PINCHIN ENVIRONMENTAL

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PINCHIN ENVIRONMENTAL NEWSLETTER 24

Ontario Has A New Asbestos Regulation!

Ontario Regulation 278/05 **Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations** was made June 8, 2005, filed June 10, 2005 and printed in the Ontario Gazette June 25, 2005. This regulation largely comes into effect November 1, 2005 although several sections will not be effective until November 1, 2007. This regulation will replace Ontario Regulation 838/90 which as been in place unchanged since 1985. The Ministry of Labour has been working on the new regulations for more than 3 years with significant consultation with the asbestos abatement industry including consultants, contractors and labour.

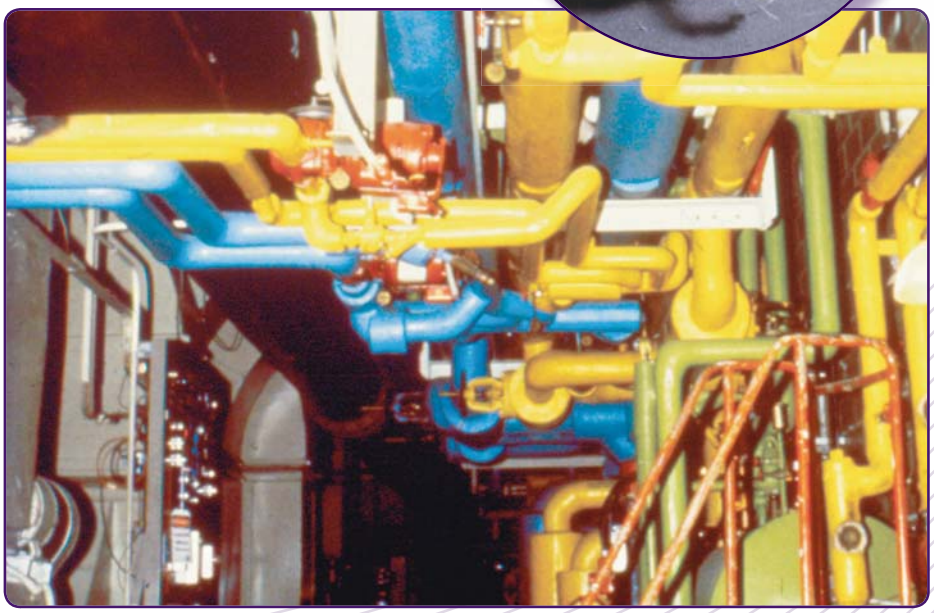
The Ministry published a draft amended regulation in October 2004 and received many (more than 80) written submissions. Many of these have been considered and the published regulation is a marked improvement over the draft version.

Many changes from existing regulation 838/90 have been made. Most of these are welcome and overdue and reflect common practice in the industry and other jurisdictions. There are however some significant inclusions and changes which Pinchin and much of the industry lobbied against. While these disagreements are few in number, several are quite major and will impact owners very significantly.

The following newsletter will outline the major changes with Pinchin's own assessment of the change. Readers are recommended to access the new Regulations at the government web page http://www.e-laws.gov.on.ca/DBLaws/Source/Regs/English/2005/R05278_e.htm and to follow the regulation along with the comments given below as the full wording will not necessarily be repeated in the commentary below. Where changes in the regulation are minor or administrative in nature no comment will be made on the change.

Pinchin Environmental is organizing some **FREE** breakfast meetings to inform our clients of the changes to the regulation. At present, we have three of these planned at our Mississauga office **August 11, September 8 and October 12.** Seating is limited so please register early by contacting Shanti Krishna at 905-712-6472 or visit **www.pinchin.com.**

Type 3 removal half face respirators are no longer allowed for type 3 procedures



New regulation greatly increases sampling frequency

Section	Working or Summary of Change	Pinchin Comment
1 (1) **Definitions**	"asbestos-containing material" means material that contains 0.5 per cent or more asbestos by dry weight;	Welcome addition which formalizes current Ontario practice.
3 (1) **Adoption of Standard**	For the purposes of this Regulation, the method and procedures for establishing whether material is asbestos-containing material and for establishing its asbestos content and the type of asbestos shall be in accordance with the following standard: **1.** U.S. Environmental Protection Agency. Test Method EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials. June 1993.	Useful clarification to match current practice. This standard requires certain quality control protocols and should improve the quality assurance of laboratory analysis.
3 (3) **Adoption of Standard**	The minimum number of bulk material samples to be collected from an area of homogeneous material is set out in Table 1. (Pinchin comment on Table 1 – Except for patches on thermal insulation this will require from 3 to 7 samples for each homogeneous area to prove a material is asbestos free. Only one sample showing more than 0.5% asbestos is necessary to prove the material contains asbestos.)	This will remove much of the uncertainty regarding the number of samples needed in a survey. The number of samples is adapted from the US EPA. It will definitely increase the number of samples and the survey costs. No indication is given whether existing surveys with fewer samples are still acceptable or if additional sampling has to be done. One sample greater than 0.5% will deem the entire installation as asbestos-containing.
5 (1) and (2) **Information for Workers**	**(1)** This section applies whenever a worker is to do work that, **(a)** involves material that, **(i)** is asbestos-containing material, **(ii)** is being treated as if it were asbestos-containing material, **(iii)** is the subject of advice under section 9 or a notice under subsection 10 (8); or **(b)** is to be carried on in close proximity to material described in clause (a) and may disturb it. **(2)** The constructor or employer shall advise the worker and provide him or her with the following information: **1.** The location of all material described in clause (1) (a). **2.** For each location, whether the material is friable or non-friable. **3.** In the case of sprayed-on friable material, for each location, **i.** if the material is known to be asbestos-containing material, the type of asbestos, if known, or **ii.** in any other case, a statement that the material will be treated as though it contained a type of asbestos other than chrysotile.	Very much clarified and strengthened notification. Now applies to both friable and non-friable ACM. This means notice is now required for all workers who work near and may disturb such non-friable materials as vinyl floor tiles, plaster or drywall with asbestos-containing joint compound.
6 (1) **Demolition**	The demolition of all or part of machinery, equipment, a building, aircraft, locomotive, railway car, vehicle or ship shall be carried out or continued only when any asbestos-containing material that may be disturbed during the work has been removed to the extent practicable.	Removal of both friable and non-friable asbestos is now necessary before demolition, which aligns the regulation with the waste disposal regulations of the Ministry of Environment.
7 **Ongoing Asbestos Management in Buildings, Two-Year Transitional period**	This section is a very detailed summary of asbestos management for two years from November 1, 2005 to November 1, 2007 – it is very lengthy – see text of regulation for full details.	Clear summary of owners' responsibilities for surveys, tenant notification, worker information and training needs. Closes a loophole that some owners used to avoid surveys. Requires re-inspection at frequent intervals (not defined) and updating of records "at least once in each 12 month period". Until November 1, 2007 the survey and Mangement Program excludes non-friable ACM and ceiling tiles.
7 (8) – 7 (11) **Ongoing Asbestos Management in Buildings, Two-Year Transitional period**	**(8)** If it is readily apparent that friable material used in a building as fireproofing or acoustical or thermal insulation has fallen and is being disturbed so that exposure to the material is likely to occur, **(a)** the owner shall cause the material to be examined to establish whether it is asbestos-containing material; and **(b)** until it has been established whether the material is asbestos-containing material, no further work involving the material shall be done. **(9)** Subsection (8) does not apply if the work is carried out in accordance with this Regulation as though the material were asbestos-containing material and, in the case of sprayed-on material, as though it contained a type of asbestos other than chrysotile.	Depending on the legal interpretation of this section (and Pinchin has not consulted a lawyer or the MOL yet), this may have enormous effect. Pinchin is unable to determine how this will be interpreted. Clearly under 7(8), if these friable ACMs (1) have fallen; (2) are currently being disturbed so that (3) exposure is likely to occur then (4) it must be tested or assumed to be amosite type and (5) all work affecting this material shall stop until this is done. If it is asbestos or presumed to be asbestos [Section 7(10)] the fallen material must be cleaned up and removed as a minimum. If the friable ACM will continue to fall it shall be repaired, sealed removed or permanently enclosed. According to Section 7(11) however ,the obligation to clean up fallen material and abate it (as described in Section 7(10)) does not apply if the fallen material is confined to an area above a closed false ceiling and not part of a return air plenum. This brings up the question: "Does this mean all fallen material on a lay-in ceiling or in a return air plenum has to be cleaned up or does this apply to only such material required to be tested under 7 (8)?"

Section	Working or Summary of Change	Pinchin Comment
7 (8) – 7 (11) **Ongoing Asbestos Management in Buildings, Two-Year Transitional period** **(continued)**	**(10)** If the examination mentioned in subsection (8) establishes that the material is asbestos-containing material, or if the material is treated as though it were asbestos-containing material as described in subsection (9), **(a)** the owner shall cause the fallen material to be cleaned up and removed; and **(b)** if it is readily apparent that material will continue to fall because of the deterioration of the fireproofing or insulation, the owner shall repair, seal, remove or permanently enclose the fireproofing or insulation. **(11)** Subsection (10) does not apply if the fallen material is confined to an area that is, **(a)** above a closed false ceiling; and **(b)** not part of a return air plenum.	While Pinchin believes the clean up is required only for material being disturbed and tested under Section 7(8) we believe this requires a legal interpretation from the Ministry to be sure.
8 **Ongoing asbestos management in buildings after transitional period**	This section is a very detailed summary of asbestos management after November 1, 2007 – it is very lengthy – see text of regulation for full details.	Same outline as section 7 (1) except that non-friable materials and ceiling tiles with asbestos must be tested and included in the management program after November 1, 2007. This will have a major effect on the need for surveys and render many of the existing surveys obsolete or non-compliant with this section when it is adopted. The record after this date must also include information or whether the material is friable or non-friable. Virtually every building built before the early 1980s will now need a Management Program.
10 (2) **Owner's responsibilities before requesting tender or arranging work**	Unless clause (3) (a) or (b) applies (Pinchin comment – if the material is already known to be asbestos or non-asbestos) the owner shall have an examination carried out in accordance with section 3 to establish whether any material that is likely to be handled, dealt with, disturbed or removed, whether friable or non-friable, is asbestos-containing material.	This very significantly increases the survey requirement to include both friable and non-friable. This means that at least some buildings built after 1982 will require pre-construction surveys (never specifically required in the past).
12 (2) **Type 1 Operations**	The following are Type 1 operations: **1.** Installing or removing ceiling tiles that are asbestos-containing material, if the tiles cover an area less than 7.5 square metres and are installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated. **2.** Installing or removing non-friable asbestos-containing material, other than ceiling tiles, if the material is installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated. **3.** Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if, **i.** the material is wetted to control the spread of dust or fibres, and **ii.** the work is done only by means of non-powered hand-held tools. **4.** Removing less than one square metre of drywall in which joint-filling compounds that are asbestos-containing material have been used.	This change will have a huge impact. Type 1 work is now limited to (1) intact handling of less that 7.5 square metres (80 square feet) of ceiling tiles (2) intact-removal of other non-friable ACM (3) removal of ACM which is broken, cut or abraded if it is wet and if non powered hand-held tools are used and (4) less than one square metre of drywall with asbestos –containing joint filling compound. The extent of this impact can only be seen by considering Type 1 operations which have been re-classified as Type 2 or 3 operations. These deleted Type 1 operations include: **1.** power drills on non-friable ACM **2.** other power tools with HEPA dust collection **3.** any mechanized breaking action (including breaking of concrete with embedded transite) **4.** removal of more than one square metre of drywall with asbestos-containing joint compound.
12 (3) **Type 2 Operations**	**2.** The removal or disturbance of one square metre or less of friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of machinery or equipment or a building, aircraft, locomotive, railway car, vehicle or ship.	Good clarification as the quantity limit is now defined between Type 2 and Type 3 work.
12 (3) **Type 2 Operations**	**5.** Installing or removing ceiling tiles that are asbestos-containing material, if the tiles cover an area of 7.5 square metres or more and are installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated.	Good clarification which codifies current common practice.
12 (3) **Type 2 Operations**	**6.** Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if, **i.** the material is not wetted to control the spread of dust or fibres, and **ii.** the work is done only by means of non-powered hand-held tools.	Very difficult to apply due to the inclusion of the word "breaking". Large scale mechanized demolition of concrete with embedded transite conduit (ie many bridges and buildings) will become Type 2 or Type 3 operations. The use of hand chippers to remove vinyl floor tiles is now a Type 2 operation. Pinchin are not sure to what operation "vibrating" refers.

Section	Working or Summary of Change	Pinchin Comment
12 (3) **Type 2 Operations**	**7.** Removing one square metre or more of drywall in which joint filling compounds that are asbestos-containing material have been used.	Absolutely massive impact. This means that virtually every interior renovation (which includes drywall work in all buildings built before around 1982) and all demolition of structures (including houses) with drywall built before around 1982 will now incorporate at least some Type 2 work. (We believe that the manufacture of joint compound with asbestos ceased around 1982 but this is difficult to confirm). Pinchin strongly believe this is unenforceable in practice, unnecessary for worker protection and may serve to drive work outside of the legally complying sector. The cost impact on owners and the increased potential for asbestos work for interior contractors is huge. The impact on the cost and detail needed for pre-construction surveys is substantial.
12 (3) **Type 2 Operations**	**8.** Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if the work is done by means of power tools that are attached to dust-collecting devices equipped with HEPA filters.	This has been moved from a Type 1 operation but will have no major impact as these tools are rarely used.
12 (3) **Type 2 Operations**	**9.** Removing insulation that is asbestos-containing material from a pipe, duct or similar structure using a glove bag.	Good addition to clarify glove bag use.
12 (3) **Type 2 Operations**	**10.** Cleaning or removing filters used in air handling equipment in a building that has sprayed fireproofing that is asbestos-containing material.	Good addition to clarify that filter changes in buildings with sprayed asbestos do not require Type 3 work practices.
12 (4) **Type 3 Operations**	**5.** Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material, if the work is done by means of power tools that are not attached to dust-collecting devices equipped with HEPA filters.	Again very difficult to apply due to the inclusion of the word “breaking”. If material being broken by mechanized means cannot be wetted it will now be Type 3 requiring all workers in powered respirators and protective equipment and portable showers setup at the site. This is a major impact which may be ignored. How do you find embedded transite conduit inside a concrete bridge? Does “breaking” of transite actually pose a risk of fibre release? Also, it is now a Type 3 operation to use a power drill on a non-friable material (e.g. drilling transite)
12 (5) **Type 1, Type 2 and Type 3 operations**	Work on ceiling tiles, drywall or friable asbestos-containing material is classified according to the total area on which work is done consecutively in a room or enclosed area, even if the work is divided into smaller jobs.	Useful clarification to prevent the subdivision of work into smaller parts to avoid the impact of the regulation.
12 (6) **Type 1, Type 2 and Type 3 operations**	The following provisions apply if a dispute arises as to the classification of an operation under this section: **1.** A party to the dispute may notify an inspector at the office of the Ministry of Labour nearest the workplace of the dispute. **2.** The party who notifies the inspector shall promptly inform the other parties that the inspector has been notified. **3.** Work on the operation shall cease until the inspector has given a decision under paragraph 4. **4.** The inspector shall, as soon as possible, investigate the matter and give the parties a decision in writing.	This is a useful addition in light of the problematic classification of work outlined above. Expect it to be used a lot until the industry determines the meaning of many sections.
13 **Respirators**	Summary of respirator use. The specific respirator type to be used in each operation is provided in Table 2 to the regulation.	Respirator use has changed significantly to be in compliance with the Occupational Exposure Limits adopted in 2001. These changes will be addressed in each work type below.
14 **Measures and procedures, Type 1 operations**	**3.** In the case of an operation mentioned in paragraph 4 of subsection 12 (2), the material shall be wetted before and kept wet during the work to control the spread of dust or fibres, unless wetting would create a hazard or cause damage. **4.** A wetting agent shall be added to water that is to be used to control the spread of dust and fibres.	Wetting seems now to be no longer recommended for all Type 1 work but only for drywall removal and breaking/cutting of non-friable ACM with hand tools. It seems unlikely that this was intended in this regulatory change. Wetting agent is now required in the water used for wetting.
14 **Measures and procedures, Type 1 operations**	**6.** Drop sheets shall not be reused.	Minor change as drop sheets were not routinely reused in industry.

Section	Working or Summary of Change	Pinchin Comment
14 **Measures and procedures, Type 1 operations**	**7.** After the work is completed, polyethylene sheeting and similar materials used for barriers and enclosures shall not be reused, but shall be wetted and placed in a container as described in paragraph 5 of section 15 as soon as practicable after paragraph 5 of this section has been complied with. **8.** After the work is completed, barriers and portable enclosures that will be reused shall be cleaned, by using a vacuum equipped with a HEPA filter or by damp wiping, as soon as practicable after paragraphs 5 and 7 have been complied with. **9.** Barriers and portable enclosures shall not be reused unless they are rigid and can be cleaned thoroughly.	This refers to disposal of barriers and enclosures but it is not clear in any of this section above that barriers are mandatory in Type 1 work as only drop sheets are specifically required. Paragraph 2 of this section requires only that "the spread of dust from the work area shall be controlled by measures appropriate to the work to be done". This wording is unchanged from 838/90 and barriers are not normally used in Type 1 work today. The need for barriers seems to be left to the consultant and contractor's judgment as we believe it should be. However, will the MOL inspectors expect to see barriers in future on all Type 1 sites?
15 **Measures and procedures, Type 2 and Type 3 operations**	**11.** The employer shall provide every worker who will enter the work area with a NIOSH approved respirator in accordance with Table 2 and the worker shall wear and use the respirator. (See original text of regulation for Table 2)	Major changes to some operations. Type 2 contaminated ceiling entry and use of a HEPA filtered power tool on non-friable ACM both require a full facepiece non-powered, powered or supplied air respirator. Major changes for Type 3 operations. As a minimum respirators with protection factors of 50 or greater (in practice these will be powered air purifying respirators (PAPRs)) will be required for all type 3 work. All removal (even wet removal) of sprayed amphibole (amosite or crocidolite) will now require supplied air. Pinchin is not clear why wording changes from full facepiece to half mask in some sections. The industry is generally in agreement with the changes and is largely using the new respiratory requirements now.
16 **Additional measures and procedures, Type 2 operations**	**4.** Subject to paragraph 5, the spread of dust from a work area shall be controlled by measures appropriate to the work to be done, including the use of drop sheets of polyethylene or other suitable material that is impervious to asbestos. **5.** If the operation is one mentioned in paragraph 1 or 2 of subsection 12 (3) and is carried on indoors, the spread of dust from the work area shall be prevented, if practicable, by, **i.** using an enclosure of polyethylene or other suitable material that is impervious to asbestos (including, if the enclosure is opaque, one or more transparent window areas to allow observation of the entire work area from outside the enclosure), if the work area is not enclosed by walls, **ii.** disabling the mechanical ventilation system serving the work area, and **iii.** sealing the ventilation ducts to and from the work area.	These read together clearly indicate that only ceiling entry where fallen ACM is present and minor removal of friable ACM indoors absolutely requires an enclosure of polyethylene or walls. All other operations require only a mandatory drop sheet and other "measures appropriate to the work to be done".
17 **Additional measures and procedures, glove bag operations**	Very detailed description of Glove Bag use (very lengthy – see text for full details)	Clear and useful addition to replace existing variance procedure. Allows cheaper polyethylene bags for single length (if bag is not moved during removal operation) but otherwise requires more expensive bags with integral zipper as is the case today.
18 (4) **Additional measures and procedures, Type 3 operations – indoor**	**5.** Unless the operation is carried on inside a building that is to be demolished and will not be entered by any person except the workers involved in the operation and the workers involved in the demolition, the spread of dust from the work area shall also be prevented by, **i.** creating and maintaining within the enclosed area, by installing a ventilation system equipped with a HEPA filtered exhaust unit, a negative air pressure of 0.02 inches of water, relative to the area outside the enclosed area, **ii.** ensuring that replacement air is taken from outside the enclosed area and is free from contamination with any hazardous dust, vapour, smoke, fume, mist or gas, and **iii.** using a device, at regular intervals, to measure the difference in air pressure between the enclosed area and the area outside it. **6.** The ventilation system referred to in subparagraph 5 i shall be inspected and maintained by a competent worker before each use to ensure that there is no air leakage, and if the filter is found to be damaged or defective, it shall be replaced before the ventilation system is used.	Good, clear addition of negative pressure with the need to monitor negative pressure. Note negative pressure is not required for pre-demolition Type 3 projects.

Section	Working or Summary of Change	Pinchin Comment
18 (4) **Additional measures and procedures, Type 3 operations**	**16.** Once the work area inside the enclosure is dry after the steps set out in subparagraphs 15 ii, iii and iv have been completed, clearance air testing shall be conducted by a competent worker in accordance with subsection (5), unless the operation is carried on inside a building that is to be demolished and will not be entered by any person except the workers involved in the operation and the workers involved in the demolition. **17.** The barriers, enclosure and decontamination facility shall not be removed or dismantled until, **i.** cleaning has been done as described in paragraph 15, and **ii.** if clearance air testing is required, it has been completed and the work area inside the enclosure has passed the clearance air test.	This useful addition requires both visual and air monitoring clearance of all Type 3 sites (which may be excessive for some of the smaller Type 3 sites). This will introduce major changes with respect to turn-around of work sites: Is weekend work and clearance possible any more? How will sites in more remote areas (Timmins?) obtain air monitoring clearance in reasonable cost? Will the Ministry accept air samples collected by a "competent worker" employed by the contractor?
18 (5) and (6) **Additional measures and procedures, Type 3 operations – indoor**	**(5)** The following rules apply to clearance air testing: **1.** Sample collection and analysis shall be done, **i.** using the phase contrast microscopy method, in accordance with subsection (6), or **ii.** using the transmission electron microscopy method, in accordance with subsection (7). **2.** If the work area inside the enclosure fails the clearance air test, the steps set out in subparagraphs 15 ii, iii and iv of subsection (4) shall be repeated and the work area shall be allowed to dry before a further test is carried out, unless paragraph 6 of subsection (6) applies. **(6)** Clearance air testing using the phase contrast microscopy method shall be carried out in accordance with U.S. National Institute of Occupational Safety and Health Manual of Analytical Methods, Method 7400, Issue 2: Asbestos and other Fibres by PCM (August 15, 1994), using the asbestos fibre counting rules, and shall comply with the following requirements: **1.** Testing shall be based on samples taken inside the enclosure. **2.** Forced air shall be used, both before and during the sampling process, to ensure that fibres are dislodged from all surfaces inside the enclosure before sampling begins and are kept airborne throughout the sampling process. **3.** At least 2,400 litres of air shall be drawn through each sample filter, even though the standard mentioned above provides for a different amount. **4.** The number of air samples to be collected shall be in accordance with Table 3. **5.** The work area inside the enclosure passes the clearance air test only if every air sample collected has a concentration of fibres that does not exceed 0.01 fibres per cubic centimetres of air. **6.** If the work area inside the enclosure fails a first test that is done using the phase contrast microscopy method, the samples may be subjected to a second analysis using transmission electron microscopy in accordance with the standard mentioned in subsection (7). **7.** When a second analysis is done as described in paragraph 6, the work area inside the enclosure passes the clearance air test only if every air sample collected has a concentration of asbestos fibres that does not exceed 0.01 fibres per cubic centimetre of air.	This is a generally clear and is a technically correct change but it remains to be seen how much it will impact the clearance of Type 3 sites and how it will be performed in practice (particularly in Northern Ontario where the availability of competent local consultants and laboratories is limited). The suggested number of samples in Table 3 seems reasonable once the decision is made that all Type 3 sites require clearance monitoring. Pinchin currently clears sites in other provinces to a level of 0.01 f/cc using phase contrast microscopy (PCM) and we rarely have to revert to the Transmission Electron Microscope to determine whether the fibres are asbestos or not (remember that the phase contrast microscope (PCM) counts all fibres of a certain size range and a site may fail PCM monitoring due to non-asbestos fibres). However, unlike our current work in other provinces, Section 18 (6) 2.,calls for "forced air" to dislodge fibres (and other dust) before and during the sampling process. Pinchin will approach the MOL to determine what "forced air" means in practice (is it the same as aggressive monitoring used in the US?) If "forced air" is similar to aggressive monitoring then we think that many PCM samples will be overloaded with non-asbestos fibres and other dust and that TEM re-analysis will be required. Considering the cost of TEM analysis, the lack of accredited laboratories in Ontario (only EJ Chatfield to our knowledge) and the turnaround from US laboratories (48 hours normally); this will have an enormous effect on contractors, consultants and owners. The inclusion of a specific reference method for PCM analysis is very useful as the NIOSH Method 7400 requires a quite specific quality control method. Laboratories will have to engage in Round Robin testing and have specific quality control standards. Will the Ministry enforce these requirements? It is likely that a significant number of TEM samples will be required as result of failing the PCM test. The concentration of each sample (not the average concentration) being equal to or less than 0.01 f/cubic centimeter of air is quite stringent.
18 (7) **Additional measures and procedures, Type 3 operations – indoor**	Clearance air testing using the transmission electron microscopy method shall be carried out in accordance with U.S. National Institute of Occupational Safety and Health Manual of Analytical Methods, Method 7402, Issue 2: Asbestos by TEM (August 15, 1994), and shall comply with the following requirements: **1.** Testing shall be based on samples taken inside the enclosure and samples taken outside the enclosure but inside the building. **2.** Forced air shall be used inside the enclosure, both before and during the sampling process, to ensure that fibres are dislodged from all surfaces before sampling begins and are kept airborne throughout the sampling process. **3.** At least 2,400 litres of air shall be drawn through each sample filter, even though the standard mentioned above provides for a different amount.	Once again this will have a major effect if the PCM results fail the site. Note that for each site where TEM testing is selected as the primary clearance method, 10 samples must be analyzed by TEM resulting in an analytical cost alone of over $1000.00. The number of samples seems excessive for smaller sites.

Section	Working or Summary of Change	Pinchin Comment
18 (7) **Additional measures and procedures, Type 3 operations – indoor** **(continued)**	**4.** At least five air samples shall be taken inside each enclosure and at least five air samples shall be taken outside the enclosure but inside the building. **5.** Sampling inside and outside the enclosure shall be conducted concurrently. **6.** The work area inside the enclosure passes the clearance air test if the average concentration of asbestos fibres in the samples collected inside the enclosure is statistically less than the average concentration of asbestos fibres in the samples collected outside the enclosure, or if there is no statistical difference between the two average concentrations.	
20 (1) – 20 (4) **Asbestos abatement training programs**	**(1)** The employer shall ensure that, **(a)** every worker involved in a Type 3 operation has successfully completed the Asbestos Abatement Worker Training Program approved by the Ministry of Training, Colleges and Universities; and **(b)** every supervisor of a worker involved in a Type 3 operation has successfully completed the Asbestos Abatement Supervisor Training Program approved by the Ministry of Training, Colleges and Universities. **(2)** The employer shall ensure that every worker and supervisor successfully completes the appropriate program required under subsection (1) before performing or supervising the work to which the program relates. **(3)** A document issued by the Ministry of Training, Colleges and Universities, showing that a worker has successfully completed a program mentioned in subsection (1), is conclusive proof, for the purposes of this section, of his or her successful completion of the program. **(4)** In accordance with the Agreement on Internal Trade, 1995 and the Protocols of Amendment, a worker shall be deemed to hold a document showing successful completion referred to in subsection (3) if he or she has successfully completed equivalent training in another province or territory of Canada, as determined by the Director.	Although this section does not become effective until November 1, 2007, it will finally be necessary for workers and supervisors to be trained in a specified program. This is long overdue although the practical considerations and the impacts are huge on the contractors. To date training has been extremely random and often inadequate. Some contractors' forces are well trained however many receive almost no training. Many questions remain to be resolved. Will trained and experienced workers require re-training or will they be grandfathered? How long will a contractor have to train a new employee on a site? How will the contractors maintain a trained work force in an industry where many of the workers are very mobile and may only work a few days or weeks? Affected parties must use the time between now and 2007 to provide input to this process. At present membership in the Environmental Abatement Council of Ontario may be one way to provide this input.
23 **Use of equivalent measure or procedure**	A constructor, in the case of a project, or the employer, in any other case, may vary a measure or procedure required by this Regulation if the following conditions are satisfied: **1.** The measure or procedure, as varied, affords protection for the health and safety of workers that is at least equal to the protection that would be provided by complying with this Regulation. **2.** The constructor or employer gives written notice of the varied measure or procedure, in advance, to the joint health and safety committee or the health and safety representative, if any, for the workplace.	This is a major change which replaces the old Variance Section 18 of O.Reg. 838/90. In the past the MOL had to be notified in advance and provide written approval for all variances. The new regulation eliminates this check and approval system and will reduce paperwork BUT it is very unclear who makes the determination if the protection is equal and what the mechanism may be. Will this section be abused in the absence of a strong health and safety committee or representative? Alternately will a committee or representative arbitrarily just reject all requests for equivalent measures? Does approval only have to be given by the constructor's health and safety committee or are building occupants protected or represented in the same way? This section is so new that we will need a lot of clarification from the Ministry.

Pinchin will be undertaking some actions to assist our clients to comply with this regulation. We are currently approaching the Ministry to clarify some sections of the regulation as noted above and we will ensure that all our clients are aware of any useful information we obtain.

We will be adding some 2 day courses on Asbestos Control in Buildings and Industry and the recent course on June 20-22 was taught in compliance with the new regulation. The next planned 3 day course is in Sarnia, July 26-27, 2005.

We will ensure that all the surveys and specifications we are currently working on which have an impact after November 1, 2005 are estimated and prepared to meet the new regulation (unfortunately for our clients this will mean an increase in the cost of both our services and the contract costs in general). We will be contacting some of the major affected organizations such as BOMA and CME to ensure their members are aware of the changes.

Removal of drywall joint compound now type 2 work.

Summary of Major Changes

These are very major changes which almost make it a brand new regulation. The greatest changes or uncertainties (to allow you to review more easily) are found in the following sections.

3 (3) and Table 1	• number of bulk samples needed in a survey
7 (8) to 7 (11)	• do suspended ceilings with air plenums have to be cleaned?
8	• management programs and surveys will have to be done or redone to include both friable and non-friable ACM by November 1, 2007
12 (2), 12 (3), 12 (4)	• major changes to the classifications of work - particularly removal of drywall joint compound and breaking of non-friable ACM
15 and Table 2	• Changes to respirator type for contaminated ceiling entry and many Type 3 operations
17	• addition of glove bags to the regulation
18 (4)	• addition of monitored negative pressure (0.02" H_2O) in most Type 3 projects
18 (5) to 18 (7)	• requirement for "forced air" clearance testing to level of 0.01 f/cc using optical and /or electron microscope following Type 3 removal
20	• Worker Training programs must be approved by Ministry of Training colleges or Universities by November 1, 2007
23	• Significant changes to the variance (equivalent) procedure

The above comments have been provided to get the information out as quickly as possible to our clients and friends. We will be approaching the Ministry to obtain some clarification and Pinchin encourages all affected parties to read the new regulation carefully. Pinchin cannot guarantee that we have picked up the implications of every single change on this review or that our current interpretation will be confirmed by the Ministry. If you find any other sections which need explanation, please e-mail **rconnelly@pinchin.com** with your questions.

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PEN is published by:
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