

**WCB PUBLIC HEARINGS
BOMA BC PRESENTATION**

October 4, 1996

Introduction

Good afternoon... On behalf of the Building Owners and Managers Association of British Columbia, I am pleased to bring you our views on the WCB's Draft Occupational Health and Safety Regulations.

My name is Paul LaBranche and I am Executive Director of BOMA BC.

I am here today representing over 200 member firms in the commercial real estate industry.

Together, throughout the province, our members:

- represent more than \$5 billion in commercial real estate, and
- own or manage about 100 million square feet of commercial and government office space.

In addition to the general remarks I will be making today, I would like the review panel to know that BOMA will also be submitting a more detailed position paper which will expand on the issues important to our organization...issues which we believe are important to both a healthy working and a healthy economic environment for British Columbians.

No Need for Regulations!

Our association's principal concern with the proposed OSH regulations are with the issue of Indoor Air Quality. It's an issue our members know a great deal about.

In discussing this complex issue, however, it is important to take a step back and examine the **need** for indoor air quality regulation. We know this regulation is not proposed in order to protect worker health or safety. The Final Report of the WCB's Occupational Hygiene Subcommittee makes it perfectly clear that establishing a carbon dioxide level to control indoor ventilation is an indicator of **COMFORT**.

When we met with you on this issue last year, you told us that you had no evidence to suggest that IAQ was a widespread health problem. You referred to an estimated 220 telephone inquiries, in 1994, as an indication of some possible problem and you further mentioned that 25% of those inquiries were about tobacco smoke.

- You also told us, however, that there was not one record of investigation into this issue.
- And - as you know - NOT ONE...I repeat.... NOT ONE claim for health problems or lost work resulting from indoor air quality has ever been awarded by the WCB.

We're not surprised by this.

In order to assemble our own information on the extent and scope of problems experienced by building tenants, BOMA reviewed the results of over 500 independent IAQ investigations undertaken in non-industrial workplaces in British Columbia. Although causes of the discomfort reported by building occupants were associated primarily with heating, ventilation and air conditioning (HVAC) systems, not one of these investigations identified a material impairment to health resulting from IAQ.

At one of our meetings, one WCB official referenced the hype around sick building syndrome. Well it is hype. Our BC government medical health officer - the Ministry of Health's head of toxicology, Dr. Ray Copes, will tell you that some people complain of illness for a whole host of reasons - but it is incorrect to attribute this to the over-stated sick building syndrome. In fact, the Doctor says that "sick building syndrome" as an entity, does not exist. It is NOT even a medically recognized condition.

The WCB has presented no evidence of a health problem that requires regulation. There have been no studies commissioned by the WCB...no research...no cost-benefit analysis...no studies on energy consumption...and no studies on how increased energy use will affect our environment.

So what, then, is driving this need to regulate indoor air quality comfort? If it's not the WCB -- then who? We haven't heard of any public or industry demand for more regulation. A recently reported study says that Canadian families already pay about \$12,000 because of government regulation.

It's certainly not the people who work in our offices. In October of last year, we provided you with a comprehensive, independently researched survey in the U.S. on indoor air quality and, as you heard from an earlier presentation, over 80% of office tenants gave a "thumbs up" to the quality of their indoor air.

In 1994, the Windsor Study, commissioned by the Ontario Ministry of Environment (ISBN 0-7778-3488-x, Queens Printer) examined contaminate levels both indoor and outdoor for the city of Windsor, Ontario. That study concluded that office buildings generally had superior air quality to residential homes.

So, we come to that still unanswered question as to what's driving this need to regulate comfort levels in our buildings. It's clear that there's no evidence of a health threat. The fact of the matter is we are here discussing this because the WCB has had the authority for regulating office building comfort dumped on its lap from the Ministry of Labour. This was done without political debate nor public knowledge.

What was once a part of the Workplace Act (formally the Factories Act) is now with the politically independent WCB. Following this, you then have a small committee representing the interests of big business and labour negotiate...I repeat negotiate... the idea that the WCB should regulate worker comfort - in every workplace throughout BC. And from this, you bring forth stringent, unworkable regulations that are no where else to be found.

In Washington State, the Department of Labor considered IAQ regulations in 1993. A year later, after statewide public hearings, Mark Brown, the Director of the Washington State Dept. of Labour, tossed out the proposal for IAQ regulations, making them instead voluntary guidelines. In his reason for their decision, Mr. Brown stated, quote:

"After a review of the testimony and comments received from the hearings, I made the judgment that, with the exception of environmental tobacco smoke in offices, the proposal for mandatory Indoor Air Quality standards is not appropriate at this time."

And so we've arrived at this point **without any public consensus** that workplace IAQ regulation is even desired let alone required. To be sure...ensuring that indoor air quality standards help maintain worker health and safety makes obvious sense.

But these air quality regulations do something very different. They attempt to regulate "comfort". Not health and safety ..."comfort". And in this sense, if brought into force, these regulations would drastically overstep the Board's fundamental mission of protecting worker health and safety.

...BOMA BC at the WCB Hearings continued

What is Wrong with the Proposed Regulations

Let us now move onto a point-by-point discussion of what is specifically wrong with the proposed regulations. In Part 4.67(c), the draft regulations would create a requirement of:

"using a carbon dioxide level of greater than 500 ppm above ambient outdoor levels as an indicator of insufficient outdoor air supply..."

This is **inconsistent** and **contradictory** to Part 4.63.1(b)...which states that ventilation systems should be designed and operated in accordance to the ASHRAE ventilation standard 62-1989 "Ventilation for Acceptable IAQ". In ASHRAE standard 62-1989, the ventilation rates are based on an indoor/outdoor CO₂ differential of 700 ppm, not 500 ppm.

Therefore, the proposed IAQ regulation on the one hand requires the use of the ASHRAE Standard...then immediately contradicts itself by requiring a CO₂ level inconsistent with the ASHRAE Standard! An indoor/outdoor CO₂ differential of 500 ppm (rather than 700 ppm) would result in outdoor air requirements substantially above established engineering principles such as ASHRAE Standard 62-1989. And it should be noted that the ASHRAE standard forms the basis for ventilation system design to meet the requirements of the BC Building Code, the Vancouver Building Code and the National Building Code.

So if this standard is good enough for all of those Building Codes...WHY isn't it good enough for the authors of these poorly thought-out regulations? Were they aware that their regulations contradict **two** provincial regulatory initiatives? The National Energy Code, currently being adopted into the BC Building Code to reduce energy use in buildings. As well, the Ministry of Environment Ozone Depleting Substance (ODS) Regulations, intended to minimize the use of ODS in building HVAC systems.

Part 5 of the draft regulations includes a Table (5-1) of occupational exposure limits for indoor contaminants. Section 5.72 restricts the allowable concentrations in air discharged into a workplace to 10% of the applicable exposure limit listed in Table 5-1.

BOMA has contacted two organizations recognized as worldwide leaders in setting exposure standards: the American Industrial Hygiene Association (AIHA); and the American Conference of Governmental Industrial Hygienists (ACGIH). **Neither organization supports or endorses the 1/10 rule of thumb proposed by the WCB.**

And the reason for this is clear. If applied, this would limit carbon dioxide to 500 ppm and carbon monoxide to 2.5 ppm and that, our environmental consultants tell us, would be virtually impossible to comply with given current HVAC technology.

There is a lot more that's wrong with these regulations and we will expand upon them in detail in our written submission.

Impact of Regulation

Now, I'd like to address the impact of the regulations. We urge the Board to consider the incredible cost associated with such unwarranted, unreasonable and unworkable proposals.

1. The capital cost requirements to upgrade the current provincial building stock (including government office buildings, commercial office buildings, retail buildings, schools, and universities) to meet the proposed IAQ regulation is estimated by BOMA to be between **\$500 million to one billion dollars**, based on a BC Hydro province-wide inventory of building types.

And remember, it will be the businesses and government that lease office space and, in the case of schools and universities, the taxpayers of BC who will pay these costs. Now if business and the public were being asked to absorb these increased costs ...on the basis of improving worker health and safety...or on the basis of accepted scientific standards...I'm sure their response would be quite reasonable.

But that's NOT what we're talking about in these IAQ regulations. We're talking about up to one billion dollars to pay for an ill-defined notion that indoor air comfort must be regulated.

2. The impact on **energy consumption** for the existing provincial building stock for the increased ventilation, heating and cooling requirements resulting from these proposed regulations is estimated by BOMA to be as high as **one hundred million dollars** a year.

Do we even have in place the electrical and gas reserves to meet this demand? Will we need a new hydro-electric dam? These are serious questions that must be addressed before considering any regulation.

3. The increased energy required to operate buildings to comply with the regulation will also increase **greenhouse gas emissions**. Does it make sense to further pollute our outside air in order to regulate the comfort of indoor air?

4. It's more than just office buildings that will be affected by this regulation. The requirement for industry to meet the one tenth exposure level may force wood and pulp processing plants throughout the province to close. Other impacted industrial jobs could include mining, electronics manufacturing and fabrication. Are workers in these areas going to be more comfortable if they lose their jobs!

BOMA Recommendations

In conclusion, BOMA believes the Board faces an important challenge. While a great deal of effort has gone into the draft regulations, we clearly have a portion of the package that **cannot go forward**. These proposed IAQ regulations go way beyond the WCB's mandate of protecting worker health and safety. The wording in the regulations is vague in the extreme and in many cases would be unenforceable.

There is no evidence nor reason for the WCB to accept these regulations. There is no industry consensus. They are simply not justified. Notwithstanding the above, should you decide to proceed with these IAQ regulations for whatever reasons, BOMA has two specific recommendations:

1. **That, the acceptable CO₂ guideline for ventilation supply sufficiency should be raised to 700 ppm above ambient and the one tenth exposure level requirement for discharging air should be deleted.** A CO₂ requirement of 700 ppm above outdoor levels would provide consistency with the current North American ventilation standard, ASHRAE 62-1989.

2. **That an exemption statement be included in the regulation, which recognizes the limitations of HVAC systems designed under previous ASHRAE standards in supplying outside air ventilation rates to commercial and institutional buildings in accordance with the standard available at the time of construction.**

We hope these comments and suggestions are helpful. As I said, our written submission will be coming to you in the days ahead - we hope you will find it useful and informative. In the meantime, I would be pleased to take any questions you might have...Thank you.

BOMA INTERNATIONAL COMMENTS ON PROPOSED INDOOR AIR QUALITY REGULATIONS DEVELOPED BY WORKERS COMPENSATION BOARD OF BRITISH COLUMBIA

September 17, 1996

Introduction

My name is Jon Markoulis and I am here today as a Governor of BOMA International to present our comments to the Workers

Compensation Board on your proposed indoor air quality regulations.

BOMA International is the oldest and largest association exclusively representing the office building industry. Its 15,000 members collectively own or manage over 6 billion square feet of commercial and government office space in North America. The membership - composed of building owners, managers, developers, leasing professionals, facility managers, asset managers and providers of goods and services - collectively represents all facets of the commercial real estate industry. BOMA is firmly established as the respected resource on legislative, regulatory and codes issues affecting office properties. Since 1911, BOMA BC has been a member of BOMA International.

Indoor Air is an Ongoing Concern

As the premiere association representing the office building industry, BOMA International has long recognized that indoor air quality is a significant issue that deserves responsible attention. Good indoor air quality is a marketplace demand - one of the things that tenants expect in exchange for the rent they pay. It is therefore in the best interest of building management, to prevent indoor air problems from occurring and to respond to any complaints in a timely, professional and efficient manner.

There is no question that indoor air quality is a serious concern - though there is often confusion over what exactly constitutes indoor air quality. It is not thermal comfort (being too hot or too cold). It is not adequate ventilation, unobstructed circulation and removal of contaminants.

Of all the steps taken to address an indoor air problem, few are as important as the concerned and professional attention given the tenant. Regardless of the potential cause or the final outcome, to the tenant the problem is real and demands immediate attention. Building management strives to handle complaints in a timely and professional manner, while educating tenants that the responsibility for addressing indoor air quality is shared by all.

Hype Does Not Help

Unfortunately, a few well publicized cases have been played up in the media and elsewhere as representing a widespread health epidemic - as if people were unable to continue working at their desks because of poor indoor air. Certainly there have been instances of people being affected by exposure to poor indoor air, but that is not the norm. We maintain that legitimate indoor air quality concerns will not be solved by premature or unnecessary regulations springing from a serious over-estimation of the extent to which this issue affects occupant health, as opposed to comfort.

Building management has long held that sound science and reliable guidance are needed in order to responsibly address indoor air quality. Market pressures already dictate the requirement for high quality indoor air. What is needed is the identification of source contaminants, along with proven steps to reduce or eliminate problems. The Workers Compensation Board appears to be side-stepping this approach in favour of a far-reaching regulatory proposal that deals with occupant comfort and puts the compliance burden squarely on building owners and managers.

BOMA Leads by Example

Over the past several years, BOMA has demonstrated its commitment to obtaining the best information on this complex subject and disseminating practical guidance to building professionals. BOMA International worked alongside the US Environmental Protection Agency (EPA) to develop its Building Air Quality manual and co-sponsored a nationwide seminar series that reached 60 cities. The Building Air Quality manual advocates a three-pronged approach in preventing indoor air quality problems; filtration, ventilation, and source reduction. Generally, the challenge for building management is to identify

the contaminant source and either remove it or provide exhaust fans for it. BOMA Canada recently contributed \$50,000 to the National Research Council to sponsor a new emissions and indoor air quality laboratory.

One of the most obvious and widespread sources of indoor air complaints is tobacco smoke. In 1993, environmental tobacco smoke was classified as a Group A carcinogen, and BOMA resolved to support a federal ban on smoking in the workplace. Given the solid scientific evidence connecting second hand smoke with occupant health, BOMA supports removal of this indoor air contaminant or its restriction to separately ventilated areas that will safeguard non-smoking building occupants and guests. This is an essential step to improved indoor air quality that focuses on controlling the problem at its source, rather than managing or diluting it.

BOMA is also working to educate office building occupants on their role in maintaining a healthy indoor environment. From smoking to cleaning to cooking, as well as the furnishings and other materials introduced into the building, tenants have an impact they may not fully realize on the quality of indoor air. That is why BOMA developed an occupant's guide, "Improving the Great Indoors", which provides the necessary education and practical tips on identifying and controlling the common sources of indoor air pollution in the workplace. Over 50,000 of these brochures have been distributed to office building occupants across North America.

Data Shows Indoor Air Quality Not an Epidemic

As building professionals know, the subject of indoor air quality does not lend itself to easy answers or 'one size fits all' solutions. Buildings differ substantially in terms of age, usage, occupant type, pollutant sources and mechanical ventilation system design. Occupants also differ one from another in their activities, perceptions and sensitivities. When complaints are investigated, the challenge for building management is to discern a pattern in occupant reports, trace pollutant pathways and determine if those complaints can ultimately be linked to a particular source or sources. Frequently in this process, initial assumptions miss the mark - and even the most diligent investigation may fail to provide a satisfactory explanation for the complaints being registered.

Before regulations are proposed, it is important to ensure that the right questions are being asked about indoor air quality and that accurate data are at hand. Government and the private sector share a three-fold challenge: to determine the facts; investigate the role of occupant perceptions; and accurately gauge the extent of demonstrable health problems.

Last year, BOMA International and other real estate organizations commissioned an extensive survey of workplace professionals in the United States, designed to accurately gauge the extent of indoor air quality concerns. A copy of this has been forwarded to the Workers Compensation Board. The findings reflect what building owners and managers know from

...BOMA International at the WCB Hearings continued

...experience; that indoor air quality is not a widespread health problem and certainly not one calling for regulation.

The survey was carried out by a reputable, independent research firm that place random calls to persons at home and asked them numerous questions regarding their workplace air quality. Over 10,000 prospects were contacted, with completed interviews obtained from a geographically balanced sample of 858 full-time workers in commercial buildings. The questionnaire was developed jointly by the research firm and the real estate groups involved. Comments were also received from the US EPA's Indoor Air Division with an eye toward ensuring that the survey did not reflect any unintentional bias.

Among the Key Findings:

- 80% of workplace professionals say their indoor air quality is "okay", "good", or "excellent".
- When asked whether workplace indoor air quality is ever a problem, 71% of respondents said "never". Of the remaining respondents, half indicated it was rarely a problem.
- Among those who said that the air in their workplace is ever a problem, two-thirds have never felt ill because of it.
- Temperature, air flow and humidity concerns (comfort related, not health related) were mentioned most frequently when respondents were asked to indicate the source of their concern.
- Another frequently cited group of air problem was tenant influenced, i.e., cleaning chemicals, emissions from photocopiers, cooking odours, etc.
- Causes of indoor air quality problems that were potentially building related or health related - specifically dust/dirt/mold and HVAC design and maintenance - constituted a distinct minority of the factors identified by survey respondents.
- Of those persons who have complained to someone in authority about indoor air, two-thirds report the response to be prompt and professional. The highest marks went to building managers and building engineers, whose response was rated satisfactory over 80% of the time.
- Just under 8% of all respondents claim to have ever felt ill due to their workplace air. Among that group, a variety of symptoms was mentioned - led by coughing, sneezing and other cold and flu-like symptoms.
- Less than 3% of respondents reported missing any days at work over the past year because of the indoor air quality. The total time missed, as a percentage of days worked by all survey respondents, was extremely small (0.06%).

These findings confirm the experience of real estate professionals - that building occupants are not experiencing widespread health problems because of poor indoor air. Any approach to this complex issue must be based on reliable evidence, not supposition. The challenge remains to separate heresy from reality, complaints from illnesses and perceptions from facts. Clearly, additional research is needed to begin to explain why some people are more prone to complain about indoor air quality than others....to what extent different factors influence occupant health...and what can be done to target the sources of poor indoor air.

Regulations: Premature and Unwarranted

Without a much better understanding of the dynamics involved in this issue, a major new regulatory program is unwarranted. A safe, comfortable work environment is what tenants demand in exchange for their rent. In response to these demands, more attention has been focused on this issue than ever before. Building management is clearly aware of the need to respond to occupant concerns in a timely, professional manner. Armed with sound research and practical guidance, real estate professionals

can address the causes of indoor air problems, rather than being put in the self-defeating position of 'managing' those concerns through regulatory fiat.

Voluntary efforts must be given a chance to work. As additional scientific scrutiny is clearly needed to shed light on the causes of indoor air quality problems - and the role of occupant perceptions - regulations are premature and may well be proven unnecessary. BOMA must take issue with this regulatory approach that:

- Is not justified by any proven 'health threat'.
- Focuses on the 'management' of indoor air complaints rather than focusing on the many potential sources of pollutants indoors.
- Places of significant record-keeping burden on building owners and managers - causing much time and expense to be sent on gathering information rather than on identifying and remedying the causes of indoor air quality complaints.

- Calls upon BC building owners to provide amounts of outside air ventilation substantially in excess of ASHRAE Standard 62-1989.

Indoor air quality regulations are unjustified absent of sound scientific research demonstrating that the hundreds of millions of dollars spent to comply would actually serve to remedy problems - instead of having building owners 'chase their tail' through record-keeping, formal complaint response mechanisms, etc. In short, the proposed regulations concerning indoor air quality are not needed, will needlessly cost both public and private buildings owners millions of dollars and conflict with many aspects of the building code.

What is Needed Now!

Simply put, good indoor air is more than an amenity - it is a marketplace demand. If the air quality is unsatisfactory, tenants will be inclined to rent space somewhere else.

We recognize indoor air quality as a legitimate concern, apart from the hype fuelled by some.

We need research - to determine the facts concerning indoor air quality. Heresy evidence does not suffice and should not drive this issue.

We need identification - of contaminant sources and solutions. We must aim at the target before shooting.

Clearly, indoor air quality is a concern requiring serious attention. Given the dedicated efforts of all parties involved in the issue, we can develop and begin to answer the questions, develop the solutions and implement sound and cost-effective procedures.

I would be pleased to answer any questions or provide any further information that the Workers Compensation Board may find useful. Thank you very much for this opportunity to provide our comments from the vantage point of those responsible for the management of office properties in British Columbia and throughout North America.