction should significant toxic substances be found.

Likewise, the **vendor** could use an environmental audit as the basis for negotiating a monetary limit on the vendor's liability for future clean-up costs. Environmental audits could also be useful in resolving disputes between the vendor and purchaser over whether or not contamination occurred before or after the sale.

Chapter 4 - UNFUNDED LIABILITY: SOME APPROACHES IN OTHER JURISDICTIONS

Both the B.C. government and the federal Canadian government have a wide range of legislative provisions that could be used to authorize government action in relation to various aspects of the problem of toxic contamination of land. But neither government has utilized existing statutory powers to implement a comprehensive program aimed at the problem. And, as was discussed in the previous chapter, neither government has thus far enacted comprehensive legislation to specifically tackle this complex problem.

Key issues in this area, especially the assignment of liability for clean-up costs, will be resolved either by litigation or law reform. Litigation, however, is time consuming and expensive. Moreover, because the courts are required to limit themselves to resolving the dispute between the parties before the court according to existing common law and statutory rules, the outcome may be less than satisfactory from a public policy perspective. Thus, it seems clear that law reform in this area is inevitable and desirable. As a first step toward such law reform in B.C., this chapter presents some [(116) -- 116. . A comprehensive review and comparative analysis of the law in other jurisdictions is beyond the scope of this work.] of the alternative approaches that are emerging in the U.S. and other Canadian provinces.

4.1 UNITED STATES -- FEDERAL

A 1979 study estimated that there were 30,000 to 50,000 abandoned hazardous waste sites in the U.S. and that 1,200 to 2,000 posed as substantial a health and environmental risk as did the Love Canal site. [(117) -- 117. .G. Thompson, "Environmental Liability: The Growing Risks for Lenders, Receivers and Trustees", *Insight*, March, 1989, pp. 5-6.] In response, in 1980 the U.S. federal government enacted the *Comprehensive Environmental Response, Compensation and Liability Act* [(118) -- 118. .42 U.S.C. ss. 9601-9657.] (CERCLA or Superfund). During the following years, many state governments adopted legislation that both complements and expands the federal Superfund law.

CERCLA is what its title indicates: a comprehensive response mechanism for everything from spills of toxic substances to long-term problems arising from hazardous waste sites.

[(119) -- 119. . Thompson, supra, note 2, at p. 4.] CERCLA provides for identifying and prioritizing hazardous waste sites throughout the U.S. (the National Priorities List--NPL).

Under CERCLA, a tax on industry was established that created a "Superfund" to pay for the decontamination of the identified NPL sites. Where there is an actual or threatened release of a contaminant that would be a public health danger, the federal government is empowered to use this fund to clean up the site and to seek compensation later.

"Liability for [Superfund] hazardous waste cleanups, like the flu, eventually seems to get around to everyone with any contact with the infected site."

Phillip Reed

CERCLA provides that compensation to the Superfund for the costs of clean-up may be obtained from any of the following parties:

- present and past owners of the site;
- operators of the site, including receivers in bankruptcy, mortgage holders and trustees (in some cases, those who acquire title through foreclosure may be liable even though they have not operated the site);
- the generators of waste present at the site; or
- transportation companies that delivered waste to the disposal site. [(120) -- 120. . For reviews of CERCLA, see C.S. Sandborn, "The Polluter Pay Principle Hits Adolescence: Statutory Trends in the Liability to Compensate", in Environmental Liability and Hazardous Waste Management, Continuing Legal Education Society of B.C., April, 1989, and G. Thompson, supra, note 2.

]

The liability imposed on each of these parties is "joint and several", that is, each party who is liable must pay the entire cost if other liable parties lack funds to pay their share. The cost of cleaning up an average site is expected to be between \$30 million and \$56 million (U.S.), following a 1986 amendment to CERCLA [(121) -- 121. . Superfund Amendments and Reauthorization ACT (SARA) 101(35)(A) 42 U.S.C. 9601(35)(A)(Supp IV, 1986).], which had the effect of boosting clean-up costs. [(122) -- 122. . Thompson, supra, note 2, at p. 6.]

"...we are looking at this whole issue of trace-back liability. It's an issue that has been looked at not just in this jurisdiction but in every jurisdiction as we get into more environmental protection enforcement: who's guilty; who's the polluter; how far back you go; and what's an orphan and what's not an orphan. It's a very intriguing study, to say the least."

B.C. Environment Minister Bruce Strachan

U.S. courts have held that liability under CERCLA can be imposed against a person or corporation without proof that the person or corporation was culpable or at fault. In other words, the courts have found that liability is 'strict'. This is equivalent to 'absolute liability' in Canadian law, that is, it is generally not a defence to have used 'due diligence' to prevent the problem from occurring. [(123) -- 123. . Thompson, supra, note 2, at p. 7.] Also, under CERCLA, liability can be imposed 'retroactively', for instance, against a party whose activity in relation to the contaminated site occurred prior to the enactment of CERCLA. In addition, a party can be found liable for the cost of cleaning up

hazardous materials that were not known to be hazardous at the time they were dealt with by the party. [(124) -- 124. . J. Lyons, "Deep Pockets and CERCLA: Should Superfund Liability be Abolished?", 6 Stanford Environmental Law Journal 271, at pp. 287-88.]

In reaction to some well-publicized cases that appeared patently unfair to purchasers of property, there has been some enlargement of the original 1980 statutory defences in CERCLA. An example is a defence for an "innocent purchaser" [(125) -- 125. . E.A. Glass, "Superfund and SARA: Are There Any Defenses Left?", 1988 Harvard Environmental Law Review, 385, at p. 396.] introduced in 1986. However, a defendant must meet a very high standard to establish this defence:

A defendant must demonstrate that prior to purchase, he or she diligently inspected the land and found no evidence that waste was contained thereon. In considering the diligence of a defendant's inspection, (the amendment) authorizes the courts to consider the defendant's particular knowledge and skill. Therefore, if an owner unwittingly purchased a CERCLA site but did not diligently investigate prior to his purchase, the owner is likely to be held liable under the Act. [(126) -- 126. . Ibid.]

The unequivocal principle that the polluter should pay for present and past misdeeds is the central policy behind CERCLA. This has led to the charge that the net of liability cast by CERCLA is too wide. Critics say CERCLA is more like a 'someone will pay' than a 'polluter will pay' policy, [(127) -- 127. . Ibid.] and that parties with 'deep pockets' are often held responsible for the clean-up costs based more on their ability to pay than on their culpability. On the other hand, supporters of CERCLA argue that such a wide net of liability is necessary in order to prevent responsible parties from escaping liability for their actions, and to ensure that taxpayers are not burdened unnecessarily.

"The people's safety is the highest law."

Ancient Roman legal maxim

CERCLA has also been criticized for the relatively small number of sites on the National Priority List (NPL). By the end of 1988, the U.S. Environmental Protection Agency had entered 1,180 sites on the NPL. At the same time, the agency had listed 425,000 sites that might be in need of clean-up. [(128) -- 128. . R.A. Macfarlane, "Superfund Simplified: What Every Attorney Should Know About Waste", in Hazardous Waste Legislation and Law: Implications for the General Practitioner, Washington State Environmental and Land Use Law Section and Real Property, Probate and Trust Section, 1988, pp. 9-29.] It is partially in response to this restrictive application of CERCLA that many states have enacted parallel legislation.

4.2 U.S. STATES

On the whole, these state statutes have provisions similar to CERCLA with regard to the parties affected and the liability imposed. In addition, they often reflect local concerns arising from the particular form of industrial development that the state has undergone. Some of them go further than CERCLA in an effort to force the clean-up of sites that are not currently a danger but could conceivably become a threat due to some factor such as a change in the use of the land.

One approach is New Jersey's Environmental Clean Up Responsibility Act, [(129) -- 129. . New Jersey Statutes, Title 13, Ch. 1K.] which came into force in 1983. This law requires that prior to the sale of industrial land or the closing of a business the vendor or

owner of the business must assure the state's Department of Environmental Protection that there has been no release of a hazardous substance on the site. If contamination has occurred, an approved remediation program must be undertaken prior to the sale or closing of the business. It has been estimated that up to 16,000 sites in New Jersey would require such approval. Legislation similar to New Jersey's has been adopted in many of the industrial northeastern states. [(130) -- 130. . W. Glenn, D. Shier, K. Sisson and J. Willms, Toxic Real Estate Manual, Don Mills: Corpus Information Services, 1988, at p. 7.]

A less onerous variation of the New Jersey model was adopted in California and Washington. [(131) -- 131. . W.E. Koons, "The Impact of Superfund Laws on Real Property Transactions", in Hazardous Waste Legislation and Law: Implications for the General Practitioner, Washington State Environmental and Land Use Law Section and Real Property, Probate and Trust Section, 1988, at pp. 9-11.] It simply requires a vendor to disclose to a buyer information regarding any known toxic substances on the subject property. The practical effect of this provision is to 'factor in' the cost of clean-up, or a portion of it, into the market value of a property.

While the California and Washington disclosure provisions are less onerous on the vendor than is the New Jersey legislation, they do not by themselves force the clean-up of contaminated property. In Washington, however, this deficiency is corrected by a state equivalent to the federal Superfund legislation. This statute authorizes the state to initiate clean-up of contaminated sites and to seek compensation from the same broad range of parties as is provided for under CERCLA. [(132) -- 132. . Ibid.]

4.3 QUEBEC

Recent events in Quebec surrounding the disposal of the PCB wastes from the August, 1988, fire at St. Basile le Grand have proven a major embarrassment for that province.

It might appear from that and the more recent incident of lead contamination at St. Jean [(133) -- 133. . "600 in town to get tests for lead", Globe and Mail, Aug. 29, 1989, at p. 1.], that Quebec has lagged behind the other provinces on environmental issues. But, on one issue, Quebec has been the first province to take action. Quebec is alone among the provinces in having adopted a clearly articulated policy designed to respond to the problems presented by the changes in the use of long-term contaminated sites.

Under the Contaminated Sites Rehabilitation Policy, [(134) -- 134. . Contaminated Sites Rehabilitation Policy, Quebec Ministere de l'Environnement, Sainte-Foy, 1988. This document, available from the Quebec MOE, provides an overview for members of the public as well as those with specific interests such as developers. Other publications, also available from MOE on request, outline more technical aspects of the policy: e.g., "Standard Guide to the Characterization of Contaminated Sites" (environmental audit or assessment) and "Technical Guide to the Implementation of Control Techniques During the Excavation of Contaminated Sites".] announced in March, 1988, the Quebec Ministere de l'Environnement (MOE) circulates to all municipalities a list of activities that may have resulted in a site becoming contaminated. When a developer, who may or may not be a new purchaser, applies to a municipality for a permit in relation to lands that have been used in the past for one of the activities on the MOE list, the municipality, before giving consideration to the application, directs the developer to the MOE. The policy also imposes a duty on the developer to 'disclose' to the municipality any past activity that may have resulted in contamination.

"The operations of this company were designed solely to secure a maximum profit with a minimum of expense with absolutely no regard to existing laws and regulations."

Quebec Fire Commissioner Cyrille Delage, in his report on the St. Basile PCB fire

The developer must then work out a plan, agreeable to the MOE, for assessment and, if necessary, treatment of the subject lands. The intended use of the site is taken into account in deciding what sort of treatment is required. When the MOE is satisfied with the decontamination plan, it provides the developer with a 'notice' for the developer to present to the municipality along with the development application. MOE inspectors monitor the decontamination procedure to ensure that the agreed upon plan is followed.

Under the Quebec policy, the costs for assessment and remediation are borne by the developer. At the point in time when this policy was introduced, it had a harsh impact on those who had recently purchased property with a view to development. Almost immediately, however, the costs of a potential clean-up would have been reflected in the purchase price of contaminated lands, which would probably result in the costs of remediation being shared by the seller and the buyer.

One criticism of the Quebec policy is that it has very limited 'retrospective' application. A polluter who sold his or her property prior to the time the policy took effect is not held liable for remediation costs under the policy.

The Quebec Contaminated Sites Rehabilitation Policy requests the general public to inform the MOE if they know of potential hazards resulting from contaminated lands:

A number of concerned parties are in a position to inform the (MOE) of potential hazards related to the contamination of land, especially developers who believe that an ounce of prevention is worth a pound of cure, residents who may be future users or who are aware of contamination, and environmental groups. At various stages of a project proposed by a developer, other concerned parties can inform the department, such as when lots are sold, titles are searched or projects are elaborated. [(135) -- 135. . Ibid., at p. 11.]

"In this area, there cannot be delays nor ambiguity in action because the life and safety of members of the public are at stake."

Fire Commissioner Cyrille Delage

The policy of encouraging citizens to report the existence of contaminated sites assists the MOE in identifying and compiling a list of potentially hazardous sites. But it does not necessarily lead to remediation of the site, unless a development application is being considered. However, the Quebec policy does protect the public from the possible adverse health consequences of living in new housing that has been polluted by contaminated land. This worthwhile policy objective is achieved by focusing on the change from industrial to residential uses of land, characteristic of many areas within Canadian urban centres today. As such, it is a simple solution for one aspect of a complex problem.

The major gap in the Quebec policy, however, is that it does not provide for the clean-up of contaminated sites that are **not** slated for redevelopment. It also appears that the Quebec policy does not specifically address the problem of toxic contamination of a site that has already been redeveloped as a residential project. In addition, it is unclear whether the Quebec policy offers sufficient deterrence to present-day polluters. The costs

of cleaning up a contaminated site and the additional costs of installing new technology to prevent further pollution are potentially enormous. Rather than take these measures, operators of one of the types of facilities on the Quebec list might be tempted to continue to pollute, not clean up the land, and take their 'lumps' on the price of the land upon eventual sale.

4.4 OTHER CANADIAN PROVINCES

Many of the states in the U.S. have altered the traditional "buyer beware" policy by instituting statutory vendor disclosure provisions. These provisions protect a purchaser of land from involuntary exposure to a variety of hazardous or potentially hazardous substances, whether they are on the lands or in materials used in construction of buildings.

Canadian provinces have not yet acted in this area, with three exceptions, all in relation to underground storage tanks. Ontario's Gasoline Handling Act [(136) -- 136. . Gasoline Handling Act of Ontario, R.S.O. 1980, c. 185.] requires a land owner, upon the sale or lease of property, to disclose to a prospective purchaser or lessee the existence of underground storage tanks. The owner must also provide the purchaser or lessee with proof that the tanks are in compliance with certain provisions of the regulations promulgated under the Act. [(137) -- 137. . Glenn, et al. supra, note 15 at p. 39.]

Provisions similar to Ontario's have been adopted by New Brunswick and the Yukon, either by way of statute or regulation. [(138) -- 138. . Ibid.] While underground storage tanks are an undoubted cause of environmental damage, it is remarkable that there are no other circumstances--either 'specific' (e.g., asbestos) or 'general' (e.g., past industrial use)--that have been deemed to warrant statutory disclosure requirements. This failure to require more extensive vendor/lessor disclosure results in greater uncertainty in the real estate industry, and allows potential hazards to human health or the environment to go unremedied.

Chapter 5 - SUMMARY OF ISSUES

The following are key issues that have emerged from the previous chapters. The recommendations that accompany these issues are offered as constructive proposals toward progress on B.C.'s toxic contamination issues and are not intended to be taken as definitive solutions to these problems.

1. TOXIC CONTAMINATION STRATEGY

Issue: The burgeoning problems of toxic contamination in B.C.--including the discovery of contaminated sites, uncertainty in the real estate industry and the need to prevent future contamination--have outpaced the development of government policy.

Recommendation: The B.C. and federal governments should devise a comprehensive strategy--with input from business, academia municipalities and citizens--for preventing **future** toxic contamination problems and dealing fairly and safely with **existing** toxic contamination problems.

2. TOXIC WASTE FACILITIES

Issue: Proper clean-up of contaminated sites--and prevention of on-going contamination--cannot occur without adequate facilities in B.C. for the safe treatment/disposal of the full range of the province's toxic waste.

Recommendation: The B.C. government should accept responsibility for ensuring the development of proper toxic waste facilities in B.C., incorporating full public participation in order to ensure that the siting and operation of these facilities will be fair and safe.

3. TOXIC CONTAMINATION CLEAN-UP

Issue: Neither federal nor provincial statutes are designed to address pollution problems and clean-up issues regarding long-standing contaminated land.

Recommendation: Government, the real estate industry, academia and concerned citizens should consider the merits of the federal and provincial governments adopting a program, incorporating both statutes and regulations, aimed directly at cleaning up land contaminated by long-term pollution, including the following elements:

- (a) identification of contaminated sites and setting priorities for clean-up;
- (b) identification of parties liable for clean-up costs;
- (c) provisions for government to clean up and bill liable parties; and
- (d) creation of a fund to clean up orphan sites (where liable parties do not exist or are unable to fully fund a clean-up).

4. CHOICE OF REGULATORY APPROACHES

Issue: There are four possible focal points for regulatory intervention to require clean-up of contaminated sites:

- (a) the sale of real estate;
- (b) the closure of industrial or commercial operations;
- (c) development of land, especially development involving a change of land use; and
- (d) a phased-in, across-the-board identification and clean-up of contaminated sites.

Recommendation: Since it seems necessary to determine which one or more of these approaches to select, each should be analyzed to determine the expected impact and associated costs to the various parties.

5. VENDOR DISCLOSURE

Issue: At present, there is no specific statutory requirement in B.C. that vendors or lessors disclose information regarding contamination of property to be sold or leased.

Recommendation: Government, the real estate industry, academia and concerned citizens should consider the merits of provincial legislation to require vendors or lessors of real estate to disclose to prospective purchasers, tenants and lenders information regarding **specific** factors such as the existence of underground storage tanks, PCBs or asbestos, and/or **general** factors such as previous uses of the property.

6. DISCLOSURE DURING CHANGES IN LAND USE

Issue: At present in B.C. there are no statutory disclosure requirements with respect to information on toxic contamination of real estate applicable to owners of real property, purchasers, developers, realtors or the various levels of government when a change in land use is planned.

Recommendation: Government, the real estate industry, academia and concerned citizens should consider the merits of provincial legislation regarding toxic contamination information to outline **who** is to disclose **what**, **when**, and **to whom** during the real estate development process when a change in land use is planned.

7. MUNICIPAL INFORMATION

Issue: Municipalities are currently uncertain as to whether to **facilitate** public access to municipal information relevant to possible toxic contamination or to **restrict** public access so as to minimize municipal liability.

Recommendation: There is a need for law reform at the provincial level to clarify municipal duties and liability regarding the provision to citizens of information relevant to possible toxic contamination problems.

8. PLANT CLOSURES

Issue: There are few regulations in B.C. (except regarding mines) to ensure that the **closure** of industrial or commercial operations includes proper clean-up procedures to avoid the problem of the subsequent discovery that the site is contaminated after the responsible parties have left the scene.

Recommendation: Environmental regulation at both the provincial and federal levels should be reviewed with a view toward strengthening the provisions for ensuring that proper clean-up is conducted prior to the closure of industrial, commercial or other operations that may otherwise leave a toxic legacy.

9. LIABILITY OF THE POLLUTER/PREVIOUS OWNER

Issue: Neither statutes nor the common law adequately clarifies whether an owner or occupier of land who causes long-lasting pollution of the land, but later sells or leaves the land, is liable for the subsequent cost of clean-up or compensation to victims. Is it equitable to assign retrospective liability to a person whose conduct was tolerated by the government of the day?

Recommendation: The statutory assignment of retrospective liability to persons whose past acts of pollution are causing current problems is an important subject that warrants further study regarding both legal and practical aspects.

10. ENVIRONMENTAL AUDITS

Issue: Real estate decisions with enormous potential financial consequences are increasingly being based on toxic contamination reports prepared by environmental consultants, most of whom are not licenced or certified as to their area and level of expertise, and many of whom are not fully insured against errors or omissions.

Recommendations: Businesses and individuals and their professional advisors such as realtors and lawyers who rely on environmental consultants' reports *in real estate transactions should ensure that potential liability issues are addressed in the retainer of the consultant. Environmental consultants or subgroups of them should consider discussing (among themselves initially) the formation of appropriate professional associations.*

11. INFORMATION ON TOXIC REAL ESTATE

Issue: There is a serious lack of information about the site-specific details of toxic contamination of real estate in B.C.

Recommendation: *The provincial government should provide leadership in investigating the feasibility of establishing a central data bank or registry of information--perhaps linked to the Land Title Office--pertaining to toxic contamination. The Federal government should do likewise regarding land within its jurisdiction.*

12. CLEAN-UP STANDARDS

Issue: Critical decisions by provincial civil servants regarding the adequacy of plans for clean-up of contaminated sites are currently being based on mere guidelines rather than statutorily authorized regulations.

Recommendation: The government of B.C. should regulate standards for satisfactory clean-up of contaminated sites, following public hearings to receive input on government proposals from concerned citizens, business, academia and municipalities.

13. FEDERAL REGULATION

Issue: Lands covered by federal jurisdiction in B.C.--including airports, armed forces bases and Indian Reserves--have inadequate environmental regulatory structures.

Recommendation: The federal government--in consultation with affected parties such as Indian bands--should carefully examine the adequacy of the current environmental regulatory structure applicable to Indian Reserves and other areas of federal jurisdiction within B.C., with a view toward improvements where necessary.

14. ENFORCEMENT

Issue: Both B.C. and the federal government have mixed records of achieving compliance with their environmental standards.

Recommendation: Both the provincial and federal governments should continue, and strengthen, their current enforcement activities aimed at achieving compliance with their environmental standards.

15. CIVIL DAMAGES

Issue: People who have suffered damages as a result of pollution that is contrary to B.C. laws have difficulty obtaining compensation because litigation is expensive and uncertain.

Recommendation: B.C. legislation should be amended to provide for private civil suits for damages against polluters who have violated provincial environmental standards, comparable to such provisions under the *Canadian Environmental Protection Act*.

APPENDIX A

LIST OF ACTIVITIES LIKELY TO CONTAMINATE SOIL

[(139) -- 139. . Reproduced from Contaminated Sites Rehabilitation Policy, Gouvernement du Quebec, Sainte-Foy, February 1988, at p. 21.]

To identify lots on which the soil is likely to be contaminated, account must be taken of the type of activity carried on there. The following list specifies those activities which warrant special attention.

THE ELIMINATION OF WASTE AND OTHER RESIDUES

- sanitary landfill and disposal of dry materials
- backfilling using industrial residues
- elimination of industrial wastes
- snow removal dumps
- garbage dumps
- disposal of mining residues

INDUSTRIAL AND COMMERCIAL ACTIVITIES

- chemical and petrochemical industry
- pharmaceutical industry
- pesticide industry
- paint and lacquer industry
- metallurgical industry
- electrotechnical industry
- galvanizing industry
- foundries
- wood preservation industry
- tanneries

- naval shipyards
- textile industry
- coking plant (plant manufacturing artificial gas using coal tar refining)
- fertilizer industry
- battery, used oil, liquid waste and barrel recycling plants
- service stations
- dry cleaners
- automobile, bus and subway repair and maintenance workshops
- transformer substations (condensers)

STORAGE AND TRANSFER OF HAZARDOUS SUBSTANCES

- storage of chemical and petrochemical products
- storage of pesticides
- storage of solvents
- oil pipeline rights-of-way

LAND SPREADING

- land spreading of contaminated sediments
- land spreading of petroleum residues
- land spreading of sludge from water purification plants or septic tanks

BIBLIOGRAPHY

I - BOOKS AND REPORTS

Agriculture Canada, *CAPCO Note: 2,4-D Update*, Ottawa, January, 1989.

British Columbia Special Waste Advisory Committee, *Development of the Special Waste Program for British Columbia: Towards a Healthier Environment*, Vancouver, 1988.

Canadian Council of Resource and Environment Ministers, *The PCB Story*, 1986.

Canadian Real Estate Association, *Code of Ethics*, 1989.

City of Vancouver Planning Department, *Administration Bulletin*, May 16, 1989.

Department of Fisheries and Oceans Background, *Crab, Prawn and Shrimp Fishery Closures*, Ottawa, December 1, 1988.

Department of Fisheries and Oceans, *National Dioxin/Furan Fish Sampling Program: Additional Salmon Information*, Ottawa, May 19, 1989.

DiCastri, V., *The Law of Vendor and Purchaser*. Toronto, Carswell, 3rd ed., 1989.

Environment Canada, *Guide to the Environmental Aspects of Decommissioning Industrial Sites*, unpublished paper of the Industrial Program Branch, 1985.

Environment Canada, *Guide to the Environmental Aspects of Decommissioning Industrial Sites*, 1985.

Environment Canada, *Pacific Pulp and Paper Industry Effluent Annual Summary*, 1987.

Epstein, S., L. Brown, L., and C. Pope, *Hazardous Waste in America*. San Francisco: Sierra Club Books, 1982.

Fleming, J., *The Law of Torts*, Law Book Company: Sydney, 1983, 6th ed.

Garrett, C.L., *Arsenic: Chemicals in the Environment*, Environment Canada, 1988.

Garrett, C.L., *Cadmium: Chemicals in the Environment*, Environment Canada, 1985.

Garrett, C.L., *Chlorophenols: Chemicals in the Environment*, Environment Canada, 1988.

Garrett, C.L., *Lead: Chemicals in the Environment*, Environment Canada, 1985.

Garrett, C.L., *Summary Report of the Pacific and Yukon Region Toxic Chemicals Profile*, Environment Canada, 1982.

Glass, E.A., "Superfund and SARA: Are There Any Defences Left?" *Harvard Environmental Law Review*, Vol. 12, 1988.

Glenn, W., D. Shier, K. Sisson, and J. Willms, *Toxic Real Estate Manual*, Corpus Information Services: Toronto, 1989.

Greater Vancouver Regional District, *Greater Vancouver Liquid Waste Management Plan, Stage 1, Draft*, July 1988.

Health and Welfare Canada, Health Protection Branch, *Backgrounder to Health Hazard Assessment of Dioxins and Furans in Fish Sampled in Various Locations in British Columbia*, Ottawa, May 19, 1989.

Jackson J., P. Weller, and the Waterloo Public Interest Research Group, *Chemical Nightmare: The Unnecessary Legacy of Toxic Wastes*, Between the Lines: Toronto, 1982.

Koons, W.E., "The Impact of Superfund Laws on Real Property Transactions", *Hazardous Waste Legislation and Law: Implications for the General Practitioner*, Washington State Environmental and Land Use Law Section and Real Property, Probate and Trust Section, 1988, at pp. 9-11.

Linden, A., *Canadian Tort Law*. Butterworths: Toronto, 1982.

Lyons, J., "Deep Pockets and CERCLA: Should Superfund Liability be Abolished?", *Stanford Environmental Law Journal* Vol. 6, 1988, at p. 271.

Macfarlane, R.A., "Superfund Simplified: What Every Attorney Should Know About Waste", paper delivered at "Hazardous Waste Legislation and Law: Implications for the

General Practitioner" sponsored by the Washington state Environmental and Land Use Law Section and Real Property, Probate and Trust Section, 1988.

MacLaren Engineers, *Waste Reduction and Recycling in the GVRD: A Blueprint for Comprehensive Resource Management*, Vancouver, 1989.

Mah, F.T.S., D.D. Macdonald, S.W. Sheehan, T. M. Tuominen, and D. Valiela, *Dioxins and Furans in Sediment and Fish from the Vicinity of Ten Island Pulp Mills in British Columbia*, Inland Waters Directorate, Pacific and Yukon Region, Environment Canada, 1989.

Mehrle, P.M., D.R. Buckler, E.E. Little, L.M. Smith, J.D. Petty, P.H. Peterman, and D.L. Stalling, *Toxicity and Bioconcentration of 2,3,7,8-Tetrachlorodibenzodioxin and 2,3,7,8-Tetrachlorodibenzofuran in Rainbow Trout*, National Fisheries Contaminant Research Center, U.S. Fish and Wildlife Service, Columbia, Missouri.

Mehrle, P.M. et al, "Toxicity and Bioconcentration of 2,3,7,8-Tetrachlorodibenzodioxin and 2,3,7,8-Tetrachlorodibenzofuran in Rainbow Trout "Environmental Toxicology and Chemistry, Vol. 7, pp. 47-62, 1988.

Ministry of Environment, *Contaminated Sites Rehabilitation Policy*, Province of Quebec, 1988.

Ministry of Environment, *Special Waste Management Report*, Province of British Columbia, 1981.

Ministry of the Environment, British Columbia Inventory of Waste Sites containing PCBs, June 1989.

Muldoon, P., and M. Vallante, *Toxic Waste Pollution in Canada: Regulatory Principles for Reduction and Elimination*, The Canadian Institute of Resources Law: Calgary, 1989.

Ryan, J.E. et al. (1985). Chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans in Canadian human adipose tissue. Chemosphere 14:697-706.

Suderman, E.A. "Fraud", *Real Estate Litigation--1987*, The Continuing Legal Education Society of British Columbia, Vancouver, 1987.

T.S. Spearing and Associates, Study of Inactive and Active Waste Disposal Sites at Federal Facilities in British Columbia, prepared for Environment Canada, 1984.

The Canadian Institute, *Environmental Law and Practice*, 2 vols., Toronto, 1988.

The Continuing Legal Education Society of British Columbia, *Environmental Liability and Hazardous Waste Management*, Vancouver, B.C., 1989.

The Environmental Defense Fund, *Nowhere To Go: The Universal Failure of Class I Hazardous Waste Dump Sites in California*, Toxics Assessment Group, Sacramento, 1985.

Thompson, G. "Environmental Liability: The Growing Risks for Lenders, Receivers and Trustees", *Insight Conference*, March 2, 1989.

Van Strum, C. and P. Merrell, *No Margin Of Safety: A Preliminary Report on Dioxin Pollution and the Need for Emergency Action in the Pulp and Paper Industry*, Greenpeace, 1987.

Viswanathan, S. *Underground Storage Tanks: Regulation and Risk*. Clayton Environmental Consultants: Toronto, 1989.

Watt, P. *Real Estate Practitioners Guide*, Vancouver: 1986.

II - CASES

Alessio v. Jovica (1973), 42 D.L.R. (3d) 242 (Alta. C.A.);

Banfai v. Formula Fun Centre (1984), 51 O.R. (2d) 361 (H. Ct.).

Beaulieu v. Riviere Verte (1970), 13 D.L.R. (3d) 110 (N.B.C.A.); Lavoie v. Poitras (1979), 28 N.B.R. (2d) 541.

Brewer v. Kayes (1973), 2 O.R. 284

Bridges Bros. Ltd. v Forest Protection Ltd. (1976), 72 D.L.R. (3rd) 335 (N.B.Q.B.).

C.R.F. Holdings Ltd. v. Fundy Chemical International Ltd. (1983), 21 B.C.L.R. 345; aff'd 39 B.C.L.R. 43 (C.A.).

De Michelle v. Peterkin (1985), 37 R.P.R. 173 (Ont.H.C.).

Esselmont v. Harker (1979), 14 B.C.L.R. 116 (S.C.)

Gertsen v. Metropolitan Toronto and Borough of York (1973), 2 O.R. (2d) 1 (H.Ct.).

Groneau v. Schlamp Investments Ltd. (1974), 52 D.L.R. (3d) 631 (Man. Q.B.);

Hartlen v. Falconer (1977), 5 R.P.R. 153 (N.S.S.C.)

Hartnett and Hartnett v. Wailea Construction Ltd, The Corporation of Delta, Robin Reimer and Block Bros. Realty Ltd., unreported decision of Gibbs J., Supreme Court of British Columbia, March 22, 1989.

Hedley Byrne v. Heller (1963), All E.R. 575 (H.L.).

Hyrsky v. Smith (1969), 5 D.L.R. 385 (Ont.H.C.).

Jonert v. Rothmans, Unreported decision of the Ontario High Court, May 12, 1989; under appeal.

Karamanian v. Richmond (1982), 38 B.C.L.R. 106 (S.C.).

Kerraghan (S.J.) Adjusters v. Grantham (1979), 12 B.C.L.R. 198 at 201.

Mann v. Raiton Holdings Ltd. (1984), 3 W.W.R. 42 (B.C.).

McGrath v. MacLean (1979), 95 D.L.R. (3d) 144, (Ont. C.A.).

Parna v. G. & S. Properties Ltd. (1968), 15 D.L.R. (3d) 336 (S.C.C.).

Plater v. Collingwood (1968), 1 O.R. 81.

R. v. City of Sault Ste. Marie (1978), 40 C.C.C. (2d) 353 (S.C.C.)

R. v. Sault Ste. Marie (1978), 2 S.C.R. 1299.

Raylon Investments Ltd. v. Bear Realty Ltd. (1981), 20 R.P.R. 288.

Redican v. Nesbitt (1924), S.C.R. 135.

Reichl v. Rutherford-McRae Ltd (1965), 51 D.L.R. (2d) 332 (B.C.).

Roberts v. Montex Dev. Corp., 100 D.L.R. (3d) 660.

Rowley v. Isley (1951), 3 D.L.R. 766 (B.C.).

Scarborough Golf and Country Club v. City of Scarborough, 1987, 55 O.R. (2d) 193 (H.Ct.).

Scott-Poulson v. Hope (1958), 25 W.W.R. 427 (B.C.).

Sedgemore v. Block Bros. Realty Ltd. (1985), 39 R.P.R. 38 (B.C.).

Sevidal v. Chopra (1979), 64 O.R. (2nd) 169 (H.Ct.).

Sorenson v. Kaye Holdings Ltd. (1979), 14 B.C.L.R. 204 (C.A.).

Stieglitz and Prestolite Battery Division v. Eltra of Canada Ltd. et al (1980), 119 D.L.R. (3d) 672 (Ont. H.C.).

Sutton v. Temple (1843), 152 E.R. 1008 (H.L.).

U.S. v. Maryland Bank (1984), 48 O.R. (2d) 9 (Ont. D.C.).

Whittaker v. Taylor (1911), 1 W.W.R. 259 (Alta.C.A.).

Wood v. St. Jules (1976), 69 D.L.R. (3d) 481 (Ont.C.A.).

CITATIONS FOR QUOTES IN MARGINS

Chapter 1

Susan Holtz, Ecology Action Centre, Report of the National Task Force on Environment and Economy, Submitted to the Canadian Council of Resource and Environment Ministers, September 24, 1987, at p. 6.

Chapter 2

Congressman Albert Gore, October 30, 1978, quoted in Hazardous Waste in America, Samuel Epstein, Lester Brown & Carl Pope, Sierra Club Books, 1982, San Francisco, at p. 3.

Justice Wright, Ethyl Corp. v. E.P.A., U.S. Court of Appeals, 1976, 541 F.2d.1 quoted in The Law of Environmental Protection, J.E. Bonine and T.O. McGarity, West Publishing Co., 1984, St. Paul, Minn., at p. 684.

Germain Gerard, "600 in Town to Get Lead Tests", Globe and Mail, August 29, 1989.

Daniel Green, Globe and Mail, August 23, 1989.

Love's Cure, Francis Beaumont and John Fletcher, Familiar Quotations, John Bartlett, Little, Brown & Co., 1951, Boston, at p. 132.

New Brunswick government document, Globe and Mail, August 31, 1989.

Justice Wright, op. cit., p. 684.

Development of the Special Waste Program in British Columbia: Towards a Healthier Environment, The Report of the Special Waste Advisory Committee, Vancouver, British Columbia, May 31, 1988, at p. 7.

California State Office of Appropriate Technology, quoted in Epstein, op. cit., at p. 317.

Barry Commoner, Newsweek, July 27, 1987, at p. 52.

Chapter 3

Norman Cerillo, quoted in Epstein, op.cit., at p. 97.

Hon. Victoria Chitepo, Minister of Natural Resources and Tourism, Government of Zimbabwe, quoted in Our Common Future, Report of the World Commission on Environment and Development, Oxford University Press, April, 1987, p. 1-7.

Chief Seattle, 1854 speech recorded in Vol. 42, No. 11, Fellowship from the Fellowship of Reconciliation, N.Y.

Congressman Toby Moffatt, op. cit., at p. 69.

Tom McMillan, Report of the National Task Force on Environment and Economy, submitted to the Canadian Council of Resource and Environment Ministers, September 24, 1987 at p. 3.

U.S. President Harry Truman.

Gordon Bottomley, quoted in Bartlett, op. cit., p. 844.

Bruce Strachan, when asked in the Legislature whether the original generator of toxic waste that later contaminates land could be held liable. Hansard, July 4, 1989.

Ibid.

National Academy of Sciences, Principles for Evaluating Chemicals in the Environment, quoted in Bonine and McGarity, op. cit., p. 662.

William Shakespeare, King Henry VI.

Chapter 4

Reed, "Fear of Foreclosure", 18 Environmental Law Reports (1986) 10, 165, as quoted by Carolyn Rashby, "Lender Liability under CERCLA", 14 Ecology Law Quarterly (1987) 569 at p. 570.

Bruce Strachan, Hansard, July 4, 1989.

Ancient Roman legal maxim, quoted in Epstein, op. cit., at p. 257.

Cyrille Delage, Globe and Mail, August 23, 1989.

Quebec Fire Commissioner Cyrille Delage on the storage and disposal of toxic wastes, Globe and Mail, August 4, 1989.

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