

# **Keeping Workers, the Public and the Environment Safe from Asbestos:**

Working Group Draft Final Report  
and Recommended Actions

December 2018

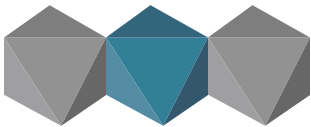


Ministry of  
Labour

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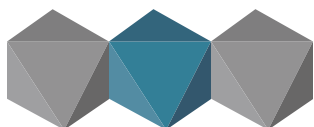
## Executive Summary

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On March 22, 2017, the previous government announced the establishment of a cross-ministry working group to ensure that British Columbians are adequately protected from the dangers of asbestos. The working group's mandate is "to identify, review and report on outstanding risks that asbestos poses for British Columbians and the environment and additional strategies and initiatives that the British Columbia government and its agencies could undertake to further protect people and the environment from the dangers of asbestos."

Shortly after the change in government in July 2017, with the establishment of a new Ministry of Labour, the new Minister was briefed on this cross-ministry initiative and encouraged its continuation given his commitment to make workplaces in the BC the safest in Canada.

The working group is comprised of representatives from the Ministries of: Labour; Environment and Climate Change Strategy (MOE); Municipal Affairs and Housing (MAH); and Health (MoH). WorkSafeBC is also represented on the working group. The working group is chaired by the Executive Director, Labour Policy and Legislation within Labour. The Deputy Minister of Labour is the executive sponsor. The Minister of Labour provides overall direction to the working group.



The terms of reference for the working group specify that the working group will prepare a final report and action plan. This report serves this purpose by reviewing the outstanding risks that asbestos poses for British Columbians and the environment and by laying out steps that can be taken to further protect people and the environment from the dangers of asbestos.

This report identifies the following broad and specific concerns about the asbestos abatement and disposal process that potentially pose risks to British Columbians and the environment.

### Concerns about Qualifications and Competencies, including:

1. Contractor competencies, responsibilities and standards of conduct;
2. The role that consultants play within the industry;
3. Quality of and access to training;
4. Air monitoring protocols, methods and requirements; and
5. The competency and quality of testing laboratories.

### **Concerns about Regulatory and Enforcement Gaps and Overlaps, including:**

1. Many renovation jobs do not require a municipal renovation or demolition permit and/or required renovation or demolition permits are not always obtained;
2. The BC Building Code is focused on building occupants' health and safety;
3. There is an opportunity to bring a worker and public safety lens into these permitting approval processes, as evidenced by some local governments;
4. Asbestos remediation in domestic buildings create situations where family members, neighbours and the general public may be at risk of exposure to asbestos; and
5. Conflicting definitions on what constitutes hazardous asbestos material.

### **Concerns about costs driving work underground, including:**

There is a need for an incentive-based system that both rewards safe asbestos removal practices and punishes unsafe practices.

### **Concerns about gaps in public knowledge and awareness, including:**

1. There is a need to continue to promote asbestos awareness initiatives; and
2. There is a need to continue to target new audiences for these asbestos awareness initiatives.

### **Concerns about limitations in disposal options and facilities, and about illegal dumping, including:**

1. Illegal dumping is both a problem in and of itself, and a symptom of a broader problem;
2. Homeowners have legitimate concerns about the disposal of small quantities of asbestos containing materials (ACMs), but there is a need to ensure that contractors do not disguise themselves as homeowners to avoid commercial disposal rules; and
3. Limitations in disposal options and facilities throughout British Columbia with a specific focus on Metro Vancouver.

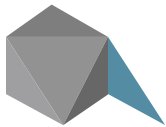
The report also contains a section on naturally occurring asbestos and an appendix ([Appendix 1](#)) outlining some issues and suggested next steps identified by a sub-group of the working group.



**The report then goes on to identify potential actions that can be taken to address these concerns.**

1. That government consider establishing a licensing scheme that would apply to asbestos abatement contractors, consultants and surveyors, and that government designate a ministry that would take the lead in working with industry, labour and all other stakeholders to establish the licensing scheme;
2. That the lead ministry and representatives from other parts of government as necessary and appropriate work closely with affected stakeholders on the development and implementation of an appropriate licensing model;
3. That BC move to adopt provincially recognized standards and programs for the training of asbestos abatement workers;
4. That the lead ministry, WorkSafeBC and representatives from other parts of government as necessary and appropriate work closely with affected stakeholders on the development and implementation of provincially recognized standards and programs for the training and certification of asbestos abatement workers. This group should also consider whether any certification requirement should apply to all asbestos abatement workers, or whether it should apply just to some workers based upon specified criteria;
5. That a process involving appropriate and interested government ministries, WorkSafeBC, local governments, BC laboratories currently providing asbestos testing services, and other interested stakeholders be established to develop provincially recognized competencies and practices for analyzing asbestos samples and reporting on results. The purpose of this work would be to document good and best practices that clearly meet the needs of laboratory clients;
6. That BC consider moving to adopt an accreditation requirement (such as ISO 17025) for laboratories that provide asbestos testing services that is informed by the results of the process proposed in the fifth recommendation;
7. That WorkSafeBC develop and consider options for promoting independent third party air monitoring;
8. That the lead ministry engage with local governments, other ministries, WorkSafeBC and other agencies as applicable on steps that could be taken to require that pre-demolition hazardous materials inspections and reports be undertaken by a qualified person, and to require confirmation that an asbestos abatement has been properly completed prior to the issuance of a renovation, demolition or building permit;
9. That MoH with WorkSafeBC proceed with the development of a public health policy and guideline to address the previous provincial Medical Health Officer's concerns about asbestos disturbances in public places that have the potential of placing the general public at risk of exposure to asbestos (see [Appendix 2](#)). In addition, MoH and WorkSafeBC complete their work on a Memorandum of Understanding that will establish a protocol for the sharing of information;





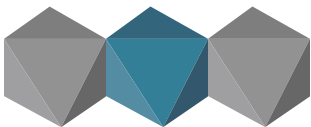
10. That with a view to addressing the confusion and uncertainty expressed by stakeholders about the different definitions of what constitutes ACMs in the MOE and WorkSafeBC regulations, MOE and WorkSafeBC develop materials to provide a clear rationale and explanation to all interested and affected parties in the asbestos abatement and disposal process as to why the standards and requirements are different. The intent is that these materials would also clarify the different purposes that they serve and when they apply, with a view to providing clear guidance to interested parties on how these two definitions operate together and not in conflict with one another;
11. That the provincial government consider: what, if any, role it could play in encouraging and supporting incentive programs that the federal and municipal governments may be considering; whether the provincial government sees any role for itself in developing a provincial incentive program; and whether the provincial government should join in or otherwise support stakeholders that have been lobbying the federal government for a national incentive program aimed at encouraging the safe removal and disposal of asbestos;
12. That WorkSafeBC continue with its asbestos awareness initiatives, and that it consider expanding these initiatives to other target audiences as warranted and appropriate (e.g., the automotive repair and maintenance industry);
13. That the provincial government and WorkSafeBC work with stakeholders to develop additional public knowledge and awareness initiatives that focus in particular on changing public attitudes;
14. That local governments continue to develop and pilot test measures aimed at making it easier for homeowners to dispose of small quantities of ACMs;
15. That the lead ministry and MOE engage with local governments and the private sector to develop and consider options for addressing stakeholder concerns about insufficient capacity within BC for the safe disposal of ACMs; and
16. That using the naturally occurring asbestos sub-team's report as a basis, MOE, MoH and MEMPR work together on any other potential next steps and a path forward.

## Section 1: Introduction

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On March 22, 2017, the previous government announced the establishment of a cross-ministry working group to ensure that British Columbians are adequately protected from the dangers of asbestos. The working group's mandate is "to identify, review and report on outstanding risks that asbestos poses for British Columbians and the environment and additional strategies and initiatives that the British Columbia government and its agencies could undertake to further protect people and the environment from the dangers of asbestos."

Shortly after the change in government in July 2017, with the establishment of a new Ministry of Labour, the new Minister was briefed on this cross-ministry initiative and encouraged its continuation given his commitment to make workplaces in the BC the safest in Canada. The working group is comprised of representatives from the Ministries of: Labour; Environment and Climate Change Strategy (MOE); Municipal Affairs and Housing (MAH); and Health (MoH). WorkSafeBC is also represented on the working group. The working group is chaired by the Executive Director, Labour Policy and Legislation within Labour. The Deputy Minister of Labour is the executive sponsor. The Minister of Labour provides overall direction to the working group.



The working group was established in part in response to a BC Federation of Labour proposal that government convene a multi-stakeholder Provincial Roundtable to develop a comprehensive strategy for eliminating asbestos exposures in BC workplaces.

Throughout the spring and early summer of 2017, the working group undertook and completed a "research and analysis on key issue areas" phase of its work plan, where it identified initiatives that were currently under way across ministries and at WorkSafeBC. As part of this phase, the working group also identified a number of key issues, and undertook research on potential options for addressing those issues.

This research on issues and potential options then formed the basis for a stakeholder and public engagement that took place over late fall and winter (November 2017 to February 2018) that was designed to elicit stakeholder perspectives around the following themes:

1. Issues stakeholders face with respect to the identification, handling, abatement and disposal of asbestos;
2. Roles and responsibilities of industry, contractors, owners and workers with respect to the identification, handling, abatement and disposal of asbestos, and on any issues affecting the ability of these groups to fulfilling their roles and responsibilities;

3. Roles and responsibilities of government (municipal and provincial), regulatory and enforcement bodies.
4. Asbestos working group initiatives including:
  - a. Contractor licensing or certification – advantages and disadvantages of legislating a requirement to use licensed asbestos abatement contractors, and any suggestions or advice in developing a licensing regime;
  - b. Worker and asbestos management consultant/surveyor certification – advantages and disadvantages of establishing a mandatory certification program, and any suggestions or advice on the development of provincially recognized competencies; and
  - c. Amending the BC Building Code to remove the references to asbestos in the BC Building Code (<https://www2.gov.bc.ca/gov/content/industry/construction-industry/building-codes-standards/the-codes/2018-bc-codes-33901/code-changes>), and consideration of a proposal to amend the BC Building Code to require that only qualified persons undertake pre-demolition hazardous materials inspections and provide confirmation that the asbestos abatement has been properly completed prior to the issuance of a permit – advantages, disadvantages and impacts.



The stakeholder engagement consisted of a series of meetings organized by: the Hazardous Materials Association; the BC Building Trades and the Employers' Forum (jointly organized); and the Regional Engineers Advisory Committee (REAC) Solid Waste Subcommittee of Lower Mainland municipalities. Through these meetings, the working group received feedback from industry associations that had canvassed and reflected the views of their members, individual employers, the BC Building Trades, the BC Federation of Labour, individual union locals, and Lower Mainland municipalities. With the assistance of the Union of BC Municipalities, the working group was also able to receive input from local governments from other parts of the province including Vancouver Island, the Fraser Valley, the Okanagan and Northern BC.

The stakeholder engagement was supplemented by a public engagement through the Government of British Columbia's public engagement website (<https://engage.gov.bc.ca/govtogetherbc>), which elicited very thoughtful input from homeowners and interested members of the general public (including workers, owners and company representatives) who were able to speak from their personal experiences. The terms of reference for the working group specify that the working group will prepare a final report and action plan on these issues. Given the in-depth research undertaken by working group members, the issues and themes that the working group identified for the stakeholder and public engagement and the very valuable input received through the engagement, the working group believes that it has identified some of the most important issues regarding the public health protection, regulation, identification, handling, abatement and disposal of asbestos, and some potential solutions that have broad support within the industry.



This report has seven sections, including this introduction. The second section provides some background and context on asbestos, its human impact in BC, and why it continues to require urgent and coordinated action. This is followed in the third section by a discussion of the asbestos abatement and disposal process, which lays out how the identification, handling, abatement and disposal of asbestos is supposed to happen given current federal, provincial and municipal regulatory requirements. In our view, many of the issues that can lead to workers and the general public being placed at risk of exposure to asbestos can be attributed to “things that were supposed to happen but didn’t” within this process, or to shortcomings or deficiencies in terms of how certain steps within the process were undertaken. For policy makers and regulators, this analysis may be helpful in determining what steps could or should be taken to make the existing process function more effectively (e.g., licensing or better training for key parties within the process), or whether parts or all of the existing process need to be fundamentally reconsidered.

The fourth section sets out the key issues and challenges with the current process. While it may be fair to say that working group members had an understanding and awareness of many of these issues, this section relies largely on how stakeholders and the general public expressed these issues through the engagement process. From the working group’s perspective, one of the most striking features of the engagement was the extent to which labour, employer and industry representatives agreed on the issues and in many cases also on potential solutions. The feedback also proved to be extremely helpful in clarifying issues that cut across the jurisdictions and mandates of the different levels of government and provincial regulatory bodies. For example, while WorkSafeBC’s worker safety mandate encompasses the disposal of asbestos containing materials as it pertains to workers, MOE’s mandate also encompasses disposal from an environmental protection perspective.

The fifth section discusses issues regarding naturally occurring asbestos, which is a sub-project that MOE led within the scope of the working group’s mandate.

Based upon the working group’s research and the stakeholder and public engagement, the sixth section lays out a suggested path forward for the consideration of government, individual ministries and WorkSafeBC. The seventh section provides some concluding observations and suggested next steps.



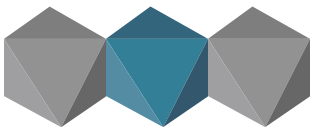
## Section 2:

### Background/Context

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From 2008 to 2017, there were 617 worker deaths in BC related to asbestos exposures, with the majority of those workers dying before the age of 65. In 2017, 70 BC workers died from asbestos-related illnesses. Asbestos-related diseases are the leading cause of workplace deaths in British Columbia because of significant workplace exposures to asbestos 20, 30, or more years ago. In addition, statistics on the number of asbestos-related deaths overall (i.e., not just worker deaths) in BC and Canada in 2017 speak to potential risks of exposure to the general public.

While there have been significant and comprehensive efforts in recent years through changes to occupational health and safety regulations and enforcement to protect workers from asbestos exposure, too many workers are continuing to be exposed to harmful levels of asbestos. According to a BC Federation of Labour Report<sup>1</sup>, “it is estimated that every year more than 145,000 Canadian workers are exposed to asbestos at their workplaces, and tragically over 2,000 are diagnosed with often fatal asbestos cancers and other diseases”. The report also notes that in addition to this tragic human impact, there are also significant economic impacts as a result of workplace exposures to asbestos, with estimates of the annual economic costs (health care and productivity) of work-related asbestos exposures of about \$1.9 billion across Canada (as reported by CAREX Canada).



In BC, WorkSafeBC established an Exposure Registry Program in 2012 to track workplace occupational disease exposures including the number of workers who have been exposed to asbestos. At present, the Registry has documented 2,964 worker exposures, of which 1,816 are asbestos. WorkSafeBC also estimates that time loss claims accepted for asbestos related diseases between 2010 and 2014 cost employers \$54.8 million, which is more than \$10 million annually.

There may also be a significant number of people, non-workers, suffering from asbestos related disease, and potentially 20% of mesotheliomas may be related to non-occupational exposure<sup>2</sup>.

Asbestos containing materials (ACMs) are most likely to be found in residential and commercial buildings that were built or that underwent significant renovations prior to 1991. Today, as these buildings face demolition or further renovation, the risk to workers and the general public occurs as the asbestos is disturbed. Given the magnitude of the stock of pre-1991 residential and commercial buildings and given the amount of renovation and demolition activity that is occurring across much of the province, the

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1. Asbestos Related Diseases are Killing Canadians in Epidemic Proportions,” BCFED Backgrounder, Spring 2016

2. “Non-occupational exposure to asbestos may explain about 20% of the mesotheliomas in industrialized countries, but it does not seem possible to estimate the number of lung cancers caused by these circumstances of exposure”

issues around the proper and safe handling of ACMs are very significant, and will likely continue to be significant for many years to come.

In addition, ACMs are found in other settings where workers and the general public can be at risk of exposure (e.g., auto mechanics working with brake pads, plumbers working with pipes, and at waste and recycling facilities), and asbestos is also a substance that occurs naturally in the environment.

In BC, the use, handling, abatement and disposal of asbestos is regulated in various ways through local governments, WorkSafeBC and MOE, while the federal government also has a role in regulating interprovincial trade and cross border movement of ACMs. Recently, the federal government announced that it is following through on its commitment to implement a ban in the trade and use of ACMs in 2018 (<https://www.cbc.ca/news/politics/trudeau-asbestos-cancer-regulations-1.4867684>). MoH has a general role under the *Public Health Act* but specific provisions or policy related to public exposure to asbestos have not been developed.

Within and between the provincial government ministries, WorkSafeBC and the local governments, there are a number of significant jurisdictional issues that surround asbestos. Specifically, local governments vary in their practices on issuing permits and conducting building inspections, while at the provincial level, confusion can result (both within and outside of government) on where responsibility for various aspects of asbestos resides. WorkSafeBC is responsible for worker protection, while MOE is responsible for the environment, MoH has a public health focus, and MAH has overall responsibility for housing and the building codes and for the relationship between the province and local governments.

The working group's perspective is that most if not all exposures that are happening today are preventable<sup>3</sup>. Any party who is working or is present in a workplace or the broader environment where asbestos is present should be safe as long as they have the proper awareness, information, training and personal protective equipment.

However, the challenge in achieving a goal of zero exposures goes beyond awareness, information, training, safety equipment and the regulatory framework. It also involves consideration of the incentives and supports that are available to the parties to encourage

The health impact of non-occupational exposure to asbestos: what do we know? Marcel Goldberg\* and Danièle Luce, Eur J Cancer Prev. 2009 Nov; 18(6): 489–503. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3499908/>. also see: <https://www.ncbi.nlm.nih.gov/pubmed/28935666>

3. We understand there is some debate in the scientific literature around questions such as what constitutes an acceptable level of exposure to asbestos, and whether and how the risks of contracting asbestos related diseases are affected by whether an individual received a single exposure or whether the individual was subjected to regular and repeated exposures. However, while the science may not be settled on this point, it is generally accepted that one significant exposure is enough for the individual to be considered at greater risk of contracting an asbestos-related disease, and subsequent exposures will increase that risk. Given this, we believe a fair characterization of the policy goal is that the standard for acceptable exposure must be set at a very low level, that any exposures above the minimum are unacceptable, and that work practices and the regulatory framework must be structured to ensure that exposures above the minimum standard do not occur.



them to remain safe, as well as consideration of broader attitudes. Since asbestos-related diseases have such long latency periods, it is often difficult for parties to accept that their actions today can have long-term consequences. This attitude can be exacerbated and exploited by parties who cut corners on safety in order to save time or money.

The most extreme examples of this attitude are reflected in the actions of employers who knowingly expose workers to harmful levels of asbestos despite repeated orders, fines and injunctions (e.g., *Seattle Environmental Consulting vs. Workers' Compensation Board of British Columbia*, 2016 BCSC 557). This in turn feeds a perception that “bad actors” are not being held accountable, which in turn reinforces a view that it is acceptable to “cut corners”. For the many employers and workers engaged in asbestos-related work who are fully committed to safe work practices, the fact that there are competitors in the industry who feed upon these negative attitudes and “cut corners” is a serious concern because it could ultimately affect their livelihoods. The bottom line is that it is not acceptable for employers or individuals to create a competitive advantage for themselves by placing their workers, the general public and the environment at risk.

In summary, the asbestos-related illnesses that are experienced in British Columbia today are a consequence of exposures that took place 20, 30 or 40 years ago. However, evidence indicates that many people are continuing to be exposed to ACMs today, which suggests that Canada and BC will continue to see unacceptably high levels of diagnosed asbestos-related diseases for many years to come. All worker exposures that are happening today are preventable with appropriate precautions, although exposures in private residential homes may be challenging to prevent without significant efforts. In order to achieve the goal of preventing all future asbestos exposures, much work needs to be done to ensure that parties working in or around asbestos have the proper awareness, information, training and personal protective equipment – and to examine consequences for parties who willfully violate the law and put British Columbians at risk. However, much work also needs to be done to consider the incentives and supports that are available to the parties to encourage them to remain safe, and to consider how to address underlying systemic issues and negative attitudes that can all too often result in workers and other parties being exposed to harmful levels of asbestos.



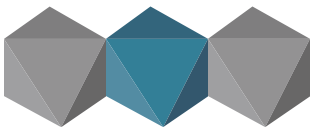
## Section 3:

### Asbestos Abatement And Disposal Process

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ACMs are hazardous to workers and the general public when they are disturbed and when they are in a form that can easily get into the atmosphere (e.g., fine fibres). However, as noted in the previous section, when workers and the general public are aware that ACMs are present and have the proper equipment, training and a safe and secure method for handling, transporting and disposing of the ACMs, they should be able to remain safe.

While this proposition – that with proper information, training and personal protective equipment, workers and the general public will remain safe when ACMs are present – seems simple, it does in fact raise complex issues when it is applied in practice. To understand this, it is necessary to understand the context within which asbestos abatement and disposal work is undertaken. This process is typically initiated in a residential and commercial construction setting when an owner or their agent decides that demolition or renovation work is required. Within the context of existing WorkSafeBC, municipality and MOE rules and regulations, the owner would be responsible for ensuring that all required municipal permits (i.e., building, renovation, demolition permits, etc.) are secured at appropriate points in the process, and the owner's first step would be to hire "qualified" people to undertake the work.



The owner could subcontract all work to a contractor who, under WorkSafeBC regulations, is the "prime contractor". This contractor then hires a surveyor, an asbestos abatement team and others to perform the actual work. Alternatively, the owner could independently select their own "qualified" people to undertake the work. Stakeholders have also mentioned the role that "consultants" play in this process, who may provide services to owners or contractors such as doing the hazardous materials inspections, writing contracts and work procedures, managing work projects and/or having their own laboratory services to do testing on material samples.

In either scenario, the first step in the process would be for a "qualified person" to conduct a survey of the work site for potential ACMs. The requirement for the surveyor to be a "qualified person" is enshrined in WorkSafeBC regulation and is intended to ensure that the survey is properly done. The surveyor takes samples and sends them to a laboratory for testing and analysis, and for the preparation of a report that will go back to the surveyor.

If the laboratory report identifies asbestos at or above a 0.5% threshold, then ACMs are deemed to be present. At this point, the surveyor or contractor will develop an inventory and a map that will identify all locations where hazardous materials are present, and complete a Hazardous Materials Report. At this point, local governments typically require the owner or contractor to apply for a demolition or renovation permit before

the work proceeds to the asbestos abatement phase. Some local governments (City of Vancouver, Coquitlam, Victoria and a handful of others) require that the Hazardous Materials Report be appended to the application for a permit. But the more common practice among local governments is that the Hazardous Materials Report is not required in order for the permit to be issued. The Hazardous Materials Report must also be available at the worksite. The owner or contractor is also required to file a Notice of Project with WorkSafeBC before proceeding to the abatement phase.

Next, the owner or contractor will identify people to remove the asbestos. They could hire asbestos removal specialists, or they could use their own workers, provided they are properly educated, trained and experienced in removing asbestos. At this point, another “qualified person” (as required under WorkSafeBC regulations) would assess the level of risk (high, moderate or low). It would then be up to the contractor or owner to implement appropriate controls, including ensuring that a proper containment or designated work area has been established around the area where the asbestos is being removed, based upon the level of risk identified. It is also up to the contractor or owner to ensure that supervisors and workers have appropriate training in, and adherence to, safe handling and containment procedures.

At this point, the owner or contractor would file a “Notice of Project” with WorkSafeBC, and the asbestos removal work begins. If more asbestos is found than what was originally identified, then the contractor or owner must repeat the hazardous materials analysis, documentation and risk assessment steps described above until the asbestos removal is complete.

Once the asbestos removal is complete and depending on the risk level of the work, a “qualified person”<sup>4</sup> inspects the designated work area or the containment area, and monitors the air in the containment area for asbestos fibres. Once the air is clear, the containment area can be dismantled. A “qualified person” then completes a clearance letter certifying that the asbestos removal has been completed, which is then provided to the owner and abatement or prime contractor. A copy of the clearance letter must also be made available at the work site.

### **Disposal:**

The contractor or owner is then responsible for segregating ACM from non-ACM waste materials<sup>5</sup>. The non-ACM waste materials may then be received at disposal and recycling facilities under normal disposal and recycling rules. However, the ACM waste materials are subject to special rules with respect to their transportation as well as to their treatment and handling at disposal and recycling facilities depending upon the amount and nature (i.e., drywall or non-drywall) of ACM waste.

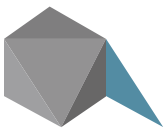
4. The “qualified person” is the surveyor (unless the contractor is the qualified surveyor). Sections 6.4 and 20.112 of the Occupational Health and Safety Regulation require that the qualified person develops the inventory, etc.

5. Where there is limited segregation (dry wall with ACM containing mud may not be separated), the issue can become more complicated.



With respect to the transportation and disposal of ACM waste, MOE regulations distinguish between situations where larger (over 1,000 kg) or smaller (less than 1,000 kg) amounts are being transported and disposed of. Specifically, a generator or owner of the ACM waste is required to register the hazardous waste if the quantity of ACM wastes is over 1,000 kg when generated within a 30-day period or stored at any time. When transporting more than 5 kg of ACM wastes, a shipping document, called a manifest is required, and the carrier must have a valid licence to transport such wastes. There are certain exemptions (manifest and licence) for homeowners who transport their own waste to a facility operated by the government or municipality. Copies of the manifest are then provided to the consigner, carriers, consignees and to MOE within three days of receipt of the waste.

MOE advises that its regulations do not distinguish between drywall and non-drywall ACMs, and that the requirements for generator registration and transportation are the same. However, the disposal options for these two types of waste are different. With respect to non-drywall ACMs, within many (but not all) regional districts, there is at least one landfill that will accept at least small quantities of non-drywall ACMs from residential and commercial customers provided that certain locally established rules and procedures are followed.



In contrast, the options for possible destinations are significantly more limited for drywall ACMs. Each landfill has its own specific rules and conditions about which waste it can and will receive – for example, a landfill with high humidity would not be a good site for drywall ACM. In practice, many do not accept any drywall ACMs - while a small number of local governments accept small amounts of drywall ACMs from residential (but not commercial) customers, and less than a handful of local governments (e.g., Victoria and Nanaimo) accept larger amounts of drywall ACMs from both residential and commercial customers. The only other option for disposing the drywall ACM waste is to transport it to an out-of-province (Alberta or the United States) disposal facility, which would in turn attract various federal and international regulations governing inter-provincial transportation and the export of ACMs<sup>6</sup> to another province or country. Prior to shipping the wastes out of province or abroad, any intermediate facility, which would likely be acting as a temporary storage facility, consolidating site or transfer station, would need to be an authorized storage and receiving facility under MOE regulations.

It should also be noted that under local municipal and local landfill rules, other options for disposing small amounts of non-drywall ACMs may be available. For example, the Greater Vancouver Regional District accepts small amounts of construction waste materials that may or may not contain ACMs provided they are bagged and marked as though they contain ACMs. More generally, some (but not all) local landfill sites will accept small amounts of properly bagged and marked ACMs from individuals. In addition, it is suspected that a common practice is for owners to transport and dispose of ACMs under the guise that the waste is “clean”.

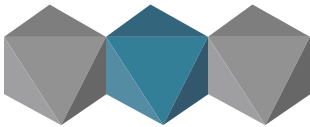
6. The Recycling Council of British Columbia website states, “At this time, most asbestos-containing drywall is sent to a disposal facility in Alberta”.

## Section 4:

### Issues/Challenges With The Current Process

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One striking observation coming out of this description of the asbestos abatement and disposal process is that it cuts across a number of regulatory bodies and levels of government. Local governments have a role in various stages of the process including: the issuance of building, renovation and demolition permits; conducting inspections that can happen at any time; issuing municipality clearance letters; and disposal and recycling<sup>7</sup>. WorkSafeBC also plays a significant role throughout the entire process in helping to ensure worker health and safety. MOE has a significant role when it comes to setting and enforcing rules governing safe transportation and disposal at municipal landfill and recycling facilities. MoH potentially has a role when it comes to incidents where ACMs are released into the environment from a building site - and indoors if there is a breach in a containment area, thereby placing the general public at risk. And the federal and U.S. governments potentially have a role when it comes to the transport of ACMs across provincial and international boundaries for disposal in other provinces or the U.S.



Another striking observation is that there are several checks and balances inherent in the process. For example, WorkSafeBC requires the filing of a Notice of Project before work commences. In addition, WorkSafeBC's requirements specifying that only "qualified" people may perform certain tasks and provide confirmation that they have been properly completed at various key milestones of the process can help to protect workers and the general public at the stages leading up to and following these key milestones. And local governments can also inject themselves into the process through the issuance of renovation and demolition permits, with a small number of local governments explicitly linking their issuance to receiving the necessary assurances that proper hazardous material assessments have been completed and that the ACMs have been properly removed.

However, despite the oversight from various regulatory bodies and despite the checks and balances, there are inherent weaknesses in the process. These include:

1. Concerns about the qualifications and competencies of the various parties within the process;
2. Concerns about regulatory gaps and overlaps;
3. Concerns about costs driving work underground;
4. Concerns about gaps in public knowledge and awareness; and
5. Concerns about limitations in disposal options and facilities, and about illegal dumping.

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7. MOE also deals with naturally occurring asbestos releases in the environment and addressing ambient air asbestos.



### Concerns about Qualifications and Competencies:

Despite the existing regulatory provisions requiring that “qualified” persons perform certain key tasks and that all workers engaged in any aspect of the process must be properly educated, trained, and experienced, stakeholders have expressed concerns about unqualified and poorly trained people being engaged in the process. For many stakeholders, these concerns relate to a lack of clear prescriptive criteria outlining what is necessary for one to be considered “qualified”.

Specific concerns raised by stakeholders were as follows:

#### Contractor competencies, responsibilities and standards of conduct:

Contractors who are engaged in demolition and renovation activity – including asbestos abatement – clearly have an important and pivotal role in ensuring that the work is done safely and that workers and the general public are not at risk of asbestos exposure. While many contractors have the necessary oversight, competencies and ethics to take this responsibility very seriously, stakeholders have expressed concerns about some other contractors that do not have the necessary competencies and/or who do not properly exercise their responsibilities to keep workers and the general public safe. Their concern is that these contractors are either unaware of or may deliberately understate the risks associated with the handling and abatement of ACMs so that they can obtain work at a lower cost, and that in so doing, they are placing their workers, the general public and themselves at risk of asbestos exposure.



A majority of stakeholders representing labour, employer and broader industry interests agree that this is a significant and serious concern, and that steps should be taken to ensure that contractors that negligently or deliberately put workers and the general public at risk of asbestos exposure should not be permitted to work in the industry. While the *Workers Compensation Act* contains a provision allowing WorkSafeBC to apply to the BC Supreme Court to restrain a willfully negligent and non-compliant employer from working in an industry, this process is cumbersome and is rarely used. As an alternative, this majority of stakeholders has indicated support in principle for a certification or licensing scheme that makes it an offence for engaging in the industry without a certificate or licence, and that includes the ability to withdraw the certificate or licence from companies and/or individuals who violate occupational health and safety regulations and put workers and the public at risk of asbestos exposure.

#### The role that consultants play within the industry:

Stakeholders noted that consultants’ roles can be several and varied, ranging from direct contact with the property owner to doing the hazardous materials surveys, to managing work projects and, in some cases, having their own laboratory services to do material sampling. While some stakeholders have noted that independent third parties

– who may include consultants – can play an important role in the process by providing independent information or advice that is free of any potential conflicts of interest, others have raised concerns that some consultants may not be properly trained or qualified. Concerns were also raised about the qualifications and competency of surveyors.

### **The competency and quality of testing laboratories:**

There are a number of laboratories in BC and outside of BC where samples extracted from the hazardous materials survey are tested for ACMs. Often, samples are taken to laboratories outside of BC, including laboratories in the U.S. Stakeholders expressed concerns about the competency and quality of the laboratories both in and out of province, and were focused on the lack of agreed upon quality standards and concerns that laboratory analysis work is not being done to recognized standards. Stakeholders noted that the consequences of substandard laboratory testing can be manifested in high numbers of “false negative” test results – where workers, owners and others receive results indicating that ACMs are not present when in fact they are, thereby exposing them to the ACMs. Concerns were also expressed about while BC-based laboratories are subject to BC laws and oversight, laboratories outside of BC are not subject to these laws or oversight.



Representatives from the testing laboratories themselves recognize many of these concerns. One stakeholder noted that when their company began in 2007, very few laboratories offered asbestos sampling. But now, with the implementation of new asbestos disposal policies at public waste facilities, the demand for asbestos testing has increased significantly. This stakeholder indicated that this, in turn, has led to a dramatic expansion in the number of testing laboratories in BC (estimated by the stakeholder to be in the range of 30 to 50 laboratories in BC, most without any accreditation or quality assurance program), and to a concern that there isn't currently a robust regulatory framework aimed at ensuring that quality assurance programs are in place.

Further to this, one municipality noted that there are multiple laboratories in their region that test for asbestos, but each has a different way of presenting laboratory data. The municipality is working with the laboratories so that there is greater consistency, but the concern also raises a broader concern about testing and reporting standards.

Concerns were also raised about abatement companies that also perform their own air sampling and bulk sample testing as to whether they may be in a conflict of interest.

And finally a concern was raised about an apparent discrepancy between WorkSafeBC's Safe Work Practices for Handling Asbestos Handbook (2017), and current WorkSafeBC regulations. Specifically, while the Handbook states “asbestos bulk samples should be analyzed by an accredited asbestos laboratory...at a minimum, the laboratory must be a participant in a quality control program...” this requirement is not supported by

existing WorkSafeBC policy or regulation<sup>8</sup>. While it is recognized that the Handbook is a guidebook on best practices, it was suggested that consideration should be given to making this a regulatory requirement.

### Quality of and access to training:

Several stakeholders noted that workers and supervisors often lack sufficient training regarding safe asbestos handling and removal. Specifically, while there are numerous training programs, their curricula are inconsistent and varied, and there is no easy way to determine whether workers and supervisors are “qualified”. In addition, the consultations and stakeholder engagement suggested that there is a regional dimension to this concern, with a view expressed by stakeholders from outside of the Lower Mainland that good training programs were difficult to access locally, and that local post-secondary institutions could be doing more to make training available. In this context, many stakeholders, including those representing employer, worker and industry interests expressed support in principle for a provincially recognized training standard or program.

Stakeholders also noted that ACMs can also be disturbed over the course of routine maintenance and repairs (i.e., in situations other than demolition and major renovations), and that tradespeople and other workers (including telecom/cable company technicians who are drilling holes in homes with no testing, and HVAC and flooring workers) in these situations may require greater knowledge and awareness on how to identify asbestos risk, and to be able to ask for asbestos testing at the work site. In this context, a suggestion was made that basic asbestos awareness should be a mandatory component of all trades education, and possibly in high schools.



### Air monitoring protocols, methods and requirements:

Stakeholders noted that air monitoring services are often provided by companies where there is insufficient or improper training and qualifications. In addition, some companies offer this service as part of a full spectrum of services, raising concerns about whether they are doing this monitoring and testing properly – including at the final clearance sampling phase – and about the objectivity of the findings.

In this context, some stakeholders who favour third party testing have noted that while currently there is no regulatory requirement for third party testing, they cite WorkSafeBC’s *Safe Work Practices for Handling Asbestos Handbook* to suggest that this should become a regulatory requirement. Specifically, the Handbook states that “Air monitoring technicians should be employees of an asbestos laboratory or an asbestos consulting agency. It is not accepted industry practices for asbestos abatement (or

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8. However, it should also be noted that the methods currently accepted by WorkSafeBC for bulk sample analysis include the NIOSH and EPA methods listed in Part 6 of the Occupational Health and Safety Regulation. These methods require that the labs have a quality control program. Given this, although the requirement for accreditation is a “should”, the quality control program is a “must”, and WorkSafeBC has been writing orders on laboratories for not having a quality control program, under section 5.53(4) “methods acceptable to the Board”.

other) contractors to perform their own asbestos air monitoring.” While these stakeholders acknowledge that the Handbook is a guidebook for best practices and is not intended to be enforceable, one stakeholder noted that “it has for many years been the bench mark in which abatement contractors, consultants, employers and WorkSafeBC hygiene officers have used for proper procedures.” The suggestion is that it may be time to consider developing a regulatory requirement in this area.

### **In conclusion:**

The concerns expressed about the qualifications and competency of the parties engaged in the asbestos abatement and disposal process speak to an interest and desire among many stakeholders to ensure that the parties are qualified, and that the process operates in a way that ensures proper accountability for all parties. Much of the stakeholder feedback also suggests a strong interest in encouraging the parties to adhere to high standards of conduct that do not compromise on safety and that avoid real or perceived conflicts. It is in this context that many stakeholders have expressed support in principle for licensing, certification and/or accreditation requirements as a way of ensuring competence, accountability and adherence to high ethical standards while at the same time improving the health and safety of workers, the public and the environment.



### **Concerns about Regulatory and Enforcement Gaps and Overlaps:**

As noted above, the asbestos abatement and disposal process both cuts across a number of regulatory bodies and levels of government and contains several checks and balances within it. While, in theory, the different bodies and levels of government should be able to work together for the overall benefit of the parties and the process, there can be situations where the process doesn't fully capture the situation, where multiple bodies may be working at cross-purposes with one another, or where there may be opportunities to use key checkpoints in new or different ways.

Specific concerns raised by stakeholders were as follows:

#### **Many renovation jobs do not require a municipal renovation or demolition permit, or required renovation or demolition permits are not always obtained:**

Municipal representatives have indicated that many renovation jobs do not require a renovation, alteration or demolition permit to remove drywall. This is the case in situations where the renovation doesn't trigger a municipal permit requirement, which can vary across local governments. However, this highlights only one facet of a larger challenge in understanding the extent to which asbestos abatement work is occurring outside of the process described above. For example, the City of Surrey reported that only 59 demolition permits were issued in Surrey during 2016, clearly indicating that there is a significant and disturbing 'underground' approach where asbestos materials

are being removed during demolition but without the appropriate permits and most likely done in an unsafe manner that exposes workers, families and the general public to unnecessary and serious health risks.

For many stakeholders, the evidence that a considerable amount of asbestos abatement work is occurring outside of the process described above is symptomatic of a process with many negative incentives that support and encourage the underground economy. This will be discussed in further detail below. However, many of these stakeholders also view this issue as a further reason to support licensing, certification and/or accreditation requirements, given that it could establish standards of conduct that could apply in all situations and given that it would impose penalties and potentially remove from the industry those who do not have the proper licences, certificates or accreditation.

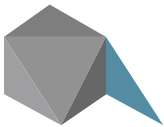
### **The BC Building Code is focused on building occupants' health and safety**

The BC Building Code focuses on building owners and occupations, whereas worker and broader public safety is covered under other legislation (e.g., the Occupational Health and Safety Regulation under the Workers Compensation Act, and the Public Health Act), and is based substantively on the National Building Code. In addition, it should be noted that the BC Building Code is focused on new construction, and not existing buildings. It is understood that at some point in the future, consideration could be given to amendments to the National Building Code to include a new Part 10 for existing buildings. If this happens, this could be an appropriate place to include provisions regarding asbestos containing material if appropriate, along with references to any tradesperson/professional certification system.

### **There is an opportunity to bring a worker and public safety lens into these permitting approval processes:**

Notwithstanding the fact that municipal renovation and demolition permits are not required in many cases, stakeholders and working group members themselves have suggested that when municipal renovation and demolition permits are required, the permitting processes could be modified in ways that would strengthen worker and public safety. For example, some stakeholders have suggested that local governments should follow the example of the City of Vancouver, which, as a way of helping to ensure municipal employee safety, established requirements that pre-demolition hazardous materials inspections and reports be undertaken by a qualified person, and that confirmation must be provided that the asbestos abatement has been properly completed prior to the issuance of a permit.

In this context, the working group sought stakeholder feedback on a proposal that would establish these requirements in the BC Building Code. However, while many stakeholders were supportive of this proposal in principle, many also expressed



concerns about how this proposal could be operationalized. Specifically, some stakeholders raised concerns that smaller local governments may not have the City of Vancouver's capacity to enforce such a requirement, while some others noted that the City of Vancouver Charter allows it to assume certain risks that the legislation governing other local governments doesn't permit.

In addition, it should be noted that permitting regimes that are designed for a specific function (such as building inspector health) may or may not necessarily address the broader public safety 'need' surrounding asbestos. In this context, there may be a need for a broader conversation about the tools that local governments have at their disposal (including the issuance of permits) that would support a goal of greater worker and public safety, including consideration of a code change request for future editions of the National Building Code and BC Building Code to include public health impacts of ACMs for existing buildings.

### **Asbestos remediation in domestic buildings create situations where the general public may be at risk of exposure to asbestos:**

As a result of several incidents in apartment buildings where asbestos disturbances in public places had the potential of placing the general public at risk of exposure to asbestos<sup>9</sup>, the Residential Tenancy Branch issued a Fact Sheet on Asbestos: Renovations, Public Safety and Tenancy in British Columbia. In addition, the previous Provincial Medical Health Officer requested that WorkSafeBC and MoH develop an ability to share information with respect to public exposure to asbestos. As part of this, MoH and WorkSafeBC are currently working on a Memorandum of Understanding which will clarify roles and responsibilities and establish a protocol for the sharing of information between WorkSafeBC, MoH, the Provincial Medical Health Officer, BC CDC, and the health authorities. MoH and WorkSafeBC are developing recommendations for a public health policy and technical guideline to address these situations (Appendix 2). Specifically, the policy and guideline under the Public Health Act will serve in contexts where a public exposure or asbestos disturbance in public spaces have occurred, and where more targeted mechanisms through WorkSafeBC, MOE or local governments may not have been sufficient to ensure overall public safety.

### **Conflicting definitions on what constitutes asbestos material:**

MOE and WorkSafeBC have different definitions of what constitutes asbestos materials, and a different threshold: 0.5% (WorkSafeBC); 1.0% (MOE). Stakeholders have expressed the view that a common definition and standard is important for them so that they can be fully compliant with both WorkSafeBC and MOE regulations. There also appears to be general support for adopting the lower threshold, although some issues were identified that may make this challenging. For example, it was noted that some laboratories do

9. See for example: <https://www.timescolonist.com/news/local/displaced-tenants-say-owners-knew-about-asbestos-for-months-1.10099017>



not have the methods or equipment necessary to test samples with the precision that WorkSafeBC's 0.5% threshold requires.

On the other hand, some stakeholders also raised concerns about challenges and unintended consequences associated with attempting to apply a single high standard in all situations. For example, it was noted that some ACMs pose lower risks to workers, the general public and the environment because they are in a non-friable form that is not easily disturbed and released into the atmosphere as fine particles. In this context, it was suggested that regulators could perhaps adopt a more flexible, risk-based approach to enforcing requirements regarding the safe use, handling and disposal of ACMs.

Further to this point, a municipality noted that large chunks of material such as drywall could be deemed as asbestos-containing and hazardous waste because of a relatively minute amount. This, in turn, leads to more materials being classified as hazardous waste and to the related increase in both costs of disposal as well as perceived work load to deal with the material. MOE has indicated that they have identified the issue of the different threshold levels, and while there is a desire to align them, they are aware of the various implications and are still thinking them through. The lower mainland local governments expressed support for alignment if it can be done in a way that is not more onerous and costly to manage the waste materials as this could contribute to issues such as illegal dumping.



### **In conclusion:**

Some stakeholders have suggested that concerns about regulatory and enforcement gaps can be partially addressed by ensuring that the key players are licensed, certified or accredited. In this way, they would have the knowledge and experience, and a commitment to working to high safety standards that would allow them to operate appropriately despite regulatory gaps that others could perhaps exploit as loopholes. At the same time, stakeholders expressed interest in trying to find ways to bring a stronger worker and public safety lens to municipal permitting processes, to ensure that appropriate public health safeguards are in place, and to harmonize conflicting definitions on what constitutes ACM.

### **Concerns about costs driving work underground**

As noted above, since asbestos-related diseases have long latency periods, it is often difficult for parties to accept that their actions today can have long-term consequences, especially since the steps that are necessary to protect workers and the general public cost time and money. In this context, almost all stakeholders referred to an "underground economy" in asbestos abatement work where unscrupulous contractors seek to avoid regulatory oversight by failing to secure the necessary permits and by failing to notify WorkSafeBC of its demolition or renovation projects, and either by illegally

dumping ACMs or attempting to disguise them by mixing them in with clean disposal or recyclable materials. These contractors have also been much more likely to cut corners on worker and public safety by failing to hire or train qualified workers, and by failing to provide or require appropriate safety equipment and protocols.

While many stakeholders acknowledged that mandatory licensing and certification may help to address the underground economy by imposing significant penalties on unlicensed contractors and others, many also expressed the concern that mandatory licensing and certification could also result in increased costs to owners and contractors. The specific concern was that anything that significantly increases costs could have the unintended consequence of driving even more of the work underground. In this context, the following specific concern was raised by stakeholders:

**There is a need for an incentive-based system that both rewards safe asbestos removal practices and punishes unsafe practices:**

Many stakeholders spoke of the need to consider issues regarding the underground economy, licensing and certification in terms of whether there is an appropriate mix of incentives that reward safe asbestos removal practices and punish unsafe practices. For example, an incentive-based system could be designed with a mix of measures such as subsidies or a rebate program that reward safe asbestos removal practices on one hand that could be balanced against other measures that significantly increase penalties or sanctions for those who engage in unsafe practices. Stakeholders argued that an exclusive focus on measures that reward safe practices or punish unsafe practices will not work, while finding an appropriate balance between the two poses the greatest likelihood of changing behaviour for the better going forward.

In this context, many stakeholders representing worker, employer and broader industry perspectives spoke favourably in terms of some form of subsidy or rebate program that would incent owners (especially homeowners) to ensure that any asbestos abatement work on their property is properly completed in accordance with all of the rules. Stakeholders commented that the vast majority of owners “want to do the right thing”, and that relatively small incentives are likely to be sufficient to change owner behaviour for the better.

For example, one municipality cited a study it had done which noted that the cost of asbestos removal can add as much as \$10,000 to a renovation budget. The study suggested that there may be an opportunity to provide a rebate to homeowners to assist with the cost of asbestos removal, and specifically suggested a rebate similar to the PowerSmart rebate program.





### In conclusion:

Stakeholders recognize that the underground economy is currently a significant issue within the asbestos abatement sector, and that the establishment of mandatory licensing and certification creates a risk that further work could be driven underground. To address this risk, there is a consensus among stakeholders in principle that efforts to increase enforcement and oversight (e.g., through mandatory licensing and certification) should be offset by some incentives aimed at encouraging owners and others to change their behaviour for the better. Some specific suggestions, representing the views of some stakeholders included:

1. The provincial government working with the federal and/or municipal governments to develop incentive programs to encourage consumers (home owners, developers) to use licensed asbestos contractors. For example, these could include income tax or other rebates, or a reduction in property taxes;
2. Local governments giving consideration to providing property tax rebates to incentivize home owners to use licensed asbestos abatement contractors and submit completed homeowner audits for ACMs; and
3. The provincial government and/or local governments giving consideration to levelling a surcharge on specific new home renovation products as a means to fund a system of disposing of the old asbestos contaminated products.



### Concerns about gaps in public knowledge and awareness

One stakeholder made the following comment:

*People often tend to either over – or under – react to asbestos related concerns. In the course of our business, we encounter people (especially home owners and small contractors) on a regular basis that are not fully aware of guidelines and safe practices or (less often) have chosen not to follow guidelines. We see many situations where homeowners are part-way through a renovation before they fully grasp the process.*

This comment highlights the challenge with preventing asbestos exposure in private dwellings noted above. This comment is also instructive because it provides insights into several different dimensions of public knowledge and awareness about asbestos-related matters. On one dimension, we see that asbestos related concerns can trigger a significant emotional reaction that can perhaps be addressed by factual information on when asbestos is a concern, and when it is not. On another dimension, we see that there may be some general awareness, but this may prove to be insufficient for homeowners (in particular) who may not fully grasp the implications of their situation until they are part-way through the renovation process and possibly when they may have already placed themselves or others at risk. And on yet another dimension, we see that

for some within the target audience, there may be some ambivalence or even hostility to any knowledge and awareness messages (because in some cases, homeowners may not really want to know if they have asbestos because of the costs associated with properly removing, packaging and disposing of the asbestos). These latter two dimensions could potentially speak to a need to develop messages that go beyond building awareness on where one can go for information and for qualified assistance to messages that influence and change attitudes at a more fundamental level.

In this context, the following specific concerns were raised by stakeholders:

### **There is a need to continue to promote asbestos awareness initiatives:**

Almost all stakeholders noted that WorkSafeBC has done considerable work in recent years to educate and to enhance awareness about the hazards of asbestos and how to address them, both in the construction industry and to other target audiences such as homeowners. In general, the stakeholders expressed strong support for WorkSafeBC's awareness campaigns, although some suggested that even more could be done to address a lack of information and awareness at the homeowner level. Some stakeholders also suggested that more could be done around tenants, the general public and property owners in general (so that they are better equipped to be able to play a more proactive role in selecting, consuming and managing asbestos related services).

Many stakeholders also emphasized that the asbestos issues in question need to be broader than what WorkSafeBC on its own can reasonably address, and that the solutions cannot reside entirely with WorkSafeBC.

### **There is a need to continue to target new audiences for these asbestos awareness initiatives:**

For example, while the BC Federation of Labour notes that WorkSafeBC has done a lot of work to educate the construction industry about ACMs and the risks that could expose workers to hazardous levels of asbestos, they also note that the bulk of imported asbestos is contained in brake linings and pads, often without any labels identifying that they contain asbestos. They also note that this aligns with CAREX Canada's report that the automotive repair and maintenance sector ranks third for the largest number of exposed workers in Canada. In this context, they recommend that WorkSafeBC develop education and awareness campaigns for the automotive repair and maintenance industry to prevent asbestos exposures, including significant support in identifying and substituting asbestos-free brake linings and pads, with progressive enforcement as required.



### **In conclusion:**

While it is widely acknowledged that progress has been made in raising public knowledge and awareness, stakeholders also acknowledge that more can be done. This could include WorkSafeBC continuing with its awareness campaigns and possibly reaching out to new audiences, but many stakeholders believe that the need is considerably broader than what WorkSafeBC can reasonably do on its own. In addition, in light of the ambivalence among some within the target audience to any knowledge and awareness messages, there is a need for these campaigns to also focus on changing public attitudes – to send the message that it is not acceptable under any circumstances for anyone to put workers, the general public or themselves at risk of exposure to ACMs.

### **Concerns about limitations in disposal options and facilities, and about illegal dumping**

The safe disposal of ACMs represents the final step in the asbestos abatement and disposal process described above. While many of the issues regarding disposal fall within the responsibilities of individual local governments and MOE, many of them are also influenced by things that may or may not have happened at earlier stages of the asbestos abatement and disposal process. For example, the issues facing individual local governments will vary significantly depending upon whether or not the ACMs are properly removed prior to a demolition or renovation, properly separated, packaged and labelled, and properly transported to a disposal or recycling facility.

Specific concerns raised by stakeholders were as follows:

#### **Illegal dumping is both a problem in and of itself, and a symptom of a broader problem:**

Stakeholders described situations where ACMs were illegally dumped on the sides of roads and in other public places. This practice, which is believed to be associated with unscrupulous contractors cutting corners throughout the abatement process, clearly puts the public at risk of exposure. In addition, it poses worker safety and other issues and challenges for local governments and MOE officials who must retrieve and safely dispose of the ACMs. Greater Vancouver Regional District municipalities indicate that illegal dumping is a costly issue, which costs them anywhere between \$250,000 and \$500,000 annually depending upon the size of the municipality to deal with the illegal dumping.

Some stakeholders identified illegal dumping as a further rationale for establishing a licensing scheme for abatement contractors on the grounds that if a contractor is found to have illegally dumped ACMs, it could be liable for significant penalties up to and including being prohibited from working in the industry. However, local governments have also made it clear that limited options for drywall recycling and disposal along



with high costs have also driven the illegal dumping. For example, the Greater Regional Vancouver District noted that in fall 2015, WorkSafeBC requirements for gypsum management changed due to concerns about potential asbestos contamination. This resulted in owners and contractors facing significantly higher costs for transporting the drywall ACMs to disposal/recycling facilities out of province, which in turn led to more gypsum being illegally deposited as garbage and less gypsum recycled. During this period, the tonnage of gypsum handled by Metro Vancouver dropped by 70% and the percentage of material recycled fell from 100% to 39%. In other words, while greater enforcement and oversight may be part of the solution to illegal dumping, there is also a need to make more disposal options available to contractors and owners.

**Homeowners have legitimate concerns about the disposal of small quantities of ACMs, but there is a need to ensure that contractors do not disguise themselves as homeowners to avoid commercial disposal rules:**

Some local governments have been looking at ways to address homeowner concerns about having to conduct testing on small quantities of building waste material, and of having to separate out the ACMs from the non-ACM material for separate handling and disposal. For example, there is currently a pilot operating at the Langley and Maple Ridge sites where homeowners may be given two bags (up to a maximum of 50 bags per year) to allow for the disposal of gypsum products, regardless of whether they contain asbestos or not. Under the pilot, they are all treated and disposed of in a safe manner, as if ACMs are present. There are plans to expand this program to other sites across the Lower Mainland, and it is understood that similar programs are in place in some local governments across the province.



While this may address homeowner concerns, stakeholders have noted that some contractors often attempt to get around requirements by claiming to be homeowners in order to avoid the documentation and transportation requirements and costs associated with the disposal of larger quantities of ACMs. Local governments, in particular, expressed concerns about how these practices place their workers (not to mention the general public) at risk of exposure while also increasing their costs. While these local governments also acknowledged their responsibilities for setting and enforcing rules around what can be deposited and landfills and recycling facilities, many of them also expressed the need for stronger oversight and enforcement throughout the asbestos abatement and disposal process and support for licensing of abatement contractors and certification of workers.

**Limitations in disposal options and facilities:**

Stakeholders attributed many of the issues related to illegal dumping and improper labelling of ACMs to the high costs associated with the proper disposal of these materials. However, some stakeholders also expressed concerns about the limited

disposal options within the province, as well as the view that the province needs to play a role in making more disposal options available.

Some stakeholders also noted that the demand for disposal options significantly exceeds the available supply, and that they are often left with the option of either stockpiling their drywall ACM waste or transporting it out-of-province at significant cost. They argued that if out-of-province disposal facilities were to suddenly become unavailable to BC contractors (either because of trade disputes or because of changes in environmental or occupational health and safety requirements), this would create an untenable situation. In this context, some stakeholders have suggested that at least one new disposal facility should be established in the province that would be equipped to receive ACMs, and especially including drywall ACMs.

### **In conclusion:**

The safe disposal of ACMs depends in part upon the steps that are taken at the stages of the asbestos abatement and disposal process that precede the actual disposal. In this context, local governments appear to be generally supportive of any steps that are taken to strengthen oversight and enforcement (including licensing of abatement contractors and certification of workers). However, there are also issues around disposal costs, how small quantities and ACMs can best be handled and the availability of disposal options and facilities. While local governments are playing an important role in developing options and pilot programs for addressing some of these issues, many stakeholders are suggesting that the province should potentially play a stronger role in helping to ensure that there is enough capacity within the province for the safe disposal and recycling of ACMs at reasonable cost.



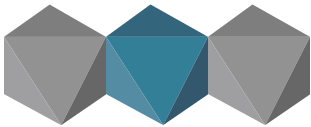
## Section 5: Naturally Occurring Asbestos

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Over the course of the cross-ministry asbestos working group's mandate, a specific issue regarding naturally occurring asbestos (NOA) in the environment was identified. Since the issue has cross-ministry implications that may potentially have an impact on many of the ministries and WorkSafeBC that are represented on the working group, a sub-team of staff from MOE, MoH and WorkSafeBC was tasked with examining this issue. The results of this analysis are presented in [Appendix 1](#).

While the analysis is focused on a specific issue that may pose a risk of public and worker exposure on and near the Sumas River near Abbotsford, the analysis suggests that NOA can pose risks in other contexts across the province, including in active mines and inactive mine sites. In light of this, the Ministry of Energy, Mines and Petroleum Resources (MEMPR), which is responsible for mine safety, has expressed an interest in this report and any potential next steps.

The sub-team's report has identified two next steps for consideration: continued federal and transboundary collaboration; and a risk assessment and scoping exercise. However, there will likely be a need for MOE, MoH and possibly MEMPR to work together on any other potential next steps and a path forward.



## Section 6:

### A Suggested Path Forward

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Drawing upon the working group’s research and analysis and the results of the public engagement and stakeholder consultations, this section lays out a number of suggested strategies and initiatives that the British Columbia government and its agencies could undertake to further protect people and the environment from the dangers of asbestos.

#### **Addressing concerns about the qualifications and competencies of the various parties within the process**

Concerns expressed about the qualifications and competency of the parties engaged in the asbestos abatement and disposal process speak to an interest and desire among many stakeholders to ensure that the parties are qualified, and that the process operates in a way that ensures proper accountability for all parties. Much of the stakeholder feedback also suggests a strong interest in encouraging the parties to adhere to high standards of conduct that do not compromise on safety and that avoid real or perceived conflicts. It is in this context that many stakeholders have expressed support in principle for licensing, certification and/or accreditation requirements as a way of ensuring competence, accountability and adherence to high ethical standards while at the same time improving the health and safety of workers, the public and the environment.



#### **Licensing of abatement contractors, consultants and surveyors**

Looking specifically at the question about whether abatement contractors, consultants and surveyors should be licensed, there is a broad support among stakeholders that contractors, consultants and surveyors should be licensed. The primary reasons given are that:

- a. the existing “qualified person” standard is broad and imprecise, and does not provide regulators and the general public enough information and guidance on what companies and individuals are in fact qualified;
- b. the enforcement challenges and problems about unscrupulous contractors who break the rules and place their workers and the general public at risk are so significant that a licensing scheme is necessary in order to provide an effective mechanism for prohibiting these contractors from engaging in this industry; and
- c. the nature of the industry is such that contractors, consultants and surveyors must adhere to high technical and ethical standards that are typically associated with a licensing scheme.

At the same time, it should be noted that some stakeholders (including those who expressed support for a licensing regime and some who did not) also raised a number of concerns with proceeding with a licensing scheme. These included concerns about:

- a. additional costs and the risk that a licensing requirement may drive more work underground;
- b. the need to ensure that any licensing or qualification program is practical and not too onerous so that everyone can fairly access affordable services, and to ensure that there is an adequate number of surveyors, consultants and contractors available to complete hazard assessments, manage/handle ACMS and monitor projects – otherwise, many projects could get held up or delayed at critical times;
- c. the need for additional work to consider issues such as costs, implementation considerations and potential unintended consequences – e.g., costs passed on to clients resulting in a decrease in the number of contractors being hired for smaller jobs that in turn leads to homeowners doing their own abatement work and thus increasing their risk of exposure; and other considerations (frequency of renewal, cost to government to run the licensing program, cost of the licence, and so on).



Stakeholder and public engagement did not settle on a particular model. However, generally speaking, it would involve government designating an organization that can issue, suspend or cancel the licence based upon criteria set by legislation or regulation. Key features could include some or all of: only licenced contractors, consultants and surveyors could engage in asbestos abatement work; unlicensed contractors, consultants and surveyors would be liable for a penalty; decisions regarding the issuance, suspension or cancellation of licences are made based upon criteria set in legislation or regulation; a statutory decision maker or the governing body of the organization would have powers to inspect and investigate for the purpose of determining whether a licence should be granted, renewed, suspended or cancelled; the business names and contact information for all licensees would be made publicly available so that owners and the general public know who is licenced and more generally who can be engaged in this work.

A jurisdictional scan of Canadian and selected American jurisdictions suggests that a licensing scheme along the lines described above would be relatively unique in the Canadian context, although there are examples from American jurisdictions, such as Oregon, which contain elements of what stakeholders and the public are seeking.


Looking at licensing arrangements currently in place in BC, there appear to be at least three general approaches that could be followed for establishing a licensing requirement that could be considered.



First, the Workers Compensation Act and the *Occupational Health and Safety Regulation* contain provisions regulating contractors and workers for technical expertise by delegating to WorkSafeBC the task of setting and approving standards. In this context, one option might be to establish a mandatory licensing and accreditation system under the workers' compensation framework (likely requiring amendments to the *Workers Compensation Act* and/or the *Regulation*) to establish a mandatory licensing and accreditation system under the workers' compensation framework. This would make it possible for WorkSafeBC to be specific about what qualifications are acceptable for persons working in asbestos abatement, and it would allow WorkSafeBC to require, through policy or guidelines, that asbestos abatement contractors are licensed and that their workers are certified under the mandatory scheme. However, one downside of establishing such a scheme under the workers' compensation framework is that it would cover only persons and places with a connection to "work", and would not capture all persons who might deal with asbestos (e.g., do-it-yourself home owners).

Second, consideration could be given to establishing a licensing and accreditation scheme under some other provincial statutory framework or body.

In this context, options that have been suggested to the working group have included:

- 
- a. *The Safety Standards Act* which contains provisions requiring contractors to be licensed for certain activities, and which establishes Technical Safety BC as an arms-length from government entity that administers the licensing program;
  - b. *The Applied Science Technologists and Technicians Act*, which contains provisions governing the certification and registration of technologists and technicians, and which establishes Applied Science and Technologists and Technicians British Columbia (ASTTBC) as the body that regulates standards of training and practice of and for its members and to protect the interest of the public; and
  - c. The Real Property Division of the Ministry of Citizens' Services – in this case, the suggestion was that considerable expertise on asbestos-related matters resides within this Division that could be leveraged in establishing a licensing and certification scheme.

It should be noted that the working group has not discussed the merits or feasibility of asbestos licensing or certification with any of these bodies or evaluated their merits or feasibility, and that these steps would need to be taken before any particular model is settled.

Third, consideration, could also be given to establishing a new industry-led organization as an asbestos abatement licensing and accreditation body, although we have been cautioned that such a body appears unprecedented in Canada and therefore the legal risks are unknown.

In this context, the following recommendations are made:

1. That government consider establishing a licensing scheme that would apply to asbestos abatement contractors, consultants and surveyors, and that government designate a ministry that would take the lead in working with industry, labour and all other stakeholders to establish the licensing scheme.
2. That the lead ministry and representatives from other parts of government as necessary and appropriate work closely with affected stakeholders on the development and implementation of an appropriate licensing model.

### Certification of asbestos abatement workers

With respect to the training needs and standards for asbestos abatement workers, there is support among stakeholders for the view that more could be done to ensure that asbestos abatement workers are properly trained. The following specific needs were identified in order to overcome the following barriers:

- contractors who are cutting corners and are not meeting existing obligations to ensure that workers are properly trained; and
- inconsistent and varied training programs, concerns about access to training, at least in parts of the province, and an expressed desire for greater specificity for all concerned about what qualifications are acceptable for persons working in asbestos abatement.



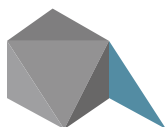
At the same time, it should be noted that some stakeholders (including those who expressed support for worker certification and some who did not) also raised a number of questions and concerns with proceeding with worker certification including:

- that it may be cumbersome and cause WorkSafeBC to lose its flexibility to adjust standards to accommodate the changing workplace; and
- whether any certification requirement should apply to all workers or just to some workers (e.g., those are required to work in high risk situations), particularly if contractors are licensed and if ensuring that workers are properly trained is a condition of any licence.

In BC, the current system established under the *Workers Compensation Act* establishes that there must be standards of training and accreditation but leaves it to WorkSafeBC to determine which standards are acceptable and what level of accreditation is necessary. The current framework allows WorkSafeBC to adjust standards to accommodate the changing workplace and to consider emerging training and accreditation institutions. The Regulation contains various clauses which identify that employers must ensure that workers and contractors have training and/or certification to certain acceptable standards and provided by a person or agency acceptable to WorkSafeBC. WorkSafeBC then describes through guidelines what standards are acceptable to WorkSafeBC for the purposes of the Regulation.

In the case of asbestos, section 6.11 of the Regulation states that an employer must ensure that a worker who is at risk of exposure to asbestos is adequately instructed and trained in: the hazards of asbestos; the means of identifying asbestos-containing material at the worksite; the work procedures to be followed; the correct use of the required personal protective equipment, and operation of the required engineering controls; and the purpose and significance of any required health monitoring.

A jurisdictional scan indicates that many provincial and American jurisdictions have taken significant steps to establish recognized standards and training programs, and to require that asbestos abatement workers have this training. Ontario and Alberta both have robust training programs and certification requirements that could potentially serve as models for BC. In Ontario, Regulation 278/05 "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" establishes instruction and training requirements, and provides that government also issues documentation to certify that one has completed the requisite training. While there are similarities between the Ontario Regulation and BC's as they relate to the training of workers in low and moderate hazard situations, Ontario is much more specific about the training requirements with respect to high risk (what they call "Type 3") operations. In these situations, the Ontario Regulation states that an employer must ensure that: "every worker involved in a Type 3 operation has successfully completed the 'Asbestos Abatement Worker Training Program' approved by the Ministry of Advanced Education and Skills Development; and 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 Advanced Education and Skills Development".



In Alberta, there is an approved training system in place, and certificates are issued to demonstrate the requisite training. Under s. 37 of Alberta's *Occupational Health and Safety Code*, an employer "must ensure that a worker who works with asbestos receives the training necessary for the worker to perform the work safely". In particular, with respect to "restricted areas" as defined, an employer "must ensure that a worker who enters a restricted area that is designated as a restricted area due to the presence of asbestos (a) has successfully completed a course of instruction approved by a Director of Occupational Hygiene, and (b) has in the worker's possession the original valid certificate of completion of the course issued to the worker".

Alberta has developed and published "Course Guidelines" for this training, which includes course criteria, course content and materials, instructor qualifications, administrative requirements, and course audits.

Workers working with asbestos in "non-restricted areas" as defined must be trained as well, but the training does not have to be provided by one of the government-approved agencies that provide training.

In this context, the following recommendations are made:

3. That BC move to adopt provincially recognized standards and programs for the training of asbestos abatement workers.
4. That the lead ministry, WorkSafeBC and representatives from other parts of government as necessary and appropriate work closely with affected stakeholders on the development and implementation of provincially recognized standards and programs for the training and certification of asbestos abatement workers. This group should also consider whether any certification requirement should apply to all asbestos abatement workers, or whether it should apply just to some workers based upon specified criteria.

### Laboratories

Some stakeholders raised issues regarding laboratories – including poor training; poor or inadequate testing equipment; non-existent or inadequate quality assurance programs; concerns about abatement companies that perform their own bulk testing putting them into a conflict of interest; and inconsistent reporting of test results.

However, the stakeholder and public engagement did not settle on a common approach to addressing these issues, with at least four distinct views being expressed. First, some stakeholders (e.g., the BC Building trades) have suggested that laboratories should be subject to a provincial licensing requirement (as part of the proposed licensing scheme that would apply to asbestos abatement contractors, consultants and surveyors). Second, other stakeholders have not gone quite as far as recommending a licensing requirement, but have still suggested that there is a need for WorkSafeBC, labour and employers to work with laboratories to develop provincially recognized competencies and practices for analyzing asbestos samples. Third, still other stakeholders have noted that samples are often sent to out-of-province laboratories because they can often provide better quality results at lower cost – and that unless the province is prepared to ban the sending of samples out of province for testing, any measures that would apply only to BC laboratories may have unintended consequences. And finally, some stakeholders representing laboratories have noted that some (but not all) of the concerns noted above could be addressed by requiring contractors and owners to use only those laboratories (in BC or elsewhere) that have an accreditation from an accrediting body that best meets BC's testing needs<sup>10</sup>. They also noted that having asbestos bulk samples analyzed by an accredited asbestos laboratory is highlighted as a best practice in WorkSafeBC's *Safe Work Practices for Handling Asbestos Handbook* (2017), although it is not a regulatory requirement.

10. The ISO 17025 is an example of an accreditation that may warrant consideration. It places the onus on the accreditation bodies to perform the audits, and it seeks to maintain the quality of the laboratory that is subjected to their evaluations up to standards. The ISO 17025 also takes care of the issue of "subcontracting" – for example, if a laboratory sends an asbestos sample to one of their parent laboratories, that is considered "subcontracting" and is also subject to the same rules/standards.



In this context, the following recommendations are made:

5. That a process involving appropriate and interested government ministries, WorkSafeBC, local governments, BC laboratories currently providing asbestos testing services, and other interested stakeholders be established to develop provincially recognized competencies and practices for analyzing asbestos samples and reporting on results. The purpose of this work would be to document good and best practices that clearly meet the needs of laboratory clients.
6. That BC consider moving to adopt an accreditation requirement (such as ISO 17025) for laboratories that provide asbestos testing services that is informed by the results of the process proposed in the fifth recommendation.

### **Air monitoring services**

Some stakeholders raised concerns about potential conflicts of interest when air monitoring is performed by asbestos abatement contractors or by consultants who are working for the contractors. Some stakeholders also cited WorkSafeBC's Safe Work Practices for Handling Asbestos Handbook (2017) which states that using independent third party air monitoring services is a best practice, although it is not a regulatory requirement. In this context, the following recommendation is made:

7. That WorkSafeBC develop and consider options for promoting independent third party air monitoring.



### **Addressing concerns about regulatory gaps and overlaps**

Concerns about regulatory and enforcement gaps can be partially addressed by ensuring that the key players are licensed, certified or accredited. This creates an expectation that these players would have the knowledge and experience, and the commitment to work to high safety standards that would allow them to operate appropriately despite regulatory gaps that others could perhaps exploit as loopholes. At the same time, there are potential opportunities for bringing a stronger worker and public safety lens to municipal permitting processes, for ensuring that appropriate public health safeguards are in place, and for clarifying the WorkSafeBC and MOE definitions of ACMs and their purposes. As noted earlier in this report, the working group considered and had discussions with stakeholders about a proposal to establish requirements in the BC Building Code aimed at linking the issuance of renovation, alteration or demolition permits to pre-demolition hazardous materials inspections and reports being undertaken by a qualified person, and to requiring confirmation by a qualified person that the asbestos abatement has been properly completed. However, the discussions and consultations indicated that while these measures may serve a useful purpose in ensuring worker and broader public health and safety, there are a number of significant concerns with establishing this as a regulatory requirement under the BC Building Code at this time, prior to establishing a viable tradesperson/professional certification system.

In this context, the following recommendations are made:

8. That the lead ministry engage with local governments, other ministries, WorkSafeBC and other agencies as applicable on steps that could be taken to require that pre-demolition hazardous materials inspections and reports be undertaken by a qualified person, and to require confirmation that an asbestos abatement has been properly completed prior to the issuance of a renovation, demolition or building permit.
9. That MoH with WorkSafeBC proceed with the development of a public health policy and guideline to address the previous provincial Medical Health Officer's concerns about asbestos disturbances in public places that have the potential of placing the general public at risk of exposure to asbestos (see [Appendix 2](#)). In addition, MoH and WorkSafeBC complete their work on a Memorandum of Understanding that will establish a protocol for the sharing of information.
10. That with a view to addressing the confusion and uncertainty expressed by stakeholders about the different definitions of what constitutes ACMs in the MOE and WorkSafeBC regulations, MOE and WorkSafeBC develop materials to provide a clear rationale and explanation to all interested and affected parties in the asbestos abatement and disposal process as to why the standards and requirements are different. The intent is that these materials would also clarify the different purposes that they serve and when they apply, with a view to providing clear guidance to interested parties on how these two definitions operate together and not in conflict with one another.



### **Addressing concerns about costs driving work underground and about the need to find an appropriate balance between measures that reward safe asbestos removal practices and punish unsafe practices**

In light of the broad consensus among stakeholders that efforts to increase enforcement and oversight (e.g., through mandatory licensing and certification) should be offset by some incentives aimed at encouraging owners (particularly homeowners) and others to change their behaviour for the better, there is a need to consider what opportunities may be available to do this.

The specific proposals cited by stakeholders suggest that there may be opportunities for any level of government – municipal, provincial or federal – to implement incentives of some sort. Some suggestions have included: leveling surcharges on new home renovation products as a means of subsidizing a system for disposing of old, asbestos contaminated products; property tax rebates for asbestos remediation work conditional on the work being done by licenced contractors; and requesting that the federal government establish a national renovation tax credit similar to programs that were in place in the past to encourage homeowners to remove urea formaldehyde foam insulation. Some stakeholders argue that the federal government has a particular responsibility

given that in the 1970s and 80s, the federal government's Canadian Home Insulation Program offered grants for installation of asbestos insulations such as Zonolite in homes<sup>11</sup>.

In light of the provincial government's interest in determining what more can be done to further protect people and the environment from the dangers of asbestos, the province may have a role in ensuring that these proposals receive due consideration.

In this context, the following recommendation is made:

11. That the provincial government consider: what, if any, role it could play in encouraging and supporting incentive programs that the federal and municipal governments may be considering; whether the provincial government sees any role for itself in developing a provincial incentive program; and whether the provincial government should join in or otherwise support stakeholders that have been lobbying the federal government for a national incentive program aimed at encouraging the safe removal and disposal of asbestos.

### **Addressing concerns about gaps in public knowledge and awareness**

While it is widely acknowledged that progress has been made in raising public knowledge and awareness, stakeholders also acknowledge that more can be done. This could include WorkSafeBC continuing with its awareness campaigns and possibly reaching out to new audiences, but many stakeholders believe that the need is considerably broader than what WorkSafeBC can reasonably do on its own. For example, some stakeholders have suggested that [Preventable.ca](http://Preventable.ca) may be an appropriate vehicle or medium for reaching a broader audience.

In addition, in light of the ambivalence or even hostility among some within the target audience to any knowledge and awareness messages, there is a need for these campaigns to also focus on changing public attitudes – to send the message that it is not acceptable under any circumstances for anyone to put workers, the general public or themselves at risk of exposure to ACMs. It could also include measures that would significantly enhance basic asbestos awareness across diverse audiences, including homeowners, high school students and trades trainees. In this context, the following recommendations are made:

12. That WorkSafeBC continue with its asbestos awareness initiatives, and that it consider expanding these initiatives to other target audiences as warranted and appropriate (e.g., the automotive repair and maintenance industry).
13. That the provincial government and WorkSafeBC work with stakeholders to develop additional public knowledge and awareness initiatives that focus in particular on changing public attitudes.

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11. "National Renovation Tax Credit Needed to Address Asbestos", Victoria Residential Builders Association <http://www.vrba.ca/national-renovation-rebate-needed-to-address-asbestos/>

## **Addressing concerns about limitations in disposal options and facilities, and illegal dumping**

The safe disposal of ACMs depends in part upon the steps that are taken at the stages of the asbestos abatement and disposal process that precede the actual disposal. Given this, local governments appear to be generally supportive of any steps that are taken to strengthen oversight and enforcement (including licensing of abatement contractors and certification of workers). However, there are also issues around disposal costs, how small quantities and ACMs can best be handled and the availability of disposal options and facilities. While local governments are playing an important role in developing options and pilot programs for addressing some of these issues, many stakeholders are suggesting that the province could play a stronger role in helping to ensure that there is enough capacity within the province for the safe disposal and recycling of ACMs at reasonable cost.

But at the same time, others point out that recycling and landfill sites are municipal responsibilities, and that the economic and environmental costs and benefits of establishing a single or multiple landfills in BC that could process ACM materials and drywall would need to be weighed against the status quo, which is that of having to transport most ACM drywall to a disposal facility in Alberta. MOE also notes that the Canadian Council of Ministers of Environment Canada-Wide Action Plan on Extended Producer Responsibility (CCME CAP-EPR) lists the safe diversion of construction and demolition materials, including ACM drywall, as part of its Phase II materials recommended for inclusion in future EPR programs. MOE is currently beginning to prioritize potential options for future expansion of BC's EPR programs, which will consider CAP-EPR materials, amongst others.

In this context, the following recommendations are made:

14. That local governments continue to develop and pilot test measures aimed at making it easier for homeowners to dispose of small quantities of ACMs.
15. That the lead ministry and MOE engage with local governments and the private sector to develop and consider options for addressing stakeholder concerns about insufficient capacity within BC for the safe disposal of ACMs.

## **Naturally Occurring Asbestos**

16. That using the naturally occurring asbestos sub-team's report as a basis, MOE, MoH and MEMPR work together on any other potential next steps and a path forward.





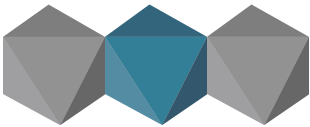
## Section 7:

### Conclusions And Next Steps

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In conclusion, the working group wishes to thank everyone who participated in the stakeholder meetings, as well as those who provided information and feedback to the working group through the Government of British Columbia's [engage.gov.bc.ca](http://engage.gov.bc.ca) website or directly to working group members. The issues discussed in this paper are urgent priorities for many of the people we met, and we are very grateful to those who were very generous with their time in helping us to understand the many issues and their intricacies.

One of the strongest messages that came out of the stakeholder meetings and the other feedback is that stakeholders are keenly interested in participating in the development of potential solutions. In this context, it is recommended that, as an immediate next step, this report be posted on the [engage.gov.bc.ca](http://engage.gov.bc.ca) website for public comment. It is recommended that any feedback then be incorporated into a final report to Cabinet aimed at securing Cabinet direction on next steps, especially on questions such as: lead ministry; development of a detailed work plan to continue developing a comprehensive provincial asbestos strategy, and whether the working group should have any role from this point forward.



## Appendix 1:

# Naturally-Occurring Asbestos Submission to Asbestos Cross-Ministry Working Group

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Proposed language for inclusion in the report and recommendations for the Asbestos Cross-Ministry Working Group.

Suggested format covers a high-level summary of the issue, what was done to investigate or address the issue, and recommended action. Any reports or documentation can be attached as an appendix. Note – City of Abbotsford should review the content before finalized.

Draft Outline:

1. What is naturally-occurring asbestos?
2. What is happening in the Sumas River? What is the US doing to address the issue at the source?
3. Findings from the cross-ministry NOA sub-team
4. Next Steps
5. References for Further Information



## **Draft Recommendations: Naturally-Occurring Asbestos – The Sumas River**

### **1) What is naturally-occurring asbestos?**

“Naturally-occurring asbestos” (NOA) refers to asbestos minerals present in our environment from natural sources. Most of BC’s asbestos deposits occur along a belt trending from the US border near Hope, BC to the Yukon border north of Dease Lake, between the Coast Mountains and the Rockies<sup>12</sup>. When disturbed, these deposits could result in adverse health risks. An example of where British Columbians may be exposed to NOA is from sediments in the Sumas River, near Abbotsford, BC.

### **2) What is happening in the Sumas River?**

Sediment in the Sumas River contains NOA<sup>13</sup>. The contaminated sediment originates from an ongoing landslide on Sumas Mountain in Washington State (WA), and travels north via Swift Creek, a tributary of the Sumas River. The mountain will continue to erode and sediment accumulation is expected to continue in Swift Creek and the Sumas River; storm events are also expected to increase, which can cause flooding and increased movement of the sediment. The contaminated sediment continues to accumulate on the Canadian side of the border and repeated flooding events exasperate the issue. The Sumas River must be dredged routinely to allow for drainage in the surrounding farmland of the Sumas Prairie. The City of Abbotsford has required approvals to dredge, transport and dispose of the contaminated sediment as it is considered a hazardous waste under the Environmental Management Act due to NOA in the sediment. The City of Abbotsford incurred dredging costs of \$125k in 2010 and \$52k in 2011 due to the additional safety requirements associated with handling and disposing of the dredged sediment; the City has raised these funding concerns with the Province and the federal government.

The City of Abbotsford has conducted its own testing to evaluate exposure for workers involved in dredging activities. While worker exposure was found to be very low and no over-exposures were identified from the analysis, other routes for potential exposure and associated health risks to the public and local farmers have not been evaluated. The United States Environmental Protection Agency (US EPA) studied the effects of common activities for individuals who live or work near the Sumas Mountain and flood areas along Swift Creek; the US EPA found exposure may occur through the inhalation of airborne asbestos during activities that disturb sediment deposits on banks, such

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12. Fleur E.L. Harvey-Kelly, P. Geo; Crescent Terrane Consulting. “Asbestos Occurrences in British Columbia,” BC Ministry of Energy, Mines and Petroleum Resources, 1995. <http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/OpenFiles/1995/Documents/OF1995-25asbestos.pdf>

13. Curran, C.A., Anderson, S.W., Barbash, J.E., Magirl, C.S., Cox, S.E., Norton, K.K., Gendaszek, A.S., Spanjer, A.R., and Foreman, J.R., 2016, Transport and deposition of asbestos-rich sediment in the Sumas River, Whatcom County, Washington: U.S. Geological Survey Scientific Investigations Report 2015–5177, p. 42. <http://dx.doi.org/10.3133/sir20155177>.

as using ashovel and wheelbarrow to move deposits; raking and mowing; or walking around a property in dry, dusty conditions<sup>14</sup>.

### 3) Findings from the cross-ministry NOA sub-team

A sub-team of staff from the Ministry of Environment and Climate Change Strategy, Worksafe BC, and Ministry of Health conducted a high-level background review of the issue, possible approaches to assess the risk of public and worker exposure to Sumas River NOA, and have identified next steps. To support this review, a series of discussions with staff from the BC Centre for Disease Control, Fraser Valley Health Authority, the City of Abbotsford, Environment and Climate Change Canada, the US Environmental Protection Agency (EPA), Washington State and researchers at the University of British Columbia contributed to the drafting of this background.

The key findings of the sub-team's work are as follows:

- The best opportunity to reduce potential public and worker exposure to NOA in the Sumas River is at the source, the Sumas Mountain. This is costly work and requires collaborative effort of US agencies. A 2014 Joint Agency Agreement between the EPA, Washington State, and Whatcom County would reduce the risks associated with human exposure to NOA through the Swift Creek Sediment Management Project to address flooding and asbestos concerns.
- There are gaps in provincial and federal approaches to NOA in the Sumas River, namely in identifying whether local workers and residents in the City of Abbotsford and Sumas First Nation are exposed. Activity-based sampling would provide valuable information to understand the potential inhalation exposure to NOA released from soil into the air through common activities. There is currently no recognised acceptable threshold for public exposure to asbestos.

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14. In 2011, the US EPA published a memorandum reporting a risk evaluation based on common activities of individuals who live or work near the Sumas Mountain and flood areas along Swift Creek. The activities conducted included excavating and moving sediment deposits using a shovel and wheelbarrow; spreading sediment deposits into loafing pens at a farm; yard work (including raking and mowing); and walking around the properties. The results indicated risks in some cases above the EPA's risk management range and the EPA therefore continues to recommend that residents and farm workers should "avoid contact with the contaminated sediment [or ensure it is kept wet, to minimize the release of fibres]; avoid tracking sediments into homes or vehicles; and when in doubt, assume that flood deposits contain asbestos." However, epidemiological studies conducted by the Washington Department of Health did not show any increased incidences of asbestos-related cancers in the Whatcom County area. [https://www3.epa.gov/region10/pdf/sites/sumasmountain/sumas\\_mountain\\_asbestos\\_risk\\_evaluation\\_memo\\_march2011.pdf](https://www3.epa.gov/region10/pdf/sites/sumasmountain/sumas_mountain_asbestos_risk_evaluation_memo_march2011.pdf)

Dr. Hans Schreier, professor of Land and Water systems at the University of British Columbia (UBC) has led academic research on Sumas River NOA. Dr. Schreier has studied the interaction between the asbestos-rich sediment and agricultural contaminants, positing that further scientific research could be conducted to determine if the chrysotile asbestos fibers are sufficiently modified once they enter, are transported and deposited on agricultural land to pose a reduced health risk. See <http://ubclfs-wmc.landfood.ubc.ca/webapp/IWM/course/case-study-watersheds-8/sumas-river-watershed-canada-50/> for a case study summarizing this work.

#### 4) Proposed Next Steps:

These next steps are proposed for consideration, should there be an interest in exploring the impacts of NOA in the Sumas River.

Proposed Next Steps	Timeline
<b>1. Continued federal and transboundary collaboration</b>	
1. BC will collaborate with Environment and Climate Change Canada, Health Canada, Washington State, and the EPA to encourage continued efforts under the 2014 Joint Agency Agreement to address NOA in the Sumas River at the source.	Continuous
2. BC will continue to track the latest research on NOA. Ensuring BC staff members at the appropriate agencies have the expertise and knowledge on the latest research and policy approaches will support future assessment and mitigation of risks to local populations and workers that may be exposed to NOA in other scenarios.	Continuous
<b>2. Risk assessment planning and scoping</b>	
1. Define roles and responsibilities: Identify the agencies with the relevant expertise and/or authority and define the respective roles and responsibilities.	1 month
2. Evidence review and problem formulation: Develop a conceptual model of asbestos within the Sumas River sediments that includes all activities associated with handling and/or movement of the asbestos material (occupational and potential public exposure pathway).	6 months
3. Subject matter experts review existing evidence, including the results of previous investigations, to define the problem, identify gaps, and evaluate the need for further assessment.	1 month
4. Scoping and feasibility assessment: If the need for further assessment is identified in 2.2 and 2.3, define the purpose, scope and feasibility of a human health risk assessment.	2 weeks

#### 5) References for Further Information:

For further information on the Sumas River, Swift Creek and the Sumas Mountain, see the following webpages:

- US EPA - <https://yosemite.epa.gov/r10/cleanup.nsf/sites/sumasmtn>
- Whatcom County - <http://www.whatcomcounty.us/513/Swift-Creek>
- UBC - <http://ubclfs-wmc.landfood.ubc.ca/webapp/IWM/course/case-study-watersheds-8/sumas-river-watershed-canada-50/>

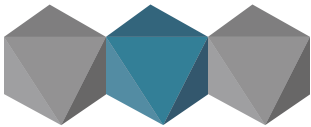
## Appendix 2:

### Public health policy and guidelines

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MoH and WorkSafeBC recommend the following technical recommendations be developed for BC:

1. Develop an asbestos assessment guide for public settings (indoors):
  - a) background dust sample method and guideline - where to sample and how.
  - b) protocol for baseline assessment - hygiene determination prior to remediation
2. Cleaning protocol - carpet, fabric, hard floors and surface (Note: but to what end – see 3)
3. Develop public clearance values (guide 3)
  - a) Dust clearance - this will require future work – parallel to ‘lead area’ sample. (Note: this requires development of an evidentiary basis for assessment – perhaps develop this as data becomes available from 1)
  - b) Air clearance value - air clearance value for public space – if contextually possible - background dust assessment not appropriate.



## Appendix 3:

# Stakeholder Engagement

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### Meetings:

#### November 16, 2017

- Hazardous Materials Association of BC/Cross Ministry Asbestos Working Group Meeting

#### November 27, 2017

- BC Building Trades/Employers' Forum/Cross Ministry Asbestos Working Group Meeting, which included representatives from:
  - BC Building Trades
  - BC Federation of Labour
  - Construction Labour Relations Association
  - City of Surrey
  - SNC Lavalin
  - BC Housing
  - Council of Construction Associations
  - Hazardous Materials Association
  - Metro Vancouver
  - BC Association of Restoration Contractors



#### February 16, 2018

- REAC Solid Waste Subcommittee/Cross Ministry Asbestos Working Group Meeting

Follow-up meetings were also held with representatives of the BC Building Trades, the Employers' Forum, the Hazardous Materials Association, and Metro Vancouver municipalities, primarily in August and September 2018 as this report was being developed and finalized.

### Other Stakeholder Engagement:

- Submissions to the [engage.gov.bc.ca](http://engage.gov.bc.ca) website from members of the general public, trade unions, laboratories, asbestos abatement contractors, consultants, safety associations and local governments.
- With the assistance of the Union of BC Municipalities, the working group also received input from local governments from other parts of the province including Vancouver Island, the Fraser Valley, the Okanagan and Northern BC.