Accommodating Employees with Environmental Sensitivities

A Guide for Building Managers

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A Note to Readers

This companion document to **Accommodating Employees with Environmental Sensitivities: A Guide for the Workplace** (the Guide) is intended to provide guidance to building managers. The Guide itself is addressed to employers and managers (as one group) and employees. It may be of interest, and, in some cases, is essential, for building managers and members of each of the other groups (employers, managers and employees) to consult the guidelines addressed to a group other than their own. For example, building managers may find it useful to consult the **Guidelines for Employers** and the **Guidelines for Managers** found in the Guide, in order to better understand the needs of workers who are environmentally sensitive. It would be important for managers responsible for supervising employees with environmental sensitivities to read **Part 3** of this document in order to fully understand the accommodation needs of these workers. It should be noted that while this document contains some general legal information, it is not intended as a substitute for legal advice, if required. Happy accommodations!

Forewords

Michel Joffres, M.D., PH.D.

This document is a crucial guide to creating a safer and more productive environment for people affected by environmental sensitivities. It is also a guide to improve indoor air quality for all employees and therefore prevent related indoor air quality problems. It is not only our legal duty, but also our human responsibility to ensure that our fellow workers are provided with an accessible physical environment, as well as one which is open, accepting and free from the harassment so often experienced by people with this disability. Many of these guidelines are not very difficult to implement, if we care.

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Occupants in the modern office building have placed their trust in a team of professionals to provide them with a safe, healthy, and comfortable work environment. The architect, engineer, builder, interior designer, property manager and operator all have critical roles to ensure the provision of accommodation with good indoor air quality (IAQ). "Acceptable indoor air quality" is defined as air "with which a substantial majority (80% or more) of the people exposed do not express dissatisfaction". [American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE) Standard 62–2001]. Under 'continuous maintenance', ASHRAE Standard 62–2001 has added new addenda recognizing the importance of building and system design, construction, commissioning, operation and maintenance in achieving acceptable indoor air quality.

Let's start with a few true statements: contaminant source control is the most effective way of achieving good IAQ; heating, ventilating and air-conditioning (HVAC) systems must be properly designed, operated and maintained; accidents and failures will happen and an appropriate remediation protocol should be followed which includes good communication; and while it may not be feasible for general ventilation to assure the protection of the most susceptible occupants from all contaminants, there are policies and techniques that can be implemented to reduce the risk of exposure.

The ventilation rate, which is defined as the amount of outdoor air mixed with the supply air, simply dilutes existing indoor pollutants. For good IAQ, it is more effective to avoid or control sources of indoor contamination. It has been demonstrated that most problems in buildings occur because of internal pollutants rather than from insufficient ventilation.

Industrial hygiene practice and the use of "threshold limit values" (TLVs) are not appropriate standards for IAQ in offices. These thresholds are to avoid "adverse health effects" for industrial workers who usually know what chemicals are present and can take protection against exposure. There are also thousands

of chemicals present in the office environment, and very few (under 500) have been studied or regulated. It is therefore prudent to control all chemical emissions in the office environment.

While IAQ parameters are measured in the low parts per million range, persons with environmental sensitivities may react to chemical concentrations in the parts per billion range, or even lower. These ranges are below the level of detection of most instruments.

The transition of our economy from an industrial to a knowledge-based workforce underlines the importance of a comfortable and productive workplace. The revised *Canada Labour Code* and the regulations made under it (as of July, 2000) require that buildings conform to ASHRAE standards, that HVAC systems be properly designed, operated, inspected, tested, cleaned and maintained, and that IAQ investigations be carried out where "the safety or health of an employee in a work place is or may be endangered by the air quality". The anticipated actual net benefits of these revisions in terms of reduced morbidity and mortality are estimated to be $166.6 million over the next 20 years. IAQ assessment protocols and guidelines already exist and have been applied by Public Works and Government Services Canada since 1986.

How can the IAQ be improved for employees with environmental sensitivities? The concerns identified by the person involved should be the basis for the appropriate course of action to be undertaken. It should be noted that it may not always be possible to identify specific triggers due to the large number of potential incitants in our modern office environments and the possibility of synergistic factors. Such a situation may require an iterative approach – eliminating the most likely irritant in consultation with the affected employee and then following up with further actions as needed.

Each situation should be handled on an *ad hoc* basis, with the cooperation and support of all stakeholders.

The provision of good IAQ and a healthy and comfortable workforce is very cost-effective. Controlling pollutants, understanding the effects of exposure and improving the interior environment for all occupants is a mission for all of us. We must acknowledge heterogeneity and that all people have different degrees of sensitivity and susceptibility to the environment. Accommodating employees with environmental sensitivities is good practice and

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More than fifteen years ago, I chaired a committee on environmental sensitivities established by Ontario's Ministry of Health. The committee included two eminent teaching hospital physicians and a highly respected epidemiologist. We issued a report that identified existing, publicly funded means of diagnosis, and accepted various methods of patient management, including avoidance of offending agents.

Equally important in our minds were measures, such as income support, that would provide concrete assistance to members of this vulnerable group and reduce the risk of preventable harm. To this end, we recommended that financial and social support services be awarded on the basis of the extent of a patient's disability, rather than on the basis of a particular diagnosis. This would reduce the risk of depriving patients of support simply because medical professionals might be unable to differentiate between the myriad possible causes. We also called for further research and the development of services to support that research, while also helping those who were experiencing a wide range of very difficult symptoms. We did not feel that more research was needed before

these and other measures were introduced to protect patients from being caused harm through inappropriate labelling or the denial of reasonable accommodation.

In the years immediately following the report, several positive steps were taken in response to the recommendations. Public support systems became more accepting of these individuals' needs. At the federal level, departments and agencies began addressing unhelpful attitudes about this disability, not only within the departments and agencies themselves, but also within doctors' offices, medical associations and the broader community. Health Canada organized conferences, distributed documents and publicly supported recommendations to protect patients from unnecessary harm. The Department of Justice and Canada Mortgage and Housing Corporation funded self-help groups to support citizens with environmental sensitivities.

Regrettably, over the past few years, that initial momentum has been largely lost, and many of the earlier recommendations seem to have been forgotten. An ongoing, legitimate, but separate debate about medical approaches is again obscuring protection issues and returning us to the situation that prevailed when the report was written.

Thus, it was with pleasure that I read this workplace guide, **Accommodating Employees with Environmental Sensitivities.** Its authors have worked hard to provide concrete advice on how a workplace might accommodate employees with this disability. While not all suggestions will be applicable to every workplace, much that is proposed here can and should be done to create a more accommodating work environment, keeping in mind recent developments in human rights jurisprudence. Employers are now required to organize their workplaces so that discriminatory barriers do not exist. I think that the suggestions in this Guide for accommodating employees who are environmentally sensitive will help employers eliminate barriers in the workplace, up to the point of undue hardship. I am particularly impressed with the proposals in the Guide for approaches that make employees partners in the development and implementation of an action plan to deal with this issue in the workplace.

I congratulate those whose hard work produced the Guide and I encourage employers and employees to take advantage of this readable and practical publication.

George M. Thomson, B.A., LL.B., LL.M.

Table of Contents

I and my colleagues find it is a regrettable situation that surrounds the matter of environmental sensitivity. There is a tendency in many circles to write it off, to treat it as though it did not exist. They shake their heads; they say there is just no dealing with some people. Our attitude, however, is that it is a problem, a genuine problem. It is a problem from which some people suffer, and suffer very painfully. They suffer all the more because of this element of humiliation. No one will take them seriously. We believe that there is a degree of public misunder-standing, and we would like to try to see that redressed.

We will investigate complaints from any person who believes that he has been discriminated against because of suffering from environmental sensitivity. It is not for us to pronounce on the medical issues involved – and there are medical issues. There is some degree of disagreement or lack of unanimity in the medical community as to what exactly is involved in this syndrome. We think it is very clear that it is an illness; it is a problem. It is not illusory. I think we all have a duty to try to help people to understand what is involved and to do something about it.

Maxwell Yalden, former Chair
Canadian Human Rights Commission
May 10, 1990, *Hansard,* House of Commons
Minutes of Proceedings and Evidence of the
Standing Committee on Human Rights and the
Status of Disabled Persons

... moved:

that in the opinion of this House, the government should implement a national strategy for reducing the threats posed by exposure to contaminants in the indoors that would include a national research centre, technology development programs, a set of national standards on indoor air quality and an information campaign designed to raise awareness of and provide advice on indoor air contaminants.
.....
I suggest that the time has come in Canada to address these [indoor air quality] problems in an organized and concentrated fashion. That is why I have suggested that by way of a national strategy the government take on a number of initiatives. I do not think these involve great direct expenditure of public money, but I do think that there will be direct benefit to the economy of Canada if we address these problems. Benefit will be realized through increased productivity in the workplace and increased job and worker satisfaction.

John Manley, M.P. (Ottawa South)
June 5, 1990, *Hansard*
House of Commons Debates
Private Members' Business – Motions

There has been some tendency on the part of management and government to think that they are dealing with a group of hypochondriacs, and to take these problems [environmental sensitivities] less than seriously. I do not think any responsible employer can believe that a group of employees suddenly turn into hypochondriacs overnight. These are very real problems, they are not unknown to the international scientific community and they deserve the very serious attention of government.

Marlene Catterall, M.P. (Ottawa West)
June 5, 1990, *Hansard*
House of Commons Debates
Private Members' Business – Motions

Accommodating Employees with Environmental Sensitivities

A Guide for Building Managers

INTRODUCTION

You may know someone who is environmentally sensitive; you may not even be aware of it. Environmental sensitivities, a hidden disability, are estimated to affect at least 15 per cent of our population. These individuals have been sensitized to environmental agents and experience associated reactions.[1] People with environmental sensitivities suffer often disabling reactions to substances in our air, water and food at concentrations that are presently considered acceptable for the general population.

Many workers with environmental sensitivities encounter difficulties in obtaining the accommodations they need to work productively, or to work at all. It should not be so. We hope that the many benefits accruing to both employers and employees of providing accommodation to workers who have this disability will become apparent as you read this Guide.

In the following real-life examples, workers with environmental sensitivities have been provided with accommodation by their employers, demonstrating that it is both possible and beneficial to remove workplace barriers for members of this group, allowing them to remain valued, productive employees.

Lisa

Lisa worked for a large information technology company. During a pregnancy, Lisa became highly sensitive to many substances, including scented products, fabric softeners, off-gassing from carpets, photocopiers, printers, cleaning products and building materials. Her reactions included life-threatening anaphylaxis, asthma, skin rashes, muscle weakness and severe headaches, among others. Lisa was diagnosed with environmental sensitivities to many foods and chemicals and was counselled to manage her sensitivities by avoiding offending agents. In spite of Lisa's efforts to control her exposures to irritants and resulting reactions, she continued to suffer severe reactions while in the workplace. After her maternity leave, Lisa's employer provided her with the equipment necessary to set up a home office, and assigned projects that Lisa could perform effectively from home. Lisa participated in meetings by teleconference, or colleagues and others attended meetings at her home. Fellow employees were educated to arrive at meetings scent-free, and without fabric softener or freshly dry-cleaned clothes, in order to avoid triggering a reaction. As a result of these accommodations, Lisa was able to continue working productively as a highly skilled worker with the company.

Johanne

Johanne works for a large government organization. She is very sensitive to chemicals and experiences anaphylactic reactions to some foods and natural substances. She has been assigned an enclosed office which helps protect her from electromagnetic radiation (to which she is sensitive) and from off-gassing of pollutants such as those emitted by cleaning products, building materials, printers and photocopiers, and scented products used by other employees. In addition, a portable "HEPA" (high

efficiency particulate arrestor) filter air cleaner was purchased for her by her employer out of a special fund available to departments within her organization for accommodation of disabilities. The cost of maintaining the air cleaner by periodic replacement of the filters is paid for out of the unit's budget. Johanne's office has a window that provides some natural light. All of Johanne's fellow employees are aware of her disability and the need to avoid wearing scented products when working near her. Many of her colleagues, but unfortunately not yet all, avoid wearing scented products. Johanne is able to work a late afternoon shift, helping her to avoid the highest levels of indoor air pollutants, which occur between the mid-morning and mid-afternoon hours. Only cleaning products that Johanne is able to tolerate are used in her office. When new furniture was purchased for her unit, Johanne's supervisor gave her the opportunity to select tolerated hardwood furniture. The new finish on the furniture was allowed to off-gas for several weeks while Johanne was on vacation. As a result of this successful accommodation, Johanne remains a valued and effective member of her workplace team.

Vince

Vince became environmentally sensitive during the early 1980s while working in a sealed office building. During major renovations on the floor of the building where his unit was located, his employer provided him with alternative accommodation on a different floor of the same building, isolated from the renovations and better tolerated by Vince. His employer provided a closed office, allowing Vince to avoid some of the indoor air contaminants and ambient noise associated with construction. His office was equipped with an air purifier. Eventually, Vince found that he was completely unable to tolerate the indoor environment at that location and, at Vince's request, his employer granted a transfer to a more tolerable environment.

Proactive Steps Taken by One Employer to Accommodate Employees Who Are Environmentally Sensitive

In the course of a major retrofit to its headquarters building, a large government department made the decision to proactively eliminate barriers to employees who have environmental sensitivities. Tolerable building materials and furnishings were selected. The employer constructed "service centres" in key locations, which are separately ventilated rooms under negative pressure where VOC- (volatile organic compound) producing equipment such as printers and photocopiers are isolated. Books and files that may harbour mould and dust are stored in the service centres. Kitchens for the use of employees are also separately ventilated to the outside air. Coats and boots are stored in ventilated closets near office entrances. Tolerable, low-VOC or no-VOC cleaning products are used throughout the building. Employees with environmental sensitivities are individually accommodated in closed offices with openable windows, older furniture and hard flooring such as natural linoleum floors, if tolerated, and other accommodations, as needed. One boardroom in the building is dedicated to accommodating employees who are environmentally sensitive, although the room is routinely used by others as well. The boardroom has natural linoleum floors and is equipped with older furniture, good ventilation and openable windows. The boardroom is designated as fragrance-free, so that persons who book the boardroom are advised that no scented products, newspapers, foods or volatile chemicals may be brought into the room. A sign outside the boardroom sets out the conditions of use. From time to time, bulletins are sent to all employees reminding them to refrain from using scented products in the workplace, in order to accommodate employees who have environmental sensitivities.

Indoor Air Quality

The benefits of accommodating employees who are environmentally sensitive by making general improvements can be demonstrated not only through anecdotes such as those detailed above, but also in

terms of productivity. Indoor building environments have been shown to affect productivity between 1.5% and 6%.[2] Gains in productivity have also been demonstrated to pay for the cost of building and air quality improvements in about 1.6 years.[3]

What are some of the specific barriers or problems facing employees who are environmentally sensitive in the workplace?

Off-gassing of volatile organic compounds from many building materials in newly constructed and remodelled buildings are particularly problematic. Indoor environments affect human health, behaviour and learning ability.[4]

ASHRAE Standard 62–2001

defines "acceptable indoor air quality" as "air in which there are no known contaminants at harmful concentrations as determined by cognizant authorities and with which a substantial majority (80% or more) of the people exposed do not express dissatisfaction." [Emphasis added]

Ventilation

The benchmark used to assess indoor air quality – *ASHRAE Standard 62–2001, Ventilation for Acceptable Indoor Air Quality* – is based on the premise that it is acceptable for up to 20 per cent of a HEALTHY, ADULT population to express dissatisfaction with the level of air quality set by the standard. In *ASHRAE Standard 62–2001* it is acknowledged that

> *"Acceptable indoor air quality may not be achieved in all buildings meeting the requirements of this standard for one or more of the following reasons:*
>
> (a) *because of the diversity of sources and contaminants in indoor air;*
>
> (b) *because of the many other factors that may affect occupant perception and acceptance of indoor air quality, such as air temperature, humidity, noise, lighting and psychological stress; and*
>
> (c) *because of the range of susceptibility in the population.*[5]

Typically, research was done using odour-based criteria, with healthy young adult males as subjects, and with an expectation of an eight-hour exposure in an industrial setting. The exposures which are the basis of the *ASHRAE Standard 62–2001* are not the substantially higher exposures that the most vulnerable populations, including pregnant women, older people, children (who may be housed in daycare centres in a workplace setting), and persons with disabilities may experience in their workplaces. These standards are clearly inadequate to protect the most vulnerable populations.

Internally generated contaminants account for about 50 per cent of indoor air quality problems, and poor system design, operation and maintenance deficiencies account for the remainder.[6] Most office buildings in operation today were not designed to accommodate energy restrictions, pollutants generated by modern synthetic materials, chemical cleaners or office equipment (such as computers, printers, fax machines and photocopiers). Energy restrictions imposed since the 1980s permit up to 85 per cent recycled air. Health Canada investigated 95 Canadian buildings in 1984 and found that 68 per cent had problems attributed to “inadequate ventilation”, resulting in poor indoor air.[7]

Indoor air today is composed of hundreds, even thousands, of different compounds at very low concentrations, and has been referred to as a "chemical soup". Further, indoor air quality investigators only select certain compounds for testing and measurement. The synergistic effects of the cumulative total concentrations of contaminants have not been established. Given these factors, it is not surprising that there has been a concurrent appearance of related health problems, and that these complaints are becoming more numerous and severe. (The Ontario Workers Compensation Board approved

127 claims between 1988 and 1992 due to health problems related to airborne contaminants.)[8]

Many employees are presently missing working days because of inadequate office environments. A failure to provide good indoor environments in our office buildings means that many employees are not performing their work as productively as they might be.

Toxins / Irritants / Sensitizers

Some of the toxins, irritants and sensitizers that contribute to unhealthy indoor environments are listed in the chart to the right.

The World Health Organization estimates that 30 per cent of homes and buildings today contain enough indoor pollutants to cause health effects that range from a sniffle to very serious health problems. Since 90 per cent of the average Canadian's time is spent indoors, and since air pollution is two to five times, and occasionally more than 100 times, greater indoors,[9] indoor air quality will increasingly become an issue of accommodation and access.

Toxins / Irritants / Sensitizers

- Volatile organic compounds (VOCs) including those found in scented products
- Bacteria, fungi, moulds, dusts and dust mites
- Building materials containing VOCs, including carpets
- Paints, waxes and cleaning products
- Pesticides, bactericides, herbicides and fungicides
- Fuels (e.g., propane, natural gas, gasoline, oil, etc.)
- Lead, radon, asbestos
- Pets, plants
- Electromagnetic radiation
- Foods
- Other substances not normally thought of as noxious

PART 1
What Are Environmental Sensitivities?

Environmental Sensitivities

- Many common things can cause adverse reactions
- Avoidance is the best treatment

A growing segment of the population experiences a variety of adverse reactions to environmental agents at concentrations well below those that might be deemed to affect "average" persons. This atypical reactivity is called environmental sensitivities. Environmental sensitivities have been known to exist since the time of Hippocrates, and have been documented for the past three centuries.[10] It should also be noted that environmental sensitivities have many different etiologies, and that consequently there can be no single test to diagnose them. Subsets of environmental sensitivities are labelled in a way that is descriptive of the site of the reaction, such as "asthma" (lungs), or the mechanism of the reactions, such as "allergy", or the causative agents, such as "multiple chemical sensitivities" or "electromagnetic sensitivity".

Environmental sensitivity (sometimes referred to as "environmental hypersensitivity") has been defined by a distinguished panel of teaching hospital physicians chaired by the former Judge George M. Thomson (formerly Deputy Minister, federal Department of Justice) as:

"... a chronic (i.e. continuing for more than three months) multisystem disorder, usually involving symptoms of the central nervous system and at least one other system. Affected persons are frequently intolerant to some foods and they react adversely to some chemicals and to environmental agents, singly or in combination, at levels generally tolerated by the majority.... Improvement is associated with avoidance of suspected agents and symptoms recur with re-exposure."[11]

Many agents can act as triggers:

- Agents, either naturally occurring or synthetic, in our air, water, food, personal and home care products, fabrics, furnishings; office equipment and supplies and building materials. An example of such airborne agents might be chemicals used or stored in homes, offices, health care facilities, schools, workplaces, farms or industries and vehicles. Other examples include, but are not limited to, pesticides, herbicides and other chemicals; plant material including pollens (grass, trees, domesticated plants, weeds), dusts, moulds, animal dander; foods, micro-organisms, genetically modified foods, etc.
- Artificial lighting and electromagnetic fields.
- Heat and cold; weather.

Environmental sensitivities can develop in individuals of any age regardless of whether they have a past history of allergies. The severity of symptoms can range from mild discomfort to total disability or chronic health problems. Symptoms may develop suddenly or slowly.

Environmental sensitivities may become progressively debilitating. Prevention, early detection and treatment are of paramount importance. Treatment of environmental sensitivities focuses on prevention, **prudent avoidance of offending agents,**

appropriate nutrition, supportive counselling and medical interventions.

In 1988, Maxwell Yalden, the Chief Commissioner of the Canadian Human Rights Commission wrote to the Honourable Jake Epp, then Minister of Health and Welfare, stating:

"It is my understanding that [environmental sensitivities are] a true medical problem, and that we owe it to people who have the misfortune to suffer from [these problems] to be more public and more positive in acknowledging that fact.

.....

My purpose in writing to you is simply to let [you] know that ... anything your department can do to increase public awareness of the legitimate concerns of people [with sensitivities] would, in our view, be most useful."[12] (See **Appendix A**.)

The Canadian Medical Association recognizes the existence of environmental sensitivities, and states that *"there are many physicians who are acutely aware of the problems of environmental sensitivities ... have expertise in this area and are addressing the needs of patients with such sensitivities."*[13] (See **Appendix B**.)

Some of the physical signs and symptoms of environmental sensitivities are shown in the chart on this page.

Performance and Behavioural Signs and Symptoms

Some of the performance and behavioural signs and symptoms of sensitivities can be seen in the chart on the following page.

Such problems make it very difficult for employees to work productively.

Sensitivities affect each individual differently. Symptoms may be mild and merely annoying, or they can be severe enough to interfere with daily activities, career and family life. Severe sensitivities can be life-threatening or fatal.

Physical Signs and Symptoms

- Recurrent headaches and migraines
- Irritated eyes and recurrent styes
- Puffy bags or dark circles under eyes
- Red ears or ear lobes
- Frequent ear, nose and throat infections, ringing ears
- Hoarse throat, laryngitis
- Recurrent earaches and sinusitis
- Stuffy, runny and/or itchy nose
- Coughing, wheezing, chest tightness, breathing difficulties
- Asthma
- Anaphylactic shock
- Urinary and reproductive problems
- Mouth – metallic taste, dryness, cracking, excessive saliva, skin peeling or blistering
- Mouth breathing and throat clearing
- Stomach aches or diarrhea
- Eczema, hives and other skin rashes
- Light sensitivity and visual disturbances
- Numbness, stiffness, pain, weakness, swelling, "arthritic" symptoms of muscles, bones and joints
- Weakness and dizziness
- Loss of coordination, seizures, convulsions or tremors

Performance and Behavioural Signs and Symptoms

- Poor concentration
- Memory loss
- Difficulty problem-solving
- Inconsistent performance
- Mood and personality changes
- Recurrent absences
- Irritability
- Drowsiness, fatigue
- Aggression and exhaustion
- Depression and suicidal tendencies

It is essential that managers, employees, property managers and heating, ventilation and air-conditioning (HVAC) engineers work together to find the best possible environment for the individual employee with environmental sensitivities. Furthermore, accommodation of members of this protected group is required by law.

PART 2
What is Accommodation?

In Canada, the duty to accommodate is based on several sources in law: the applicable human rights legislation (the *Canadian Human Rights Act* and equivalent provincial legislation), equality rights legislation (the *Canadian Charter of Rights and Freedoms* and the *Employment Equity Act* or equivalent provincial legislation), and human rights jurisprudence.

In a recent case, the Supreme Court of Canada has radically changed and broadened the meaning of accommodation. In the *Meiorin*[14] decision, the court clarified the duty of employers to take every step available to them, to the point of undue hardship, to ensure that all their programs and activities are inclusive of the needs of a diverse workforce. Prior to this decision, employers and providers of goods, services and facilities were only required to solve accommodation problems as they arose, on an individual basis, as the problem of a particular individual, not of society. Now, as a result of the *Meiorin* case, employers and providers of goods, services and accommodation are required to proactively review all their programs and activities, including policies, rules, practices, standards, procurement and decisions related to real property, and, to the extent possible, eliminate any existing discriminatory barriers. In other words, they are required to set up their workplaces in such a way that accommodation and access problems do not arise in the first place. What does this mean for employers and building managers? It means that they should ensure that their workplaces and facilities are fully accessible for people with a wide range of disabilities, including environmental sensitivities.

Put simply, the duty to accommodate refers to the obligation of an employer or union or service provider to make every effort, short of undue hardship, to accommodate and eliminate disadvantage to an employee or prospective employee resulting from a rule, practice or physical barrier that has or may have an adverse impact on individuals or groups protected under human rights legislation, or identified as a designated group under employment equity legislation.

In practice, accommodation requires an individual assessment of the needs of the employee requesting it. In some situations, if the needs of individuals are similar to those of others, it may be possible to establish general policies or practices to accommodate those needs. These accommodation policies and practices could require changes in the terms and conditions of employment to meet the particular needs of the individual or group in question. This may also mean a change in work schedules or special job support, equipment or assistance or a change in job duties. What is needed must be decided with all the relevant parties' participation: the employee, the employer, the unions, co-workers and building managers.

Undue hardship is a high standard to meet. Accommodation measures are to be taken unless no further accommodation is possible without causing undue hardship to the employer. The onus is on the employer to establish that further accommodation or certain accommodation options would have such a serious impact on the workplace that the needed accommodation should not be required. The *Canadian Human Rights Act* provides that "health, safety and cost" are the relevant criteria to determine undue hardship. Provincial legislation contains similar criteria. For example, the *Ontario Human Rights Code* refers to “cost, outside sources of funding, if any, and health and safety requirements”.

Further, the courts have held that there are several factors that may be considered in determining whether a particular accommodation would cause undue hardship, including cost, safety risks, employee morale issues, disruptions of collective agreements, interchangeability of the workforce, facilities, and seniority rights. The case law has been clear that

minimal efforts are not sufficient nor does minor inconvenience constitute undue hardship.

As a manager, it may occur to you that it is unfair to other employees to give one employee "special treatment". You may think that morale will suffer if you give special treatment to some and not others. You may also be concerned about cost.

Accommodation is not a favour or a courtesy. It is the law. It is not a lowering of standards but a recognition that circumstances may require some fine-tuning to support individual performance on the job. The accommodation requested by an employee who is environmentally sensitive may, in fact, benefit everyone, by improving the environment for all employees, or by providing an open forum for employees, managers, and building managers to explore better ways to work together. Statistics show that the average cost for accommodation for an employee is minimal.[15] Many forms of accommodation for employees with environmental sensitivities will have no cost impact at all, or may actually result in a cost savings.

Relevant Health and Safety Protections

In addition to the protections provided by human rights laws, health and safety legislation and jurisprudence may assist workers who are environmentally sensitive. Under the *Canada Labour Code*, Part II and provincial labour legislation, employees have the right to refuse to work in a place that they believe is dangerous to the employee or to another employee. Provincial statutes contain parallel provisions.

Under federal[16] occupational safety and health regulations, heating, ventilation and air-conditioning (HVAC) systems are required to meet the design requirements of the *ASHRAE Standard 62–2001: Ventilation for Acceptable Indoor Air Quality*. Further, federally regulated employers are required to appoint qualified people to provide instructions for operating, inspecting, testing, cleaning and maintaining the HVAC system,[17] and to develop procedures for air quality investigations in circumstances where the safety or health of an employee is or may be endangered.[18] A federally regulated employer is also required to post the telephone number of a contact person to whom safety or health concerns regarding indoor air quality in the workplace may be addressed.[19]

PART 3
Guidelines for Building Managers

Research shows that indoor building environments can affect productivity between 1.5% and 6%, and that productivity gains would pay for the cost of building and air quality improvements in about 1.6 years,[20] as previously mentioned. Employee costs are on average $200 per square foot annually, based on a salary of $30,000 (USD) and a space allotment of 150 square feet per person.[21] On the other hand, building-related costs represent a fraction of the cost of employees. In 1995, a study of annual average building costs indicated that rent, utilities and taxes cost building owners between $14.24 and $43.09 per square foot.[22] Thus, even a one per cent drop in productivity would cost a great deal more than the costs of operating a building. If building owners and managers fail to grasp these important considerations, they may make unfortunate and costly decisions.

1. Scented Products and Smoking

In order to protect employees who are environmentally sensitive, the following steps should be taken:

- Establish and post a "no-scent" policy in the workplace.

- It is important to realize that many scented products contain volatile organic compounds, such as alcohol, formaldehyde and other chemicals. Scented products and other chemicals, including fabric softeners, even unscented ones, can trigger symptoms in persons who are environmentally sensitive including those listed in **Part 1: What Are Environmental Sensitivities?** These reactions affect the health of employees and may effectively prevent workplace access to members of this protected group, contrary to Canadian human rights laws.

  ⇒ A "no-scent" policy includes perfume, cologne, after-shave and scented personal care products such as deodorant, shampoos, hair products, cosmetics, soaps, laundry detergents, fabric softeners, etc. Encourage staff not to use scented products. Air smoke-laden and dry-cleaned clothing well before wearing. Avoid scented laundry detergents and **all** fabric softeners.

- Institute a non-smoking policy requiring smokers to remain at an appropriate distance (at least 30 metres) from building entrances, since it is known that contaminants near ground floor entrances are drawn into the building and circulated throughout the ventilation system due to the "stack effect". Environmental tobacco smoke has been found to be harmful to human health and may trigger reactions in employees who are environmentally sensitive.

2. Biocide Policy
(e.g., bactericides, fungicides, herbicides, insecticides and pesticides)

- Eliminate the use of synthetic bactericides, fungicides, herbicides and pesticides. Use alternative pest management strategies and safer products such as borax, benzalkonium chloride and hydrogen peroxide, with appropriate caution. Organic lawn care companies are available.

- When selecting a new office location, select a site well away from major users of pesticides, insecticides and herbicides, such as golf courses and commercial (non-organic) farms.

- Prepare a policy and procedures manual listing safe products and techniques and ensure that the procedures are enforced.

Ventilation Systems

- Where necessary, upgrade and maintain ventilation system.
- Provide direct source exhaust to outside (not to return air) for all pollutant sources.
- Use clean steam rather than treated boiler water in steam humidifiers.

3. Ventilation Systems

In order to improve employee health and productivity, it is important to take the following steps:

- Upgrade, clean and maintain HVAC systems as well as humidification systems to satisfy either the most stringent indoor air quality standards or those necessary to meet the needs of employees who are environmentally sensitive, whichever is higher.
- Improve fresh air intake and air filtration systems. Locate intakes upwind and away from building exhaust vents, tarred roofs and parking lots. Choose appropriate air filtration materials and ventilation systems; check for the tolerability of these materials (e.g., charcoal, coconut, potassium permanganate, cotton, paper, etc.) with each employee who has self-identified as being environmentally sensitive.
- Provide direct exhaust to the outside (NOT to the return air plenum) from all contaminant sources such as photocopiers, printers, fax machines and laminating equipment, chemistry and biology laboratories, storage rooms, cloak rooms, kitchens, washrooms, etc. Computers, particularly when new, may contain parts that have been sprayed with a lacquer that will off-gas when the computer is turned on. Such computers should not be assigned to employees who are environmentally sensitive. Computers and other machines may be placed in an enclosure that is constructed of tolerable materials and, preferably, exhausted to the outside, or if this is not possible, to the return air plenum. Install automatic-closure doors on all rooms containing a contaminant source.
- Steam humidifiers should use clean water, rather than chemically treated boiler water, to avoid exposing employees to dangerous chemicals. Water systems must be maintained meticulously to reduce the risk of mould and algae growth.[23]
- Heat recovery ventilators will improve energy efficiency in smaller buildings.
- Where possible, provide openable windows in all offices.

Openable Windows

- Reassign windowless offices for non-employee uses.
- Maximize the use of windows for natural light and fresh air in new and retrofit projects.
- All employees will benefit significantly from fresh air and natural light.

4. Proximity to Power Line Corridors

- When choosing a new office location, locate the building away from power line corridors, if possible. Where possible, office buildings should not be located near transformers, power line corridors or overhead power lines.[24]

5. Lighting

- Office areas without windows should be retrofitted with either openable windows or skylights and heat recovery ventilators; if retrofits are not possible, reassign the office or area for non-employee uses. An office without windows is not advisable for an employee who is environmentally sensitive, since many individuals with sensitivities have observed that good quality natural light is required for them to perform well.

- Maximize the use of windows and skylights in offices to allow for adequate natural light.

- Some individuals who are environmentally sensitive experience reactions when exposed to electromagnetic fields or fluorescent lighting. In particular, fluorescent lighting should be avoided in office environments. Use near- or full-spectrum lighting and install low-harmonic electronic ballasts.

- Avoid the use of low-E windows. Low-E windows filter out some wavelengths of the full spectrum of natural sunlight and reduce general illumination levels, although it should be noted that different kinds of low-E windows may differ in their light transmission. Given that tinted and coated windows tend to reduce or alter the spectral properties of light, their use is likely to promote the increased use of artificial lighting. The potential physiological effects of these artificial lighting systems may include effects on mood, normal daily behavioural and physiological rhythms, regulation of patterns of hormone secretion, and effects on the skin such as tanning and allergic response to light. The human health effects of altering the balance between natural and artificial sources of illumination have not been adequately studied, and as a result, are not fully understood at this time.[25]

- Microwaves, colour TVs and computer monitors should be equipped with EMF shields.

- A grounded screen attached to a computer monitor, laptop or TV with a properly grounded plug may help block electrical fields. Alternatively, a laptop equipped with a liquid crystal display (LCD) screen and rechargeable batteries may be used. The electromagnetic fields emitted by an LCD screen are much reduced and do not extend as far out from the screen, as compared to a regular computer monitor. To make computer use even safer, use only the battery for power while working at the computer and recharge the battery while in another room.[26]

6. Building Materials and Furnishings

- Avoid "building in" problems when renovating or building new facilities. Use least-toxic building materials and furniture in all projects. See Canada Mortgage and Housing Corporation's *Building Materials for the Environmentally Hypersensitive* and *The Clean Air Guide* for appropriate product information and sources.

- Use maintenance and renovation practices which minimize the use of volatile organic compounds and solvents.

- Use building materials and furnishings that either do not off-gas, or do so minimally, and have been aired out off-site. For example, when building, renovating or buying new furniture, avoid material such as particle-board products that off-gas at high levels for many years. An "environmentally-friendly" label may not be sufficient to protect employees from exposure to sources of chemical off-gassing found in building materials and furnishings. As part of the design process, it is important to have the employees who are the most environmentally sensitive screen any building materials and furnishings contemplated for use in the workplace.

- Use flooring for which off-gassing is more manageable, such as ceramic, hardwood and some hard vinyl tiles, and do not apply sealants or waxes. Select adhesives and finishes for their tolerability and to minimize volatile organic compounds. Avoid carpeting and sheet vinyl due to their usual and significant off-gassing.

- Establish a mandatory off-gassing period for new construction and renovation projects. Use extra ventilation 24 hours a day, seven days a week to accelerate off-gassing. If possible, use outdoor air for "free" cooling during spring and fall months.

- In selecting interior design products, avoid products containing foam, rubber, most vinyls (contain plasticizers) and many leathers. Most commercially available furniture and room dividers contain foam that is known to adsorb and later desorb many noxious gases and odours.

- Avoid products that have been treated with fabric protector, fire repellent or water repellent. These off-gas formaldehyde and other chemicals. Most commercially available upholstered furniture and room dividers are treated with these substances, unless otherwise specified.

- Cotton, metal, glass and solid hardwood are better options. (Note: many people mistake veneers over particle board for solid wood.) Particle board products which are several years old are often acceptable from an air quality standpoint.

- New or refinished furniture (even solid wood) should be allowed to off-gas for several weeks or months before delivery. The furniture should be screened by any person with environmental sensitivities who will be using it, and should be found by that individual to be odour-free and otherwise tolerable on delivery to the office environment.

Floor Coverings

- Establish a no-carpet policy

- Use tolerated smooth, non-porous and preferably seamless flooring throughout all offices for replacement and new construction projects

7. Carpets

- Establish a "no-carpet" policy for new construction and renovation projects.

  If carpets are unavoidable in some areas, ensure that the carpet is low-VOC and odour-free. Use low-mass or natural options for limited applications, such as for mobility impairments. Preferably, any carpets that are used should be made of nylon, and free of SBR (styrene-butadiene-rubber) latex backing, anti-static treatment, pest-proofing, fungicides, biocides, and deodorizers. If possible, carpets should be tacked or taped rather than glued. Use of foam or rubber underpad should be avoided. As for all building materials and furnishings, carpets should be screened by the individuals most acutely affected by environmental sensitivities who will occupy the building, if possible. As in the case of other building materials and furnishings, an "environmentally-friendly" label attached to a carpet may not be adequate to protect employees from exposure to chemical off-gassing. If a carpet must be glued, a water-based, low-odour adhesive should be used — but only very sparingly. Manufacturers' specifications may indicate that adhesive should be used extensively. However, depending on the space that is being furnished, it may be possible to use minimal amounts of adhesive, or none at all, particularly if

the room is to contain heavy furniture that would anchor the carpet.

Carpets are a major source of indoor air pollution in our workplaces. When new, some carpets and the adhesives used to install them off-gas many chemicals, including formaldehyde (a suspected carcinogen), for which there are no safe levels of exposure. Carpets and other soft absorbent materials like foam and upholstery act as "sinks" or reservoirs, continually adsorbing and desorbing contaminants in the environment. Carpets are traps for pesticides, dust, particles and moisture and become breeding grounds for moulds, bacteria and dust mites. Use smooth, non-porous, preferably seamless, flooring as a substitute for carpeting.

According to a recent article in *Scientific American,*[27] carpets analyzed from more than half of 362 households contained concentrations of seven toxic, organic chemicals called polycyclic aromatic hydrocarbons (which cause cancer in animals and are believed to cause cancer in humans) at levels above those which would trigger a formal risk assessment for soil at a U.S. "Superfund" waste dump.

A comparative study indicates that substantial savings can be achieved when installation and maintenance costs are considered, by using smooth flooring rather than carpeting.[28]

In their study, Nörback and Torgén indicated that:

"*The wall-to-wall carpet group reported an overfrequency of eye and airway symptoms, rashes in the face, headache, abnormal tiredness and a sensation of being elecrostatically charged in comparison with personnel* [in buildings] *with hard floor covering.*"[29]

Carpets, if present in the workplace, should be vacuumed frequently with a HEPA (or other high-efficiency multi-stage) filter vacuum cleaner. In addition, any carpets should be cleaned, at least once quarterly, using a process of simultaneous steam-cleaning and vacuum-extraction with minimal moisture and without surfactant.

In order to help employees with environmental sensitivities, it is necessary to reduce the overall load of contaminants to which they are exposed. Removing carpets is one of the most effective methods of reducing this load.

A policy of no carpeting in offices will benefit all building occupants.

A Few of the Chemicals Found in Carpets

- 4-PC
- Styrene
- Alkanes
- 2,6-Di-t-butyl-4-methyl-phenol (BHT)
- Caprolactam
- Chlorinated butadiene
- Chlorinated cyclohexene
- C9-alkyl benzene
- 2-Ethyl-1-hexanol
- Bis(2-ethylhexyl)-phthalate
- Hexamethylcyclotetrasiloxane
- Isobutyl hexadecanoate
- Isobutyl octadecanoate
- Methyl chloroform
- 2-Methyl-2,4-pentanediol
- 1,1'-Methylenebis-(4-icocantobenzene)
- Octamethylcyclotetrasiloxane
- Propyl octadecanoate
- Triethyl phosphate
- Xylenes

Maintenance and Renovations

- Schedule maintenance and renovation projects to minimize exposures.
- Conduct IAQ commissioning before occupancy.
- Avoid construction, renovation and maintenance problems.

8. Building Maintenance and Renovations

- Use readily available, zero-VOC or low-VOC, water-borne paints.
- Use zero-VOC or low-VOC epoxy paints for special applications.
- Air out products before delivery to the designated office. Specify open packaging if cross-contamination is unlikely. Cross-contamination could occur, for example, if you stored a new desk or upholstered furniture in open packaging next to a printer, new carpeting, or other potential sources of off-gassing or contamination.
- For all building and renovation materials used in the workplace, copies of Material Safety Data Sheets (MSDSs) must be maintained and made available to employees, as required under the *Hazardous Materials Information Review Act* and the *Canada Labour Code*, Part II, or applicable provincial legislation.
- Samples of products contemplated for use in construction or renovation should be made available to employees who request them, and if possible, should be screened by the individuals most acutely affected by environmental sensitivities who will occupy the building.
- Schedule painting, heavy maintenance and construction or renovation projects during fall and spring months for "free" cooling, with extra ventilation, 24 hours a day, seven days a week, to minimize exposures and accelerate off-gassing.
- Areas under renovation or construction should be physically isolated from occupied areas of the building. Areas under renovation or construction should also remain vacant for a period of several weeks to several months, as required to ensure tolerable accommodation for employees. Buildings that house day-care centres will require strategies to protect children, such as moving them to alternate locations.
- During any of these activities, employees who are environmentally sensitive should be provided with an alternate work site that is safe and well tolerated. Alternatively, if preferred by the individual employee and if appropriate, the employee could work at home, in accordance with the Treasury Board of Canada Secretariat *Telework Policy*, or other relevant policy.
- Ensure that indoor air quality (IAQ) "commissioning"[30] is undertaken before employees move into the building, as a means of verifying that the building will have acceptable indoor air quality. It should be noted that commissioning is a systematic check of the performance of the building systems against their design intent. Commissioning can afford designers and contractors an early opportunity to correct defects in the HVAC system and to avoid later IAQ problems.
- Building management should provide advance notification to ALL employees advising of construction, remodelling and cleaning activities, including the use of paints, adhesives, solvents, wall coverings, carpet shampoo, floor waxes and pesticides. This notification system, in conjunction with a registry, and personal notification by responsible managers of self-identified employees who are environmentally sensitive, will help prevent employee injury and illness. (See section 9, **Employee Notification System and Registry**.)

How an Effective Self-identification Registry Would Function

An employee with environmental sensitivities has self-identified and requested personal notification of building maintenance and renovation activities. She has been on vacation for several weeks and so has not received an e-mail notice that was sent to all employees informing them that solvent glues will be used to apply vinyl wall coverings throughout the building. On the day the employee is scheduled to return from vacation, remodelling will take place on the floor where her office is located. The day before the employee returns to work, her supervisor (or a person designated by the supervisor) telephones her at home to advise her of the remodelling activities. The employee and her supervisor then agree as to the best solution in the circumstances. For example, the employee could work at home for a few days to avoid illness. Better still, more tolerable construction and remodelling materials including low-VOC paints, or cellulose wallpaper and low-VOC glues could have been used in the first place.

9. Employee Notification System and Registry

- ALL employees should be notified in advance by building management of construction, remodelling and cleaning activities, including the use of materials containing volatile organic compounds such as those found in paints, cleaning products, adhesives, solvents, ammonia, chlorine bleach, tar, pressed board, carpeting, wall coverings, carpet shampoo, floor waxes and pesticides. In the case of offices located in leased properties or facilities operated by a landlord or other third party, the implementation of this notification system will require the active participation and cooperation of the relevant building management.
- Conspicuous notices of building projects and maintenance activities should be posted at building entrances, where possible.
- An employee notification system, in conjunction with a confidential registry of individuals who have self-identified as being environmentally sensitive, should be implemented. This registry should be used solely for the purpose of providing notification of building events to the identified employees for occupational safety and health purposes, in accordance with the *Privacy Act* (Canada) or applicable provincial privacy legislation and the *Occupational Safety and Health Policy* published by the Treasury Board of Canada Secretariat, or other applicable policies.
- A supervisor responsible for an employee who has environmental sensitivities must ensure that the employee is personally notified of cleaning or remodelling activities directly affecting the employee, in order to prevent injury and illness.

10. Cleaning and Maintenance Products and Procedures

- Use non-odorous, unscented, zero-VOC or low-VOC, non-toxic cleaning and maintenance products that leave no residual odour or volatile organic compounds. An “environmentally-friendly” label may not protect employees from

exposure to chemical off-gassing from cleaning products.

- Avoid using any cleaning product in the workplace if its MSDS requires the use of protective equipment, such as safety goggles, rubber gloves and extra ventilation, or if the MSDS recommends caution with respect to the disposal of the product.

Cleaning and Maintenance Products

- Use unscented, tolerable, non-toxic cleaning and maintenance products

- Eliminate any product to which an employee reacts.

- Eliminate the use of all waxes. Some people believe that a floor is not clean unless it has a gleaming, polished finish. Although waxes provide a shine that may be cosmetically desirable to some, they are unnecessary and can create a barrier to the workplace for workers with environmental sensitivities, contrary to Canadian human rights laws. Waxes contain volatile organic compounds that may cause reactions, illness and injuries in many employees who are environmentally sensitive. Instead of wax, use tolerated sealants only where necessary to contain volatile organic compounds and to prevent moisture damage to porous surfaces. It should be noted that although the use of a tolerated sealant may not provide a shiny finish, it will make the surface easier to clean.

- Dust and vacuum frequently using a HEPA (or other high-efficiency multi-stage) filter vacuum and a static or damp mop.

- At least once annually, clean all fabric partitions, soft-surfaced walls and plush furniture using a process of simultaneous steam-cleaning and vacuum-extraction, with minimal moisture and without surfactant.

- Carpets, if present in the workplace, should be vacuumed frequently with a HEPA (or other high-efficiency multi-stage) filter vacuum cleaner. In addition, carpets should be cleaned, at least once quarterly, using a process of simultaneous steam-cleaning and vacuum-extraction with minimal moisture and without surfactant.

- Ventilate offices thoroughly after cleaning and ensure that there are no residual pollutants when employees return to the workplace.

- For all cleaning and maintenance products (including chemicals and toners used in photocopiers, printers, fax machines and other equipment) used in the workplace, copies of MSDSs must be maintained and made freely available to employees, as required under the *Hazardous Materials Information Review Act* and the *Canada Labour Code*, Part II, or applicable provincial legislation.

- Samples of any cleaning products contemplated for use in the building should be provided to employees on request and, if possible, should be screened by the occupants of the building who are the most environmentally sensitive.

No-waxing Policy

11. Specific Accommodations for Employees with Environmental Sensitivities

Building managers should:

a) Recognize that sensitivities vary significantly. What one individual who is environmentally sensitive tolerates, another may not. Also

recognize that the same individual's tolerances will vary from one day to the next depending on their exposure profile and history.

b) Check with employees who are environmentally sensitive before bringing new substances into the workplace. As noted above, if possible, cleaning products, building materials and other substances contemplated for use in the building should be screened by employees who are environmentally sensitive. Samples of these substances should be made available to employees who request them.

c) If possible, consult with employees who are environmentally sensitive, in cooperation with employees' supervisors, in an attempt to identify problematic irritants and to remove problems at their source.

d) Cooperate with managers' requests to assign employees who are environmentally sensitive to closed, carpet-free offices or other suitable locations that are located away from pollution sources such as photocopiers, fax machines, printers and vehicle exhaust;

e) Provide a well-ventilated space, with sufficient fresh air and preferably windows that open and that provide sufficient natural light, if appropriate to the needs of the individual in question.

f) Cooperate with any request by an employee's supervisor for tolerated furniture and supplies that have sufficiently off-gassed – usually at least two years old – if the individual so requires. The furniture should not be so old as to harbour dust or mould. Real wood or metal furniture are preferred choices.

g) Provide a ventilated central storage area or closet near the office entrance for storage of coats, boots, files, newspapers, etc.

h) In cooperation with the employer, arrange for the destruction or off-site storage of mildewy files and books. Technology is available, such as microfiche or computer tape, to eliminate the need for long-term storage of paper documents.

i) Cooperate with employers' requests to provide electronic non-polluting news services which are available as an alternative to storing newspapers (with inks that off-gas) in office spaces.

j) Avoid known allergens or triggers such as volatile organic compounds, pets, plants and chalk dust. Whiteboards and flipcharts should be used with tolerated water-based markers as an alternative to chalkboards.

k) Use only tolerated, non-volatile cleaning products.

l) Dust and vacuum offices frequently using a HEPA (or other high-efficiency multi-stage) filter vacuum cleaner.

m) Ventilate offices after cleaning.

n) Provide tolerated flooring such as hardwood, stone, ceramic, natural linoleum or hard vinyl tiles.

o) If possible, provide an individually controlled thermostat.

p) Schedule maintenance and renovations to minimize exposures. (See section 8, **Building Maintenance and Renovation**.)

q) Provide advance warning, in cooperation with management, to employees who are environmentally sensitive of ALL building projects, such as construction, remodelling and cleaning activities, the use of paints, adhesives, solvents, wall coverings, carpet shampoo, floor waxes and pesticides. Implement an employee notification system, in conjunction with a confidential registry of individuals who have self-identified as being environmentally sensitive. (See section 9, **Employee Notification System and Registry**.)

r) Post conspicuous notices of all building projects and maintenance activities at building entrances, where possible.

12. Meeting Rooms Designed to Accommodate Employees with Environmental Sensitivities

Where possible, at least one meeting room in the workplace should be made available which includes the following accommodations for employees who are environmentally sensitive:

- Designate the meeting room as fragrance-free. Individuals booking the room should be advised that no scented products, newspapers, foods or volatile chemicals may be brought into the room. Conspicuously post a sign detailing conditions of use outside the room.

- Other appropriate meeting room accommodations are set out in section 10, **Cleaning and Maintenance Products and Procedures**, and section 11, **Specific Accommodations for Employees with Environmental Sensitivities**.

Meeting Rooms Designed to Accommodate Employees With Environmental Sensitivities

- Fragrance-free and newspaper-free
- Carpet-free
- Openable windows
- Tolerable furnishings
- Portable HEPA air cleaner
- Educate all staff on conditions of use
- Have employees who are environmentally sensitive screen samples of building materials, furnishings and cleaning products as part of the design and accommodation process

CONCLUSION
Environmental Sensitivities – The Hidden Costs

Environmental Sensitivities – The Hidden Costs

- Employee attitude
- Concentration
- Health costs
- Job performance
- Absenteeism
- Vision
- Learning ability
- Total cost of production

Generally accepted indoor air quality standards can place employees at risk. Indoor air quality-related illnesses are not readily diagnosed by doctors. If employers and others fail to acknowledge these symptoms, the result will be avoidable sick leave expenses, lost productivity and possible liability for damages and human rights violations suffered by employees. One way or another, poor indoor air quality results in high costs to employers, and to the employees who suffer from sensitivities.

Providing clean, safe office accommodation for employees will improve their attendance, their ability to work productively and will also help them on their journey to wellness. Moreover, changes made to accommodate the needs of employees with environmental sensitivities will benefit all staff by providing improved workplace environments.

By working together, we can create healthier environments for ALL, and accommodate the needs of persons who have environmental sensitivities.

Endnotes

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Resource List

Organizations Representing Persons with Environmental Sensitivities

H.E.L.P. Saskatchewan (branch of H.E.A.L.)
15 Olson Place, Regina, SK S4S 2J6
(306) 584-2835
Contact: Paule Hjertaas

Canada Mortgage and Housing Corporation
700 Montreal Rd, Ottawa, ON K1A 0P7
(613) 748-2000
Regional offices in every province and territory.

Canadian Human Rights Commission
Human Rights Promotion Branch
320 Queen St, Place de Ville, Tower "A"
Ottawa, ON K1A 1E1
(613) 995-1151

Canadian Lung Association
3 Raymond St, Suite 300
Ottawa, ON K1R 1A3
Chapters: Alberta, British Columbia, Manitoba,
New Brunswick, Nova Scotia, Ontario,
Prince Edward Iland, Quebec and Saskatchewan.
(613) 569-6411, fax: (613) 569-8860
<http://www.lung.ca/>
Contact: Mary Pat Shaw

Canadian Society for Environmental Medicine
Suite 506, 2197 Riverside Dr, Ottawa ON K1H 7X3
(613) 523-0108

Associations by Province

Alberta

Alberta Lung Association
Box 4500, Station South
Edmonton, AB T6E 6K2
(780) 407-6819, fax: (780) 407-6829
Contact: Tracy Bertsch

Society for Environmental Health and Housing
Box 74, Site 22, R.R. #12
Calgary, AB T3E 6W3
(403) 240-2494
Contact: Ethel Patrick

British Columbia

Allergy and Environmental Health Association
(Victoria Branch)
(also known as Ecological Health Alliance)
1019 Lodge Avenue, Victoria, BC V8X 3B1
(604) 384-8892
Contact: Katy Young

British Columbia Lung Association
2675 Oak Street, Vancouver, BC V6H 2K2
(604) 731-5864, fax: (604) 731-5810
Contact: Scott McDonald

Manitoba

Allergy and Environmental Health Association
(Winnipeg Branch)
63 Greensboro Bay, Winnipeg, MB R3T 4K9
(204) 339-1609
<pawlychka@hotmail.com>
Contact: Colleen Pawlychka

Manitoba Lung Association
629 McDermot Avenue, 2nd Floor
Winnipeg, MB R3A 1P6
(204) 774-5501, fax: (204) 772-5083
Contact: John Hutchings

New Brunswick

Allergy and Environmental Health Association
(New Brunswick Branch)
112 Leeside Drive, Moncton NB E1C 4L5
(506) 384-2178
Contact: Murray McInnis

New Brunswick Lung Association
Victoria Health Centre, Suite 257
65 Brunswick Street, Fredericton, NB E3B 1G5
(506) 455-8961, fax: (506) 462-0939
Contact: Ken Maybee

Newfoundland

Newfoundland and Labrador Lung Association
Post Office Box 5250, Stn C
St. John's, NL A1C 5W1
(709) 726-4664, fax: (709) 726-2550
Contact: Peggy Johnson

Nova Scotia

Citizens for A Safe Learning Environment (CASLE)
287 Lacewood Drive, Unit 103, Suite 178
Halifax, NS B3M 3Y7
(902) 457-3002, (902) 861-1851 (902) 885-2395
<am077@chebucto.ns.ca>
<www.chebucto.ns.ca/Education/CASLE>
Contact: Karen Robinson

Nova Scotia Allergy and Environmental Health Association
P.O. Box 31323, Halifax, NS B3K 5Y9
1-800-449-1995
<www.environmentalhealth.ca>
Contact: Eric Slone

The Nova Scotia Environmental Health Centre
P.O. Box 2130, Fall River, NS B2T 1K6
(902) 860-0057, fax: (902) 860-2046
<http://www.nsehc.com/>
Contact: Dr. Roy Fox

Nova Scotia Lung Association
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(902) 443-8141, fax: (902) 445-2573
Contact: Bill VanGorder

Ontario

Allergy and Environmental Health Association
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Contact: Donna Keddie

Allergy and Environmental Health Association
(Ottawa Branch)
Ottawa RPO Shopp/West Box 33023
Nepean, ON K2C 3Y9
(613) 860-AEHA
Contact: Barbara Leimsner

Environmental Health Clinic
Women's College Hospital
76 Grenville Street, Toronto, ON M5S 1B2
1-800-417-7092, fax: (416) 323-7314
Contact: Gloria Fraser, R.N.

Ontario Lung Association
573 King Street East, Suite 201
Toronto, ON M5A 4L3
(416) 864-9911, fax: (416) 864-9916
Contact: Ross Reid

Prince Edward Island

P.E.I. Lung Association
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Charlottetown, PE C1A 9L2
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Contact: Vicky Bryanton

Quebec

Quebec Lung Association
800, de Maisonneuve Est, bureau 800
Montreal, QC H2L 4L8
(514) 287-7400, fax: (514) 287-1978

Saskatchewan

H.E.L.P. Saskatchewan (Branch of H.E.A.L)
15 Olson Place, Regina, SK S4S 2J6
(306) 584-2835
Contact: Paule Hjertaas

Lung Association of Saskatchewan
1231 – 8th Street E., Saskatoon, SK S7H 0S5
(306) 343-9511, fax: (306) 343-7007
Contact: Dr. Brian Graham

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Appendix A

August 3, 1988

The Honourable Jake Epp, P.C., M.P.
Minister of Health and Welfare
Brooke Claxton Building
Tunney's Pasture
Ottawa, Ontario
K1A 0K9

My dear Minister:

The Commission has recently been contacted by , with whom I think your office may already be familiar. suffers from environmental hypersensitivity, and is concerned that the nature of that complaint has not been sufficiently recognized by government authorities and that this, in turn, has added to the social and professional hardships which and other sufferers from this condition are subject to.

Some years ago, lodged a complaint with the Canadian Human Rights Commission; the Commission did not feel the complaint could properly be dealt with under the Canadian Human Rights Act. I am sure it was not the Commission's intention at the time to question the authenticity of 's condition. It is my understanding that environmental hypersensitivity is a true medical problem, and that we owe it to people who have the misfortune to suffer from this syndrome to be more public and more positive in acknowledging that fact.

As you know, recently brought concerns to the Standing Committee on National Health and Welfare, where received a sympathetic hearing (HC Issue No. 48, May 26, 1988). On that occasion, expressed the hope that the Health Minister would state publicly that he is sympathetic to the plight of those who suffer from environmental hypersensitivity and considers their concerns legitimate.

My purpose in writing to you is simply to let you know that we consider this request a reasonable one and that anything your department can do to increase public awareness of the legitimate concerns of people like , would, in our view, be most useful.

Yours sincerely,

Maxwell Yalden
Chief Commissioner
Canadian Human Rights Commission
90 Sparks Street, Ottawa, ON K1A 1E1

Appendix B

January 22, 1996

Dear :

In your letter of January 13, 1996, you make some erroneous statements which need to be corrected. At no time has the CMA encouraged the media or others to think of the concerns of those individuals with environmental sensitivities as synonymous with those of practitioners whose methods are unacceptable or not mainstream. We have not made any public statements on alternative therapies other than that the term "alternate" for alternative therapies covers a wide spectrum of activities, some of which are becoming more accepted into usual medical practice and others that are devoid of any evidence of therapeutic value to patients.

I am glad that you do accept that there are many physicians who are acutely aware of the problems of environmental sensitivities and have expertise in this area and are addressing the needs of patients with such sensitivities. I am sorry that you think that the prevailing impression is that organized medicine does not consider the health complaints of these consumers legitimate.

I am sure that you agree that confusing individuals with health problems with therapies used to address them is counter-productive and leads neither to a better understanding of complex problems nor of better care for individuals.

Yours sincerely,

Carole A. Guzman, M.D., FRCPC
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