

Environmental News

FOR THE STAFF & CLIENTS OF PHH ENVIRONMENTAL LIMITED

STAFF UPDATES & NEWS

Richmond Office

Michael Kennedy joined our office as a Technologist. Michael recently graduated from BCIT with a Diploma in Building Technology. We are also welcoming Catie Robertson to our office as she has transferred from the Victoria location.

Edmonton Office

Gordon Halbert has come on board as our newest Technologist in our Industrial Hygiene division. He brings with him extensive experience in the petrochemical industry. Richard Kolada has joined PHH as a Senior Project Manager, bringing his expertise in emergency planning, hazardous materials, ISO 9000 and 14000 and ventilation engineering. Also joining us is James Phillipow. James is a Project Manager in Occupational Hygiene. Lil Moro has achieved her Professional Ergonomics Designation. Regena Denys has joined us as well as Office Administrator. Jim Bagley spoke at the BOMA/Envirotest Fungal Jungle forum in October in Calgary and Edmonton. PHH was the corporate sponsor at the Harley Grey Cup Open Squash Tournament in November.

Calgary Office

Thuy Nguyen is our newest Technologist at the Calgary office. Thuy has her Diploma in Occupational Hygiene Technology from Mt. Royal College and brings with her experience in hazardous material abatement projects.

Victoria Office

Julie Bowman has joined our Victoria office as a Technologist. Julie graduated from the University of Guelph with an Honours Degree in Environmental Science. She has completed several volunteer environmental initiatives including an environmental assessment of Lake Ontario at the Centre for Heritage and the Environment in London.

Regina

Brodie Anderson has joined our Regina office as a Senior Project Manager. Brodie has a Masters of Environmental Design from the University of Calgary. His most recent areas of practice have been in Sustainable Management and Environmental Management Systems.

Toll Free Number

You can reach us toll free from anywhere in North America at 1-877-322-4744 or 1-87-REACHPHH.

WINTER/SPRING TRAINING COURSE SCHEDULE

Hazards and Control of Mould in Buildings	February 3	Mississauga	1 day
Asbestos Training for Maintenance Workers	February 17	Mississauga	1 day
Hazardous Materials Management	February 22	Vancouver	1 day
Microbial Remediation in Buildings	February 24	Vancouver	1 day
Microbial Remediation in Buildings	February 25	Victoria	1 day
Office Ergonomics	February 25	Prince George	½ day
Office Ergonomics	February 28	Vancouver	½ day
Office Ergonomics	February 29	Victoria	½ day
Indoor Environmental Quality	March 14	Vancouver	1 day
TDG/IATA	March 14	Prince George	1 day
Indoor Environmental Quality	March 15	Victoria	1 day
TDG/IATA	March 15	Vancouver	1 day
Indoor Environmental Quality	March 16	Prince George	1 day
Office Ergonomics	March 16	Edmonton	½ day
Asbestos Certified Worker	March 21/22	Edmonton	2 day
Environmental Management Systems	March 22	Vancouver	1 day
Environmental Management Systems	March 23	Victoria	1 day
Asbestos Training for Maintenance Workers	March 23	Mississauga	1 day
Environmental Management Systems	March 24	Prince George	1 day
Environmental Management Systems	March 27	Regina	1 day
Environmental Management Systems	March 29	Edmonton	1 day
Microbial Remediation in Buildings	March 29	Regina	1 day
Indoor Environmental Quality	March 30	Regina	1 day
Asbestos Control in Buildings and Industry	April 4-6	Mississauga	3 days
Asbestos Management	April 6	Saskatoon	1 day
Hazards and Control of Moulds in Buildings	April 13	Mississauga	1 day
Introduction to Environmental Management Systems	April 13	Regina	1 day
Asbestos Training for Maintenance Workers	April 20	Mississauga	1 day
Environmental First Responder	May 4	Prince George	1 day
Environmental First Responder	May 5	Vancouver	1 day
Asbestos Training for Maintenance Workers	May 25	Mississauga	1 day
Hazards and Control of Mould in Buildings & Industry	June 8	Mississauga	1 day

For more information please contact the appropriate office listed below.



**Environmental, Occupational
Health and Safety Services**

1-87-REACH-PHH

COMPANY PROFILE

PHH Environmental Limited is a full service consulting company which specializes in providing environmental, health and safety services. PHH offers assurance and peace of mind through its proven emphasis on practical and professional service.

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MOULD LITIGATION AND DUE DILIGENCE

By Jim Bagley, M.C.I.O.B.

Previous issues of the Environmental News have highlighted the hazards of mould in buildings and described the measures needed to assess and remediate mould. Mould contamination is however, not only a disruptive and costly problem to remedy, it can also be the subject of litigation, with settlement costs in some cases reaching eight figures!

In general, Canada is less litigious than our neighbours south of the border, where some of the more substantial cases have been tried. However, several cases are pending in Canada and inevitably a large judgement will focus our



Worker remediating mould from a leaky building.

attention more closely. A close parallel can be seen with asbestos litigation in the late 1980's.

A mould contaminated building impacts on a wide range of stakeholders. Some of the parties involved will have a special relationship such as employee/employer, and our no-fault compensation system may limit claims in this relationship. This system does not, however, cover other parties such as landlords and tenants (both commercial and residential), and building occupants such as schoolchildren.

Very little case law is yet available in Canada.

One of the earliest references in the journal of the Canadian Bar Association is to a 1989 Quebec Tribunal (Bureau de Revision de la Commission de la Santé et de la Sécurité au Travail), which found that the province's health and safety legislation was violated by significant growth of *Stachybotrys Chartarum* in a building.

Minnesota Courts have ruled against insurance companies attempting to exclude coverage for mould, mycotoxin and allergen contamination under the "pollution exclusion" of their insurance policies.

In 1995 the Reliant Insurance Company was ordered to pay the owners of Polk County Courthouse \$40 Million to remedy toxigenic mould growing in a building. Personal injury claims were settled for approximately \$10 Mil-

lion. In an even more spectacular judgement, a \$400 Million class action suit was settled between The New Museum of Contemporary Art in New York and its employees. *Stachybotrys Chartarum* found growing on building materials in a sub-basement was found to have caused immune dysfunction.

One of the most important developing cases in Canada, both for the scope and potential impact on building owners in the public sphere is the \$2 billion class action lawsuit launched against the Dufferin Peel Catholic District School Board in Ontario. This lawsuit alleges that children in the board have been adversely affected by mould exposure in school buildings, particularly portable classrooms and other 'temporary facilities'. Peel has been a hotbed of public concern over mould in schools. In March of 1999 the regional medical officer of health ordered the public and Catholic boards to inspect and remediate over 1100 school portables and portapack classrooms, failing which, they would not be reoccupied in September.

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SO WHAT IS AN ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)?

By Brodie Anderson, M.E.Des.

You, your customers, neighbors and the people concerned about protecting your interests (your insurers, regulators, investors, etc.) are affected by your companies operations.

In the event of a spill or accident, they will require a statement of the actions your company is prepared to take to safeguard their interests. An Environmental Management System effectively provides the concerned parties with this diligence statement.

An EMS will explain the measures to take to ensure that the health of your workers and the 'health' of the physical environment surrounding your operations meet acceptable standards.

AN ENVIRONMENTAL MANAGEMENT SYSTEM

EMS components should prescribe the standards and procedures required to ensure a

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It is clear that in the light of not only a potential health hazard to occupants, but also the very real threat of a substantial lawsuit, building owners and managers need to do all they can to mitigate their risks. The best defence against any form of health and safety litigation is "Due Diligence". Have I done all that is reasonable in the light of current knowledge to prevent this problem from occurring?

Mould contamination in a building is entirely preventable - if a suitable nutrient source and water is not available, moulds will not amplify. Having said that, inspecting a large facility or extensive property portfolio and ensuring that it is free from water damage can be a major task. Often some of the early symptoms of mould are not attended to quickly enough - reports of musty odours or staining on ceiling tiles or drywall finishes. Routine maintenance tasks such as clearing gutters and ensuring that caulking is intact should take on a higher priority as the impact of not doing so could prove several orders of magnitude higher than the effort expended.

Public Works and Government Services Canada has produced guidelines that should help property owners and managers achieve and maintain a healthy building environment.

Their strategy comprises:

- good design in accordance with accepted standards;
- formal commissioning to ensure building systems are functioning as intended;
- an active preventative maintenance program;
- regular periodic inspections by the property manager;
- investigation of any environmental problems or complaints;
- testing and special in-depth investigation by consultants (in-house or external) where problems persist;
- open communication including a service-call system for tenants;
- meetings with tenants and their safety and health committees and consultation with health and other regulatory officials.

NB Thanks to Brian J Evans QC of Miller Thomson, Barristers and Solicitors, Calgary Alberta for providing case law and to Bruce Stewart CIH, ROH of Pinchin Environmental, Mississauga Ontario for providing school information.

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company's processes and activities that impact the environment are conducted in the intended manner.

An effective EMS integrates a firm's business practices with expected industry standards.

To accommodate annual operational reviews (e.g. budgeting) and to ease external party or investor relations, a company typically prepares and publishes a fully integrated business plan EMS.

Many EMS programs are based on a blend of elements found in international certification systems, industry codes of practice, and specific performance protocols employed in environmental audit systems.



EMS - Improving environmental compliance.

The salient characteristics common to most include:

- A Corporate Environmental Policy Commitment
- Explicit recognition of Environmental Conditions
- Environmental Performance Targets and Objectives
- EMS Establishment Procedures
- Environmental Management Action Plan(s)
- Environmental Performance Reviews

EMS DEVELOPMENT

Intensive development of a standard Environmental Management System (EMS) began during the early 1980's. Business interests attending the Uruguay Round of GATT, who supported the removal of any non-tariff trade barrier, were concerned over the proliferation of inconsistent national and regional EMS standards.

Their agreement with delegates interested in international commitment to environmental protection (the 1992 Rio Conference on the Environment) led to what many hoped would become a single global environmental management system.

Their intention was to create uniform and effective environmental management measures that safeguard against negative trade and commerce impacts.

CERTIFICATION OF ENVIRONMENTAL MANAGEMENT SYSTEMS

An international ISO 14000 series emerged, covering over 20 separate but related environmental standards - a voluntary program serving to accentuate internal quality policies, manage marketplace expectations and implement an overall strategic environmental quality program.

Although many companies and national regulators wanted ISO 14000 to become "the" industry standard, this system was not designed to supplant any government regulatory requirements nor require conformance to any environmental performance level - other than company commitment to comply with applicable legislation and regulations.

Several countries had their own environmental standard certification systems. The British Standard Institute's (BSI) BS 7750 and the European Union's Eco-Management and Auditing Scheme (EMAS) were two of the first EMS model systems.

Several American systems (American National Standards Institute - ANSI - or those of the Environmental Protection Agency) and the Canadian Standards Association (CSA) environmental system also provide national templates.

But no single system is necessarily correct in all aspects for all applications.

INDUSTRY CODES OF PRACTICE

Many industrial codes of practice, such as the CERES principles (Coalition for Environmentally Responsible Economies), World Business Council on Environment programs (WBCSD) or the International Chamber of Commerce (ICC) Business Charter Guidelines also provide valuable benchmark characteristics.

Several environmental labeling programs also provide further EMS protocol templates. Agreements with public authorities and non-regulatory guidelines also contribute valuable characteristics.

ENVIRONMENTAL AUDIT PROTOCOLS

Environmental auditing systems, similar in scope to environmental management certifica-

tion systems, also provide reference material for the design of an effective EMS. Audit protocols used by the DNV (Det Norske Veritas) - International Environmental Rating System (IERS) system or the European Union Eco-Management and Audit Scheme (EMAS) provide a test of a company's EMS effectiveness and industry conformance.

A CORPORATE CONTENT - ENVIRONMENTAL POLICY STATEMENTS

An EMS ideally reflects the company's corporate policy framework and culture. It provides a level of corporate commitment as well as guideline statements to support those initiatives.

The statement commits to environmental protection, compliance with regulations, continuous environmental performance improvement and open communication of performance.

Environmental Policy typically addresses the underlying rationale for environmental initiatives, commitment to resolving main environmental issues. It describes responsibility for environmental policy and Board of Director sanctions.

ENVIRONMENTAL PERFORMANCE OBJECTIVES AND TARGETS

Environmental targets usually address broad environmental issues (e.g. energy conservation). Objectives establish specific solution or activity endpoints - i.e. measurable environmental impacts (e.g. solid waste reduction). Both are typically determined in the annual planning cycle.

Operational targets and objectives define the direction and magnitude of environmental attention. They also provide a basis for measuring improvement in performance.

Targets and objectives must meet appropriate criteria. They must be measurable, concrete, attainable, and affordable, as well as clearly defining required authorities. They frequently contribute to sustainable corporate management initiatives

ESTABLISHMENT OF AN EMS

Establishing the EMS requires executive leadership with sufficient responsibility and authority to champion consistent delivery. This leader constantly monitors Health/Hygiene Controls, Environmental Protection and Emergency Preparedness. S/he evaluates achievement of targets and objectives and ensures insurance coverage.

System implementations typically include permit verification, monitoring review, safety evaluation and overall site assessment. EMS

performance is reported to Sr. Management, usually involving a review of work instructions, monitoring or control procedures and the verification of compliance.

Environmental performance frequently includes review of waste management, emergency preparedness, issue management and community relations, ordinarily supported by training and awareness programs.

ENVIRONMENTAL MANAGEMENT ACTION PLAN(S)

Action planning is central to the entire system. Plans explain a company's environmental challenges, its areas of greatest environmental exposure and the actions required to implement environmental targets and objectives. This places company policies and operating procedures into the intended context.

Detailed operating procedures (e.g. data collection, reporting, tracking, monitoring, recording, inspection, maintenance, calibration, and contractor/supplier requirements) support protocol implementation. This data also supports environmental performance improvement, regulator contact, training, and the preparation of necessary environmental financial plans.

IMPLEMENTING CONTINUOUS DUE DILIGENCE ACTIVITY - ENVIRONMENTAL PERFORMANCE REVIEW

Continued environmental performance improvement is achieved through preventing recurrence, evaluating established performance indicators and consistent integration of environmental impact analysis within the annual capital planning exercise.

Evaluation compares actual performance against established objectives, reviewing suitability of environmental statements, environmental priorities, operational procedures and work guidelines. Many organizations have evolved these environmental performance reviews into formal environmental audit procedures.

ERGONOMICS AT WORK

By Lil Moro, M.Sc., CCPE

Musculoskeletal pain from work consistently stands out as a health concern for many office environments. Often, minor ergonomics issues can be corrected through some basic action. For example, office workers can check to ensure that their workstation adequately supports their body and task needs, review how they do their job, and check to ensure their

environment doesn't add unnecessary stress. This may include:

EQUIPMENT CHOICE: A well designed chair should fit the user's unique body dimensions and be adjustable to match the workstation, equipment, task and environmental needs. Today more chairs are also including features to allow dynamic movement in the work day.



Ergonomically friendly chair.

EQUIPMENT LAYOUT: The position of your equipment can dramatically influence how well your body responds when you use it. For example, a mouse that is positioned too far in front or the side of a keyboard can unnecessarily strain the shoulder area.

JOB DESIGN: Where possible, avoid prolonged activity by adjusting the chair, change to a standing posture (e.g. move some equipment off the desk, periodically stand to talk on the phone), or spread the work load to different body parts (e.g. using keystroke combinations instead of prolonged mouse activity).

WORK ENVIRONMENT: The visual environment can be improved by positioning the monitor to allow for comfortable viewing and neck postures. A monitor that is too close or too high, combined with prolonged near focussing can lead to eye strain symptoms. Rearranging the space to encourage periodic far viewing can also help.

Of course these are just a few tips that workers can follow, and not all concerns can be solved from these few basic actions. PHH Environmental can help your organization optimize office environments through training, site audits and related ergonomics consulting services.

For more information, call Lil Moro in our Edmonton office. Lil has an M.Sc. in Ergonomics from the University of Loughborough in England and is a Canadian Certified Professional Ergonomist (CCPE).