# Work Safe

Tools for building safer workplaces | worksafemagazine.com | July / August 2017

Protecting B.C. bus drivers from acts of violence p7

Stopping workplace exposure to sensitizers p5

Honouring those who shaped B.C.'s agriculture industry p21 Tansit Fares al fue to the state of the

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CLINT MAHLMAN EXECUTIVE VICE PRESIDENT & CHIEF OPERATING OFFICER - LONDON DRUGS



### Highlight

The health and safety history of B.C. farmworkers p2

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#### What's wrong with this photo? These workers are at the height of danger.

**On the front cover:** New barriers for Coast Mountain buses have three settings for how wide the barrier can be. Derek Stewart, director of Safety, Environment, and Emergency Management, demonstrates the widest and fullest shield.

### **Historic landmarks in safety**

This year marks a milestone for WorkSafeBC the 100-year anniversary of British Columbia's workers' compensation system. Since then, there have been many more milestones in occupational health and safety.

In this edition, we look at the historic decision to add farm workers to the *Workers Compensation Act* in 1993 (see page 21). Today, farm workers are not only protected under the Act, but the industry itself is invested in occupational health and safety. Young farm workers of 4-H British Columbia have been stepping up to address the hazards of farm machinery, both with their peers and their families, through videos and talks on safety around machinery (see page 23).

Our cover story celebrates another kind of milestone, the end of a multi-year pilot on using barriers to protect B.C. bus drivers from acts of violence (see page 7). And our work science feature covers the winner of the first-ever Roberta Ellis Award for Excellence in the Study and Practice of Occupational and Environmental Health, which aims to encourage the growth of the next generation of researchers (see page 15).

Over the last 100 years, there have been many milestones in occupational health and safety. Thanks to our partners, stakeholders, and dedicated employers and workers, positive change continues to happen every day. Their commitment supports workers and employers now, and for generations to come.



Terence Little Editor-in-chief

# WorkSafe

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WorkSafe Magazine is published by the WorkSafeBC (Workers' Compensation Board of B.C.) Communications department to educate workers and employers about injury and disease prevention, promote positive safety culture, and provide links to WorkSafeBC resources for safer workplaces.

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### Contributors



#### Gord Woodward

Nanaimo-based writer Gord Woodward has covered everything from ergonomics in truck cabs to safety motivation, but he always learns something new from our officers in Ask an Officer. In this edition, he speaks with Lisa Kennedy about sensitizers (right).



Helena Bryan

From writing about health and safety, creating documents for land treaties, and covering local news, North Vancouver-based writer Helena Bryan has a diverse history of telling B.C.'s stories. In the cover story (page 7) she reveals the happy end to a two-year pilot into barriers to protect bus drivers from acts of violence.



#### Lucy Hyslop

As a writer who also teaches skiing and yoga, Lucy Hyslop says she constantly reminds people about safety. In this edition, she covers the City of Surrey's commitment to reducing MSIs for pool workers (page 12).



#### Susan Kerschbaumer

Susan Kerschbaumer is a communications specialist living in Victoria, B.C. In this edition she delves into a piece of B.C. history — the inclusion of farm workers under the *Workers Compensation Act* (page 21).

# Ask an officer

# Prevent exposure to sensitizers



Lisa Kennedy Occupational hygiene officer

Region: Nanaimo Years on the job: 8

In this issue, we speak with certified industrial hygienist and WorkSafeBC occupational hygiene officer Lisa Kennedy about the hazards of sensitizers in the workplace. Sensitizers are part of WorkSafeBC's province-wide occupational disease strategy that runs throughout 2017.

#### Q. What are sensitizers?

- A. Sensitizers are materials that can cause severe skin and/or respiratory responses after exposure. They can be inhaled or come into contact with your skin. There's quite a long list of sensitizers. Some of the common ones include:
  - Paints and coatings used in vehicle and industrial painting
  - Construction materials, such as epoxy, glues, or adhesives, roofing materials, tar or glue used with vapour barriers, and insulation foam
  - Flour in baking
  - Dyes in hairdressing and industrial use
  - Concrete additives such as curing compounds and binding agents
  - Some wood types, including western red cedar, ash, beech, and spruce

#### Q. What health problems can they cause?

A. Skin rashes and respiratory reactions, like severe asthma attacks, can occur and are potentially life-threatening. Sensitization can result in an immediate reaction where people have to be taken to hospital.

The way your body reacts to a sensitizer is an immune response, which makes it challenging to talk about specific symptoms because we all have different immune systems. For some people, subsequent exposure after being sensitized to a material may cause intense responses, even at very low exposures levels. Cross-sensitivity can occur when a worker who is sensitized is exposed to similar chemicals.

If you have a reaction to a sensitizer, you shouldn't ever be near it again.

# Q. How do I know if the materials I'm using are sensitizers?

A. A lot of time these things have an odour to them so that can be a clue — but don't rely on that. Review the safety data sheets for each product you use, looking for the terms sensitizer, sensitizing, allergy, or asthma. Also, check the WHMIS labels in your workplace. The following symbols can indicate the presence of a sensitizer in a WHMIS controlled product:



#### Q. As an employer who uses sensitizers, I understand I need an exposure control plan. What should it cover?

A. You should first ask yourself: "Do we have to be using this product?" If you can't substitute it with something else, you must have an exposure control plan specific to your workplace.

Your exposure control plan must include:

- A statement of purpose and responsibilities
- Risk identification, assessment, and control
- Education and training of workers
- Written work procedures
- Hygiene facilities and decontamination procedures, where applicable

You may also be required to include health monitoring and documentation in your plan, which is to be reviewed annually.

In addition to an exposure control plan, you need to follow WHMIS requirements. These include providing safety data sheets, labelling materials, and training staff.

It's also helpful to make sure your first aid attendant understands what sensitizers are in the workplace. This will help ensure that a worker who has a reaction gets appropriate medical treatment.

# Q. I've heard we are supposed to use ALARA levels for sensitizers. What does that mean?

A. ALARA stands for "as low as reasonably achievable." What that means is that we expect employers to not just meet the exposure limits, but to be below them where you can. You need to take measures to keep a worker's exposure to a level as low as is reasonably achievable.

# Q. As a worker, how do I protect myself from exposure to sensitizers?

A. Personal protective equipment is important. Let's take the example of an auto body painter using isocyanate products — these are sensitizers. The worker would need to wear an air-supplying respirator, and eye and skin protection.

You can educate yourself about the risks, and other protective measures you can take, at worksafebc.com. You can also talk with your worker health and safety representative (for workplaces with 9–19 workers) or your joint health and safety committee member (for workplaces with 20 or more workers).

If you think you've had a reaction to a sensitizer, make sure you report it to your first aid attendant or employer.

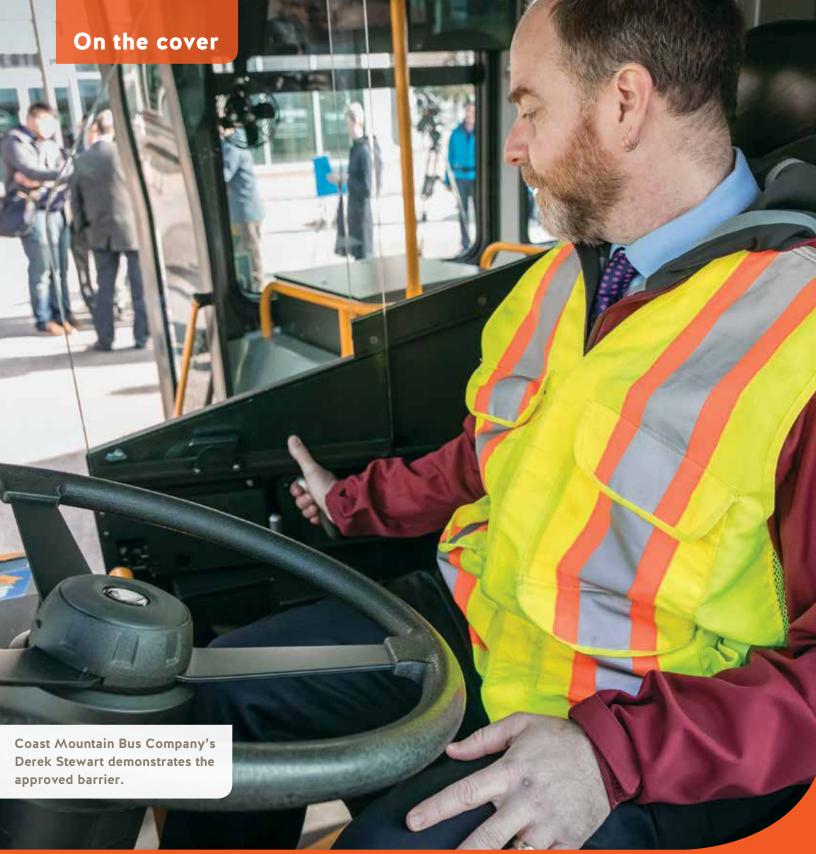
# Q. Where can I get more information about sensitizers?

A. Start with Part 5 and Part 12 of the OHS Regulation to learn about employer responsibilities.

Search worksafebc.com for "sensitizers" to find free resources that include industry-specific information.

Looking for answers to your specific health and safety questions? Send them to us at worksafemagazine@ worksafebc.com, and we'll consider them for our next Ask an Officer feature.  $\circledast$ 

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# All aboard with bus safety barriers

By Helena Bryan

Thanks to a unique collaboration between B.C. bus companies, their unions, and WorkSafeBC, new safety barriers designed to protect drivers from acts of violence will soon ensure an easier ride for Coast Mountain Bus Company drivers, and their customers.

A major pilot took place in 2015 and 2016 between BC Transit and TransLink's Coast Mountain Bus Company (CMBC) to test various safety barriers meant to protect bus drivers from acts of violence. While BC Transit is in the final pilot phase, the Lower Mainland's CMBC is satisfied that they've found the right barrier to protect their drivers, and the company is installing permanent windshield-like barriers on all new buses — a measure many workers and employers say prevents dangerous or unwanted exchanges with problem passengers.

New buses equipped with barriers are expected to begin arriving by early 2018. Near the end of 2017, CMBC will begin retrofitting 208 of its conventional buses with barriers, a task it hopes to complete within two years.

While safety barriers are a common feature on European buses, here in Canada, the only other transit authority to equip its buses with barriers is Toronto their version is a partial barrier with a pop-up top half. Ontario's Brampton Transit is currently testing prototypes for their system, but the jury is still out on whether barriers will become a standard feature on buses there.

Despite the lack of precedent for bus barriers in Canada, a current of optimism runs through the offices and transit centre depots of BC Transit and CMBC. BC Transit hopes the knowledge gained during the pilot process will improve future decision-making. And

## "Imagine coming to work every day not knowing whether you'll be one of the more than 100 [workers] who are assaulted that year."

-Haydn Acheson, Coast Mountain Bus Company president and general manager CMBC is confident the decision to go ahead with the barrier will help drivers do their jobs more effectively, while protecting them from illness and injury.

Derek Stewart, safety, environment, and emergency management director for CMBC, says the greatest boost toward the project's success was its grassroots support. From the outset, he credits the close collaboration with both unions — BC Transit's Unifor local 333-BC and CMBC's Unifor local 111 — for finding common ground on an initiative meant to help, rather than hinder drivers from doing their work. "The two unions were able to share similar experiences and learn from each other," Stewart says.

"It was important that our transit operators be a partner in the process early on," he adds. "The bus drivers are the ones who know the job. And, without the unions at the table, we might not even have known the right questions to ask."

#### **Driver protection paramount**

In moving ahead with the pilot, company and worker representatives knew they faced significant challenges. Bus drivers confront an array of potential hazards every day, such as the potential for musculoskeletal strain, and the effects of fatigue. On top of that, they risk harmful on-board interactions, including passengers who inadvertently fall or spill their drinks on them, cough or sneeze on them, and at worst, violently assault them.

Bus drivers — like all employees in B.C. — have the right to a safe and healthy workplace.

"Under the Occupational Health and Safety Regulation, employers have a legal obligation to eliminate or, if not possible to eliminate, to minimize risks of violence against workers," says occupational safety officer and violence prevention expert Dave Scott. Scott is part of the officer team assigned to CMBC that provided guidance on creating a violence prevention program.

While preventing violence at work involves "communication, training, and incident investigations," says Scott, it also involves minimizing the risk from the hazard to the lowest level practicable using engineering controls, administrative controls, or a combination of both.

Over the years, CMBC has consulted with WorkSafeBC to make improvements in injury-prevention training, ergonomic measures, and engineering enhancements —



all to lower the hazards associated with musculoskeletal strain and fatigue. The next step was to address acts of violence and assaults.

To define bus driver assaults, CMBC uses a classification system created by the Canadian Urban Transit Association, which represents about 100 transit authorities. Generally, assaults are defined as any act of aggression — physical or verbal — that hinders the driver's ability to complete his or her scheduled run safely.

Since Coast Mountain Bus Company installed cameras on buses in October 2009, they've seen a reduction in all types of driver assaults, from 144 in 2009 to 124 in 2013. "But one assault is one too many and we had 106 assaults in 2016," says Stewart. "We needed an engineered solution, a physical device that prevents physical contact between driver and customer."

When he joined the organization in 2011, CMBC president and general manager Haydn Acheson says he was stunned to find out that there were so many assaults on bus drivers every year. "Imagine coming to work every day not knowing whether you'll be one

of the more than 100 [workers] who are assaulted that year. Unless maybe you're in the police or armed forces, you just don't expect that kind of risk."

And the impact of such incidents is major, adds Stewart. "They can make the person assaulted and their co-workers — leery of coming to work, less productive, and more stressed out. For some, these incidents are incapacitating."

Ben Williams, union president for BC Transit Victoria operators, and a former bus driver for 16 years, says drivers are verbally abused every day, and spitting, especially, is on the rise. "When I started out, there might be six spitting incidents in one year. Today, there can be as many as four or five in one weekend." CMBC statistics show the prevalence of the issue: since 2009, spitting incidents have accounted for 38 percent of assaults on Lower Mainland bus drivers.

#### **Barriers being introduced gradually**

The pilot to reduce such harmful exposures and potential assaults featured two phases: One involved a six-week internal trial, in which operators tested

### "One assault is one too many and we had 106 assaults in 2016."

-Derek Stewart, Coast Mountain Bus Company safety, environment, and emergency management director

a barrier prototype and provided feedback on its ventilation, visibility, ergonomics, sturdiness, and level of separation. The second phase included a 12-month, in-service trial for operators to test the barrier in various road conditions with actual barriers. Phase two was followed by a WorkSafeBC survey.

A critical feature of the pilot required driver feedback from each phase, which was used to refine the prototype and assess its effect on the driver's work environment.

Trials began for CMBC operators in October of 2014, and the first barrier was introduced to the public on Burnaby routes in late January, 2015. A total of six prototypes with four different designs were piloted. The one chosen for CMBC was piloted in the fall of 2016.

BC Transit is nearing a decision as well. BC Transit's president signed off on a similarly designed safety barrier on May 1. This signed-off design will be piloted with their regional contractors throughout B.C. before a final decision will be made.

#### On track for a new industry standard

During the trials, CMBC worked through major roadblocks says McMillan. "One of the biggest concerns about barriers is the perceived disconnection from customers. That interaction is what draws many bus drivers to the job." The solution: a barrier that doesn't go all the way up to the bus ceiling and a sliding glass partition with three different safety lock settings, giving operators a choice. "This prototype is operator and passenger friendly," says McMillan. "It provides the security needed to prevent assaults, without cutting off the driver."

There were also other issues to consider, says Stewart. "Did the prototype disrupt air flow? Did it impede sight lines to mirrors? What about glare and visibility? Standard plexiglass scratches easily, making it difficult for operators to see clearly. Coast Mountain Bus Company's chosen model is constructed of a glass and plastic combination similar to windshields, and is scratch-resistant and offers low reflection."

The pilot was about minimizing these unintended consequences, Stewart says. "The lessons learned

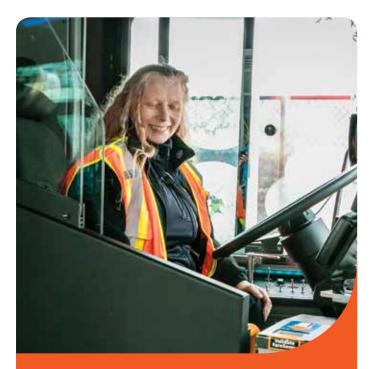
from the pilot helped us build a solution that works for everybody."

McMillan says he was impressed when he tested an early prototype: "It had a sturdy metal frame, it's non-glare, and the angle and height of the barrier gives you a sense of not being enclosed. At the same time, you know you have your own space and that nobody can violate it."

#### **Everyone at the table**

WorkSafeBC key account performance consultant Ray Zukanovic calls the barriers "a huge improvement from those introduced several years ago." Under the steerage of WorkSafeBC Prevention Services, and with WorkSafeBC funding, the prototype was the result of a successful collaboration.

In late 2011, WorkSafeBC began working closely with Coast Mountain Bus to focus on the risks that drove their injury rate. Acts of violence were one of the risks identified, and discussions on how to mitigate that risk



Bus drivers like Dee Cooke, will have the option of opening the barrier for easier communication with non-violent passengers.

culminated in the pilot, and eventual decision to adopt safety barriers.

Zukanovic led the first official meeting to discuss the trial back in July 2014. "I was there to kick off the project, make sure we stayed on track with our deadlines, and to hold everyone accountable to our collective goals and expectations," he says.

"Importantly, we had all the stakeholders — the two employers and the two union leaders — in the same room. The conversations were respectful and we built trust, resulting in the best possible product for employers, employees, and customers."

Equally important was the commitment from senior leadership like Haydn Acheson, who Zukanovic says ultimately made the change happen.

And the process itself set a significant precedent.

"This trial was large-scale, with many stakeholders involved and long-term implications; it had the

## "The conversations were respectful and we built trust, resulting in the best possible product for employers, employees, and customers."

-Ray Zukanovic, WorkSafeBC key account performance consultant

potential to go sideways," McMillan says. "Instead, it's a flagship example of the benefits of collaboration."

Acheson agrees, "It's easy to say that safety is a core goal, but you have to walk it, you have to follow through and deliver. Everyone — the unions, WorkSafeBC, and both employers — did a lot of work during the barrier pilot to find the best possible solution. It was crucial that we drive it all the way home and make it a reality."  $\odot$ 



We're working with you to make sure all farmers go home safe. For resources and videos on safe equipment operation, visit worksafebc.com/agriculture.



### Safety spotlight

Kelsey Woods and Jackie Dear use the motorized bulkhead at the Grandview Heights Aquatic Centre in Surrey, B.C.

# Going to great lengths to reduce musculoskeletal injuries

By Lucy Hyslop

When a work task regularly performed at indoor pools was causing overexertion, the City of Surrey knew they had to take action. Their solution? Engineer out the risk.

Think of a swimming pool, and you immediately picture people of all ages lapping up fun and getting exercise. For some workers, however, creating that perfect watery playground can put them at risk of developing musculoskeletal injuries (MSIs), particularly in the back and shoulders.

The force needed, for example, to manually pull or push a crucial piece of equipment, known as the pool bulkhead, can put staff at a high risk of back injuries. A bulkhead is basically a large divider that spans the width of a pool. It's sturdy and wide, and can be used to change the length of the swimming area to separate aqua fit classes, for instance, or set up for competitions. Manually pushing or pulling a bulkhead has the potential for injury, says Peter Goyert, senior ergonomist at WorkSafeBC. During tests at three aquatic centres in the Lower Mainland, Goyert noted that the forces required to manually move heavy and cumbersome bulkheads registered above acceptable levels listed on the well-known Snook tables — the Liberty Mutual Manual Material Handling Tables (commonly known as Snook tables, after their original creator Dr. Stover Snook) outline design goals for various lifting, lowering, pushing, pulling, and carrying tasks.

Overexertion injuries can be debilitating injuries, says Goyert, adding that ergonomic claims accounted for 34 percent of the lost work days in B.C., in 2015. Ergonomic injuries include injuries from repetitive motion and MSIs. These types of injuries can make it difficult to return to work if the risk (the cause of the injury) is not removed, he adds. "We take the approach that if something is high risk, employers need to find a different way of doing it. So, if you engineer the risk out of the task — you just push a button and the bulkhead moves along the pool, instead of manually pushing it — then you eliminate that risk."

-Peter Goyert, WorkSafeBC senior ergonomist

#### **Finding a solution**

The key to avoiding injury from overexertion in moving swimming pool bulkheads is eliminating the need to push or pull the bulkhead by hand. The alternatives found throughout the Lower Mainland include retrofitting manual equipment to be mechanical, or including mechanized bulkheads in the building plans for new pools. The City of Surrey did both.

In 2014, the Surrey Sport and Leisure Complex retrofitted its manual bulkheads to allow for motorization. The City of Surrey's joint occupational health and safety committee identified that the bulkhead was a problem that needed to be fixed their team had reported several injuries, ranging from lower back pain, to damage to wrists and rear ends from people slipping while moving the equipment.

A task force of workers and management looked into — and tried out — the different methods to move the bulkheads. "We piloted a few options, but realized that a motorized bulkhead would be the way to go," says Jeffrey Holland, recreation facility manager for the City of Surrey. "It's been very successful. Since its introduction, we really don't have any health and safety issues, as it takes the exertion out of the exercise. The workers are now tasked more with simply guiding the bulkhead."

In constructing their newest pools, City of Surrey didn't take any chances. When constructing their Grandview Heights Aquatic Centre and Guildford Recreation Centre, which both opened two years ago, they factored motorized bulkheads into their original design and budget.

#### **Minimizing injuries**

"We take the approach that if something is high risk, employers need to find a different way of doing it. So, if you engineer the risk out of the task — you just push a button and the bulkhead moves along the pool, instead of manually pushing it — then you eliminate that risk," says Goyert.

Both Goyert and Holland agree that it is worth working out how to remove the risk from the task for the sake of workers. Stressing that the City of Surrey takes "safety very seriously," Holland is happy with the results. "This was a coordinated effort from facility employees and joint committee members. The greatly reduced injuries really point to that success."  $\odot$ 

### WorkSafeBC Ergonomics Forum



Save the date Tuesday, Oct 17, 2017 | 12:30 to 4:30 p.m.

October is Ergonomics Month and in recognition WorkSafeBC is hosting an ergonomics forum.

Join us for an afternoon of presentations and networking.

Register for the event at worksafebc-ergonomics-forum-2017.eventbrite.ca

For more information, email ergomonth@worksafebc.com

WORK SAFE BC

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WORK SAFE BC

### Work science

Dr. Chris McLeod and Nicole Boeder pose with Roberta Ellis, the namesake for the new award for excellence in occupational health and safety.

# Practicum to prevent lead exposure leads to award

By Gail Johnson

When workers at her practicum raised concerns about lead exposure, UBC student Nicole Boeder devoted her summer to finding out more. Her investigation earned her the inaugural Roberta Ellis Award for Excellence in the Study and Practice of Occupational and Environmental Health, and helped some workers along the way.

While she was doing her undergraduate degree in science, Boeder wanted to be a doctor. Over time, however, she found herself more becoming curious about why people become ill in the first place. Realizing the potential impact she could have on people's lives by preventing injury and disease, she pursued the MSc in Occupational and Environmental Hygiene program at UBC.

The program allowed Boeder to take a proactive approach to health and medicine. Last summer, she was able to put her passion for prevention into practice while doing her industrial-hygiene co-op practicum at a lead and zinc smelter and refinery.

# Understanding workplace lead exposure

While working with an industrial hygienist and hygiene technicians during her practicum, Boeder learned that previous workplace testing had revealed that lead exposure was occurring for a group of workers that did not have direct contact with lead processes. What wasn't as evident was the source.

Lead is a highly toxic agent that can interfere with normal cellular biological processes throughout the entire body and cause serious chronic health problems. Inhalation has generally been considered the greatest potential route to exposure in this type of workplace.

However, what made the situation curious was that exposure was occurring in some workers, but not all, and air sample results didn't support any correlation for this particular group.

"That's what prompted me to do the investigation into determinants of lead exposure in this group of workers," says Boeder, who now works as health and safety advisor for the Vancouver Airport Authority. "Some tasks were associated with a much higher exposure than others. I identified different tasks, and working conditions, and hygiene habits that were other potential routes of exposure."

Boeder conducted air sampling, dermal wipes, and personal hygiene surveys in combination with biological data monitoring. She also discovered that certain worksite characteristics could result in greater potential airborne lead exposure, especially from falling dust associated with working underneath vehicles.

#### Limiting exposure

She also found strong links between workers' personal hygiene habits and lead exposure. "What kind of gloves they were wearing, how frequently they changed their gloves, and how effective were their own personal handwashing techniques: those enabled us to look at all potential routes of exposure other than what they might inhale," she says.

This enhanced understanding of lead exposure determinants made for informed recommendations to reduce personal exposure, such as changing the type of gloves worn and replacing them more frequently. Boeder did her analysis while still on her practicum so that she could present her findings to the workers themselves.

"It opened up the discussion between workers and management about what everyone could do to make sure we keep exposures at a minimum," Boeder says. "We got ideas from workers on how to work more safely and prevent or limit their exposure with some of these tasks.

"It was important to the workers because they had concerns, and that's what drove this research," she adds. "If a worker has a legitimate concern, that's something that should be looked into and investigated. We have the right to refuse unsafe work and also the right to know and be made aware of our workplace exposure. Knowing your rights isn't just about staying safe in the physical sense, but about thinking about your health as well."

#### **Practical applications**

While Boeder's efforts helped the workers, they also impressed the committee looking for candidates for the Roberta Ellis Award for Excellence in the Study and Practice of Occupational and Environmental Health. Dr. Chris McLeod, Partnership for Work, Health, and Safety co-director at UBC's School of Population Health, came up with the idea for the Roberta Ellis Award as a way to recognize the former senior vice president of corporate services and human resources at WorkSafeBC, who retired last year. Ellis is known for her longstanding support of the education and training of students in the area of occupational and environmental health.

The committee, made up of occupational and environmental health faculty, assessed the UBC program's co-op students, ultimately selecting Boeder as the recipient of the inaugural \$1,000 award.

"She did really interesting, excellent work and she was able to bring forward some concrete recommendations to help improve workers' circumstances," McLeod says. "Her work was a really good fit for the award because her research had strong practical applications."

Suhail Marino, director of privacy and operations at the Partnership, says Boeder's research demonstrated excellence in the study and practice of occupational and environmental health. "She had an impact on protecting workers and making their work environment safer, the goal of all of us in our field," Marino says.

WorkSafeBC and the Partnership for Work, Health, and Safety supported the inaugural award, but going forward it will be supported by WorkSafeBC. Encouraging the growth of the next generation of researchers is a key component of WorkSafeBC's research program, says Lori Guiton, director of WorkSafeBC Policy, Regulation and Research. "Through our Research Training Awards and through the Partnership for Work, Health, and Safety, we support young scientists at the beginning of their careers, connecting them with policy makers, employers, and other stakeholders as they are establishing their research interests and discovering their passion for improving occupational health through their work.

"Roberta's long commitment to building capacity in occupational health and safety research underscores its importance to us as an organization, and this award honours her contribution to this integral piece of our approach: supporting the training of new researchers today who will help us to respond to the critical questions of the future."  $\otimes$ 



Winner

# Air quality a concern for confined spaces

The May / June 'What's wrong with this photo?' contest depicted a number of hazards associated with entering and working in a confined space.



Our contest winner **Gerardo Noriega**, Supervisor, Safety Management Systems of Metro Vancouver Regional District correctly identified a key question for this photo: Has the air been tested, and is it safe? Here is a list of what he spotted:

#### Outside the confined space

- The lid on the side of the opening is a trip hazard.
- The entry opening is not guarded and someone could fall in there. The worker looking in could be at risk of falling into the opening. There are plenty of objects to trip on, and no guarding around the opening.
- The worker looking into the space is not wearing gloves and his hard hat is being worn backwards.
   Also, I can't see whether there is a chin strap on the hardhat: Without it, the hard hat could fall from the

worker's head and strike a worker below. Assuming this is the confined space attendant, he doesn't seem to be taking any atmospheric readings.

- The tripod has not been deployed to assist with workers' access in and out of the confined space or rescue. It is also a trip hazard.
- The retractable lifeline / winch has not been deployed to assist with worker's access in and out of the confined space. It is also a trip hazard, and someone could kick this device into the opening and strike a worker below. It also has to be inspected to verify that certification by the manufacturer is current.
- There is slight rust on the snaphook.
- The document next to the hole does not have any visible atmospheric readings on it. Also, someone could kick this clipboard into the opening and strike a worker below.
- The ventilation ducting is outside of the confined space. It seems the confined space is not being ventilated. It's also a trip hazard.

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 There are numerous objects scattered around inside and outside of the confined space. The site must be neatly organized to avoid workers tripping and falling and objects being kicked into the opening of the confined space.

#### Inside the confined space

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- There is rope going into the confined space, but we can't see where it's anchored to, or what it's being used for. It cannot be used for rescue or hoisting personnel into the confined space. It also seems that the rope has become entangled in the worker's leg (or the worker has made a harness with the rope). It could immobilize worker's leg as he is climbing the ladder and make him fall.
- The worker on the ladder is not focusing on climbing, and is distracted. Also, he's not wearing a hard hat, nor a full body harness. He's not attached to a hoisting device or a lifeline.
- We don't know what kind of substances they are working with in the confined space, because there are no labels on the green bottle. Also, I can't see what is in the pail. If a respirator was required, the worker on the ladder is wearing it on his head rather than having it donned.

- There is rope all entangled at the bottom of the confined space. It's not clear if it's being used as a lifeline for rescue or to hoist equipment and materials into and out of the confined space. It must not be used with dual purpose.
- Neither of the workers inside the space are wearing gloves.
- There seems to be some sort of motor in the space. Would it be on? Would it be noisy or hot? Would it need to be isolated and locked out?
- There is a worker using pliers to open a five gallon pail spout: This is not the right tool.
- Looks like there is a ventilator inside the space, which should be outside.
- The worker on the floor is not wearing a full body harness, nor is he attached to a lifeline.
- Not sure if this confined space is located in an area where there is traffic and / or heavy machinery running around. If that were the case, these workers would have to be wearing high-visibility apparel and have an established control zone around the work area.

The BCCSA has developed the Silica Control Tool as a resource for the construction industry in BC. The Tool assists employers in conducting appropriate risk assessments and implementing effective controls and safe work practices where RCS dust may be an occupational hazard. The Tool identifies processes that may lead to exposures over the allowable exposure control limit, provides information about how to bring the exposure within the allowable limit, and produces a corresponding Exposure Control Plan (ECP) for the user.

#### www.silicacontroltool.com

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#### WHAT DOES IT DO?

The Tool guides the user step-by-step for each of their identified RCS dust producing processes through:

- Assessment of the risk from exposure
- Identification of the expected exposure
- Suggestions for appropriate controls
- Identification of expected exposure with
- the controls
- Any PPE that may be required
- Production of components of a related Exposure Control Plan (ECP)

#### **EMPLOYERS' KEY BENEFITS**

- Help to ensure the health & safety of workers engaged in RCS dust producing processes.
- Assist in complying with the requirements of the OHS Regulation relating to assessing & controlling RCS dust exposures to below the allowable exposure limit.
- In some situations, eliminate the need for air monitoring tests for planned work processes, which is particularly helpful given that testing can often be challenging on construction sites because of short duration of work, and changing nature of activities.
- Preparation of specific process-based ECP templates that can be tailored for each jobsite.

BC Construction Safety Alliance

BCCSA

The BCCSA Silica Control Tool can be a valuable aid to qualified persons in conducting RCS dust risk assessments, selecting and implementing controls and developing ECPs. However, the Tool Is NOT a replacement for professional advice or jobsite air monitoring tests as may be needed. Jobsites and construction projects can be highly complex with unique variables and ever changing nature of work. The Tool does not purport to provide a conclusive output for every possible RCS dust producing process. Employers are ultimately responsible for taking whatever steps are needed to ensure that the requirements of the OHS Regulation are met.

Both employers and workers have an important role to play in addressing bullying and harassment on the construction site.

# **Constructing a workplace** free from bullying and harassment

By Jesse Marchand

If someone at your worksite was being bullied would you know what to do? Speaking directly to workers and employers who have experienced bullying and harassment first hand, a series of videos and resources from WorkSafeBC titled Bullying and Harassment in Construction: It's Personal can help your workplace have a frank shop talk this summer.

"There's a culture in the construction industry that you've got to be tough with employees in the field, and that's not the case," says Robert Lashin, president and CEO of Houle Electric. Lashin states in the video that creating a workplace free from bullying starts with communication.

"You need to be caring. You need to be understanding. You have to understand where people are coming from, and you have to communicate."

So how do you change the culture at your worksite? Both employers and workers have a role.

"Employers have the responsibility to establish and maintain a safe and healthy workplace and to comply with the Worker's Compensation Act and the Occupational Health and Safety Regulation," says supervisor, Prevention Field Services, Stewart Babineau. "Employers must take all reasonable steps to prevent where possible, or otherwise minimize, bullying and harassment in the workplace.

"To start, employers must have a policy in place that states that bullying and harassment will not be tolerated. To support this policy, employers must establish procedures for workers to report incidents that they have witnessed or experienced.

"Next, employers need to respond to complaints by implementing their procedures for investigating reported incidents of bullying and harassment."

Workers also play a very important role in workplace health and safety, adds Babineau. "Workers have a responsibility to take reasonable care to protect the health and safety of themselves and others by not engaging in bullying and harassment, and reporting incidents to their employers by following the established procedures in place at their workplace."

If you are a worker and you experience or see bullying at work, here are five steps to address the hazard:

- Recognize bullying and harassment. What is bullying and harassment? If someone at work is trying to humiliate or intimidate someone else through inappropriate conduct or comments, it's bullying and harassment. It can include calling someone derogatory names, vandalizing personal belongings, spreading malicious gossip or rumours, making aggressive gestures, or even socially isolating someone from the rest of the crew.
- 2 Don't be a bystander. You may not be the one saying derogatory comments, but if you do nothing while they are happening, you are contributing to a negative work culture. Speak up if it's safe to do so.
- Report bullying and harassment. Make sure you are aware of your workplace's policies and procedures regarding bullying and harassment. These policies should include how to report incidents or complaints, as well as what to do if your supervisor is the alleged bully or harasser.
- Participate in investigations. Once you've reported the incident, you may be required to participate in an investigation. How investigations work should be clearly outlined in your workplace policy and include:
  - The roles and responsibilities of employers, supervisors, workers, and others
  - What will follow the investigation (description of corrective actions, timeframe, dealing with adverse symptoms, etc.)
  - Record-keeping requirements
- Do not engage in bullying and harassment. Don't be a contributor to a negative work culture. In the WorkSafeBC videos, Josh Towsley, business representative for local 115 of the International Union of Operating Engineers, speaks to the reality of being part of the problem: "When I was a young foreman, we had a really good young apprentice on

our crew. No matter what he did, he was picked on for it. He was nitpicked on by the crew. Nothing was ever good enough," says Towsley. "I found myself saying stuff to the young apprentice that was said to me when I was a young apprentice. And it was when I heard myself saying that stuff when I realized that the culture had to change on our crew." Towsley's message has one simple thread: Don't be a bully.

#### For more information

You can search for bullying and harassment on worksafebc.com and access the following resources:

- Fact sheets and FAQs in multiple languages
- The video and discussion guide series Bullying and Harassment in Construction: It's Personal
- The handbook for preventing and addressing workplace bullying and harassment *Toward a Respectful Workplace*
- The Small Business Guide to Bullying and Harassment ∞

# Bullying and harassing behaviour can include:

- Verbal aggression or yelling
- Humiliating initiation practices or hazing
- Spreading malicious rumours
- Calling someone derogatory names

# Bullying and harassing behaviour does not include:

- Expressing differences of opinion
- Offering constructive feedback, guidance, or advice about work-related behaviour
- Reasonable action taken by an employer or supervisor relating to the management and direction of workers or the place of employment (e.g. managing a worker's performance, taking reasonable disciplinary actions, assigning work)

### WorkSafeBC updates

In the 1970s, pesticides, mechanization, and increasing numbers of immigrant workers began to highlight the need for safety standards on B.C. farms.

# Video honours those who shaped B.C.'s agriculture industry

By Susan Kerschbaumer

#### "We thought we were safe," says Bill Zylmans, remembering his experiences growing up on his family farm.

"Farmers were doing everything in their right mind to do things right. My father, when he first started spraying, would mix chemicals, with lack of better knowledge, just with his bare hands in a five-gallon bucket. And those were just common practices that no one thought anything different of back then."

Thankfully, things have changed on B.C. farms. And in honour of farmers like Zylmans, and the many workers who fought for progress, WorkSafeBC, in partnership with the BC Labour Heritage Centre, created a video about the history of agricultural safety in the province. The video is the ninth in a series that tells the stories of the working men and women who helped shape B.C. industry.

#### Safety was a "non-starter"

Mixed farming was well established across B.C. by the 1950s. In the 1970s, the industry saw an influx of new

immigrant farmers and a whole new generation of employees. "But safety, and knowledge of what safety meant, was a non-starter," says Zylmans. "There was no one really trying to explain the right or wrong. We didn't know any of that stuff at that time."

Raj Chouhan, now an MLA for Burnaby-Edmonds, took a job as a farmhand upon arriving in Canada in the early 1970s. "I found it very shocking," remembers Chouhan. "It wasn't a very pleasant experience for me going to work in Canada."

Charan Gill, CEO of the Progressive Intercultural Community Services Society, had a similar experience.

"There was no fresh water for drinking. There were no toilets. And [workers were] washing their hands in the ditches full of pesticides."

#### No protection for thousands

Despite the dangers, farmworkers were one of the last groups in B.C. to get health and safety regulatory protection.

For Chouhan, the issue was that farmers still viewed their operations as family enterprises that should be exempt from regulation. "They didn't think it was a workplace," says Chouhan. "They thought it was their personal property."

Farmers were under the gun to stay out of the red, says Zylmans. Their focus was on making a living on getting the fieldwork done "faster, quicker, better, so that the farmer could eventually have a black line at the end of his ledger."

Meanwhile, the health and safety aspect was ignored and no protection was available for the thousands of B.C. farmworkers. "It was not a priority," says Chouhan. "There was no compensation, no nothing." It wasn't until the 1990s that agricultural workers were finally recognized under the *Workers Compensation Act*.

#### Uniting to bring change

But the desire for change had long been brewing. Ken Novakowski, Chair of the BC Labour Heritage Centre, was a social studies teacher in the Fraser Valley in the late 1970s. Many of his students came from farm families, and classroom discussions often touched on the organizing that was happening among farmworkers at the time.

This organizing led to the establishment of the Farm Workers' Organizing Committee in 1979; more than 2,000 workers signed up in the first year.

Chouhan, inspired by California's United Farm Workers union, helped form the Canadian Farmworkers' Union — the first in Canada. In 1991, under the new NDP government, farmworkers were brought under the protection of the *Employment Standards Act*. And in 1993, regulations were introduced, and AgSafe — an independent health and safety association (then called FARSHA) that provides site-specific training, programs, resources and advice to farmers throughout the province — was established.

#### Minimum cost, maximum safety

Ever since, WorkSafeBC has been actively inspecting agricultural operations and partnering with AgSafe to promote safety, in areas from animal handling to hydrogen sulphide management.

The benefits of collaboration, says Zylmans — a former FARSHA board member — are clear: "minimum cost to the farmers and maximum safety for the workers."

### "Safety, and knowledge of what safety meant, was a non-starter."

 Bill Zylmans, farmer, W&A Farms, and former FARSHA board member

There is, of course, still more to do. As farms become increasingly mechanized, machinery and equipment remain a significant cause of serious injuries (176 since 2009) and deaths (13 since 2009). And as farms become bigger employers, new needs arise. Increasing numbers of temporary foreign workers, for example, call for training and information in multiple languages.

#### Learning from the past

Meanwhile, WorkSafeBC and the BC Labour Heritage Centre hope that the video will help new generations of workers appreciate and learn from the past. "It's a dangerous industry and accidents continue to happen," says Novakowski.

"We're standing on the shoulders of men and women who have worked to make this province a better place," says Scott McCloy, director of Government, Community and Media Relations for WorkSafeBC. "We want people to understand where we came from so we can do better going forward."

The video can be found at the BC Labour Heritage Centre website at www.labourheritagecentre.ca/ historyhealthsafetybc. (9)



Before the 1990s, some viewed farming as a family enterprise that didn't need regulation.

4-H, WorkSafeBC, the BC Ministry of Agriculture, and AgSafe team up with B.C. youth to make injuries from farm machinery a thing of the past.

# Young farm workers learn safety from a respected source: their peers

By Gord Woodward

Farm machinery accounts for a significant percentage of injuries in B.C.'s agriculture sector. To address the risk, young farmworkers are turning to their peers through the channels of 4-H B.C., a branch of a global network of youth organizations dedicated to leadership and development.

In B.C., 4-H clubs are using two new videos to promote safe-work practices on and around tractors and other farm machinery. A joint project of 4-H, WorkSafeBC, the BC Ministry of Agriculture, and AgSafe, the videos are being shown at club meetings and events around the province. They're also available on YouTube.

"The videos send a powerful message to youth because they come from youth," says Abbotsford-based Mike Nielsen, a WorkSafeBC manager with Field Prevention Services. "They can pass good safety habits along to their peers."

Cole Hoefer, 17, a member of the 4-H beef club in Armstrong, is one of the youths helping to share the message about farm safety. In the videos, he demonstrates safe work habits when on and around equipment. His role was undoubtedly inspired by his own experience as a farmhand: two years ago, his foot was injured in a machinery incident.

"Young people need to be trained in safety," he says. "Employers really need to focus on that aspect."

In the last five years, more than 2,700 injuries were reported in B.C.'s agriculture sector. Farm vehicles or machinery were involved in 16 percent of them.

The videos are learning tools that aim to reduce those numbers by teaching young farm workers key safety points, including the following:

- Read and follow the user's manual for all farm equipment
- Ensure the tractor's roll-over protection structures (ROPS) are up, and always wear your seatbelt

- Always keep three points of contact when getting on and off equipment
- Wear high-visibility apparel when working around farm equipment
- Ensure all power take off (PTO) shields and guards are maintained and in place

4-H B.C. was a natural choice as a partner in the production and distribution of the videos, 4-H Working Safely on Tractors and 4-H Working Safely Around Tractors.

"Safety is one of the primary things we teach," says 4-H B.C safety chair Lorna Kotz. Their 2,200 members work on family or commercial farms, where they face hazards ranging from machinery, to unpredictable animal behaviours, to pesticides and hazardous substances.

Members are six to twenty-one years of age and generally eager to learn, she says. "If you teach kids the proper way to do things, they get it before they develop bad habits."

As an added bonus, parents on family farms may listen to their children when it comes to safety, in both the fields and their homes. "When you teach the kids," she says, "it rubs off on the adults."

Nielsen sees that dynamic too. "Young people are very well informed," he says. "They have become role models for older workers." Many of them will also become the next generation of ranchers, farmers, supervisors, and managers. And, if teenage farmhand Hoefer is an example, they'll be well prepared for protecting themselves from work-related injury and illness.

"Safety becomes part of day-to-day life," he says. "It's a pretty big concern."

Visit worksafebc.com to see the videos and access free resources on safety in specific agricultural agriculture sectors.  $\odot$ 

# Peer-to-peer tips on farm safety

What safety pointers does teenage farmhand Cole Hoefer emphasize to his peers?

- "Don't ride on the steps of a tractor."
- "Always be aware of hydraulics, because lines can blow at any time."
- "No baggy clothing. It can get caught in the machinery."
- "If you're going to work on a piece of equipment, always shut it off and lock it out first."



### Safety on the agenda

Want to boost your safety knowledge? Take some time this summer to start planning for your autumn safety workshops and conferences.

#### **First Nations Safety Council of BC**

First Nations Safety Conference Safe Nations Safe Opportunities September 14–15, 2017 Vancouver, B.C. www.fnsc-bc.ca

#### **Canadian Association of Fire Chiefs**

Fire-Rescue / Secours-Incendie Annual Education Conference September 17–20, 2017 Vancouver, B.C. www.cafc.ca/conference

#### **Canadian Society of Safety Engineering**

2017 Professional Development Conference Health & Safety in a Changing World Leading Beyond Compliance September 17–20, 2017 Halifax, Nova Scotia www.csse.org/2017\_conference

#### State of Oregon

Central Oregon Occupational Safety and Health Conference September 19–20, 2017 Bend, Oregon www.orosha.org

#### **Hearts & Hands**

2017 Conference for Health Care Assistants Celebrate & Educate October 3, 2017, in Vancouver, B.C. October 26, 2017, in Victoria, B.C. www.hcaconference.ca

#### **Canadian Dam Association**

2017 Annual Conference Dams of All Sizes: State of Practice and Evolving Regulations October 14–20, 2017 Kelowna, B.C. www.cda.ca

#### **BC Municipal Safety Association**

2017 Occupational Health & Safety Conference October 15–17, 2017 Penticton, B.C. http://pacificsafetycenter.com/bcmsa

#### **International Life Saving Federation**

World Conference on Drowning Prevention 2017 October 17–19, 2017 Vancouver, B.C. www.wcdp2017.org

#### WorkSafeBC

18th Annual Physician Education Conference October 21, 2017 Vancouver, B.C. www.worksafebcphysicians.com

#### The Conference Board of Canada

The Better Workplace Conference 2017 Better Wellness, Better Leaders, Better Experience October 24–October 26, 2017 Toronto, Ontario www.conferenceboard.ca/conf/betterworkplace/default.aspx

#### **BC Construction Safety Association**

12th Annual Construction Safety Conference Bridging the Gap October 26–27, 2017 Vancouver, B.C. www.bridgingthegapsafely.ca

#### Health & Safety Conference Society of Alberta

16th Annual Health and Safety Conference and Trade Fair New Directions October 26–27, 2017 Banff, Alberta http://hsconference.ca

Please note, information and links that appear in this section are provided as a resource. Listings do not necessarily constitute an endorsement from WorkSafeBC.

#### Construction

#### 0837829 B.C. Ltd. / Infinity Roofing | \$4,272.61 | Sidney | March 29, 2017

WorkSafeBC observed three of this firm's workers re-roofing an apartment building. The building had a central flat roof surrounded by a 12:12 sloped roof. Two of the workers were on the flat roof and WorkSafeBC observed them standing within 1.8 m (6 ft.) of the flat roof's leading edge without a fall protection system in place. The third worker, a supervisor, was using a fall protection system while working on the sloped portion of the roof but immediately disconnected it upon entering the flat roof section. The workers were exposed to a risk of falling about 9.1 m (30 ft.). The firm failed to ensure fall protection systems were used when required, a high-risk violation. It also failed to provide its workers with the information, instruction, training, and supervision needed to ensure their health and safety. These were both repeated violations.

#### 0873123 B.C. Ltd. / Glazier Construction | \$10,960.56 | Lantzville | February 10, 2017

This firm was working on the roof of a residential building under construction with a roof slope of 7:12. WorkSafeBC observed one of the firm's workers on the roof relocating construction materials at a height of about 4.6 m (15 ft.). Another worker was installing roof sheathing at the peak of the roof at about 5.2 m (17 ft.) above grade. Neither worker was using a personal fall protection system and no other form of fall protection was in place. The firm's failure to ensure that fall protection was used was a high-risk violation.

#### 1034022 B.C. Ltd. | \$2,500 | Langley | April 10, 2017

A worker was performing cleanup work at a three-storey house under construction. The worker fell about 5.8 m (19 ft.) down an unguarded elevator shaft and sustained serious injuries. WorkSafeBC's investigation found that the firm had not installed a guardrail or other fall protection system for work being done at a place where a fall of 3 m (10 ft.) or more could occur. The firm's failure to ensure fall protection was used was a high-risk violation.

#### 1089850 B.C. Ltd. / SP Environmental | \$5,000.00 | Surrey | April 10, 2017

This firm's workers were performing asbestos abatement services at a pre-1990 house slated for demolition. WorkSafeBC inspected the site and identified multiple safety violations. Abatement work was already underway but containment had not been established with acceptable sheeting and a negative air unit. Nor was water in use for wetting and decontamination. Some workers wore half-face masks not suitable for asbestos abatement and a supervisor was observed entering and exiting the containment area without using any personal protective equipment. The firm failed to safely contain hazardous materials, a repeated and high-risk violation.

#### 1089850 B.C. Ltd. / SP Environmental | \$20,000.00 | Vancouver | April 12, 2017

This firm was contracted to perform asbestos abatement at a house slated for demolition. WorkSafeBC inspected the site and observed that abatement work had been conducted in a manner that did not safely contain or remove asbestos-containing materials (ACMs), and exposed workers to the potential hazard of electrocution due to the main electrical service to the building not having been disconnected or effectively locked out. A significant amount of ACMs were present in the interior. A proper seal to contain ACMs from leaving the

Administrative penalties are monetary fines imposed on employers for health and safety violations of the *Workers Compensation Act* and/or the Occupational Health and Safety Regulation. The penalties listed in this section are grouped by industry, in alphabetical order, starting with "Construction." They show the date the penalty was imposed and the location where the violation occurred (not necessarily the business location). The registered business name is given, as well as any "doing business as" (DBA) name.

The penalty amount is based on the nature of the violation, the employer's compliance history, and the employer's assessable payroll. Once a penalty is imposed, the employer has 45 days to appeal to the Review Division of WorkSafeBC. The Review Division may maintain, reduce, or withdraw the penalty; it may increase the penalty as well. Employers may then file an appeal within 30 days of the Review Division's decision to the Workers' Compensation Appeal Tribunal, an independent appeal body.

The amounts shown here indicate the penalties imposed prior to appeal, and may not reflect the final penalty amount.

For more up-to-date penalty information, you can search our penalties database on our website at worksafebc.com. Find it easily by entering the word "penalties" into our search bar.

building had not been established. A negative air machine was present but not running at the time of inspection and not in a location that would effectively protect the workers from airborne asbestos fibres. Some bagged ACMs in an exterior asbestos waste bin were not marked as such. The firm failed to ensure the safe containment and removal of hazardous materials as required, a repeated and high-risk violation.

#### 3D Environmental Groups Ltd. | \$92,184.64 | Delta | March 28, 2017

This firm was performing asbestos abatement at a two-storey house. A hazardous materials survey completed for the site confirmed the presence of asbestos-containing materials (ACMs) including drywall joint compound. WorkSafeBC inspected the site and observed that the containment sheeting had breaches in more than one place, and the external venting had not been sealed. Dust was visible at several building entrances, and there was uncontained drywall debris in multiple places inside and outside the house. There were used protective suits in several places in the building, indicating that decontamination procedures had not been followed and workers may have been in the building without appropriate protective clothing. Drywall dust was also observed inside the clean room of the decontamination area. WorkSafeBC issued a stop-work order. The firm failed to safely contain or remove ACMs. The firm also failed to provide its workers with the information, instruction, training, and supervision needed to ensure their health and safety. These were high-risk and repeated violations.

#### BCS Contractors Ltd. | \$320,000 | Port Coquitlam | January 12, 2017

This firm was conducting asbestos abatement at a two-storey house scheduled for demolition. The hazardous materials inspection had identified the presence of asbestos-containing materials (ACMs) requiring high-risk abatement work procedures. WorkSafeBC inspected the worksite and found multiple violations of safe work requirements. Water was not being used to wet ACMs to control dust and HEPA vacuums were not being used for cleanup. The Notice of Project had expired and respirator fit records for at least one worker were not available on site. There was no adequate decontamination facility available for workers. The building containment had several breaches. Air monitoring results were not available and the negative air unit had been removed before air clearance had been completed. WorkSafeBC issued a stop-work order. The firm's failure to safely remove and contain hazardous materials was a repeated and high-risk violation.

#### BCS Contractors Ltd. | \$628,034.57 | Burnaby | March 3, 2017

This firm was conducting asbestos abatement work at a two-storey house slated for demolition. During an inspection, WorkSafeBC observed a representative of the firm, and later a worker, exiting the building in street clothes and without respiratory protection. In addition, WorkSafeBC observed a third worker, also in street clothes and without respiratory protection, handling poly sheeting from the containment and decontamination facility. The firm had downgraded the abatement work from high risk to moderate risk before the final air clearance testing had been conducted. At a separate site, the firm issued a written post-abatement clearance letter stating that asbestos-containing materials (ACMs), including vinyl sheet flooring and furnace duct tape, had been safely removed. However, WorkSafeBC inspected this site and observed that some furnace duct tape and poly sheeting from the containment was still on site. Further, window blinds were left up during the abatement and had not been removed after the containment was dismantled. When the firm returned to remove the remaining ACMs, WorkSafeBC observed that neither of the two workers, one a representative of the firm, was using a respirator or wearing any personal protective clothing. The firm committed high-risk violations by failing to safely contain and remove ACMs, and failing to use acceptable procedures for controlling and handling asbestos. Further, the firm failed to provide its workers with the information, instruction, training, and supervision necessary to ensure their health and safety. These were all repeated violations.

#### Boris Dutina / Evolve Environmental Services | \$2,500 | Abbotsford | April 24, 2017

This firm had performed asbestos abatement work at a house scheduled for demolition and had issued a clearance letter for the abatement. WorkSafeBC inspected the site and observed asbestos-containing materials (ACMs) still present, including drywall joint compound, drywall nails, and a trail of drywall debris leading from the basement to the attic where there were piles of drywall debris and an open plastic tub of drywall debris. The firm failed to ensure the safe containment and removal of hazardous materials as required, a repeated and high-risk violation.

#### Braza Construction Ltd. | \$2,500 | Fort St. John | January 31, 2017

This firm was the owner and prime contractor of a four-storey commercial building under construction. WorkSafeBC inspected the site and observed four workers from a subcontractor on the top two levels of a scaffold applying stucco to the building's exterior wall. The scaffold was 12.2 m (40 ft.) high and did not have guardrails installed, nor was there any other form of fall protection in place. The engineer's drawings for the scaffold required guardrails on the outside area and toeboards on all levels. Further, the guardrail materials were on site but hadn't been installed. The firm failed to ensure that guards or guardrails were installed on a work platform that was 1.2 m (4 ft.) higher than the adjacent floor or grade level, a repeated and high-risk violation.

#### B S Roofing Ltd. | \$5,000 | Richmond | April 6, 2017

This firm was installing new roofing materials on a two-storey house under construction. WorkSafeBC inspected the site and observed three of the firm's workers, one of whom was the firm's representative, applying the roofing materials on a 7:12 sloped roof at heights of 6 m (20 ft.) to 9.5 m (31 ft.) above grade. All three workers were wearing full body harnesses but none of the harnesses were connected to the available lifelines and anchors. The firm failed to ensure fall protection was used, a repeated and high-risk violation.

#### BTT Exteriors 2014 Limited | \$4,853.92 | Maple Ridge | April 6, 2017

This firm was installing siding at a three-storey residential construction site. WorkSafeBC observed a worker standing at the unguarded edge of a second-storey balcony passing materials to a worker in a boom lift. The worker on the balcony was not using a personal fall protection system and no guardrail or other form of fall protection was in place. The worker was exposed to a risk of falling 3.8 m (12 ft. 5 in.). The firm failed to ensure fall protection was used, a repeated and high-risk violation.

#### CM Environmental Inc. | \$3,528.95 | North Vancouver | April 5, 2017

This firm was conducting asbestos abatement in a house slated for demolition. WorkSafeBC inspected the site after the firm had completed its work and observed that asbestos-containing materials (ACMs) were still present. This included polyethylene sheeting and hazard tape — which, when used as part of asbestos abatement, is always considered asbestos waste. As well, firestop cement on a chimney side identified as ACMs was still present because the wrong side of the chimney had been treated. This posed a risk of exposure to workers if further demolition activities were to continue. Because of this, a stop-work order was issued. The firm's failure to ensure that identified ACMs were safely contained and removed was a repeated and high-risk violation.

#### Dagru Framing Ltd. | \$1,250 | Surrey | April 10, 2017

This firm was hired to frame a two-storey house. WorkSafeBC inspected the site and observed that the house's second-storey front window and rear patio area did not have guardrails installed. There was also no interior stairway from the ground floor to the second floor. Workers were observed working in these areas, exposing them to a risk of falling approximately 3 m (10 ft.). The firm failed to ensure the use of guardrails or other means of fall restraint. Further, the firm failed to provide stairway access to each floor before construction of the next floor was undertaken. These were both repeated violations.

#### Daveshar Framing Ltd. | \$5,000 | Abbotsford | March 14, 2017

This firm was working on sheeting the roof trusses of a house under construction. WorkSafeBC observed two workers, one of whom was the supervisor, working on the upper section of the 4:12 to 6:12 sloped roof. Both workers were wearing personal fall protection harnesses but neither harness was connected to an anchor point and no other form of fall protection was in place. The workers were exposed to a risk of falling from heights up to about 7.5 m (25 ft.). The firm failed to ensure that fall protection was used, a repeated and high-risk violation.

#### European Environmental Ltd. | \$25,229.28 | Vancouver | April 25, 2017

This firm was contracted to remove asbestos-containing materials (ACMs) from a pre-1990, three-storey house slated for demolition. A post-abatement inspection had been completed and a written confirmation issued. However, WorkSafeBC inspected the site and observed that some ACMs remained on site, including a section of tarp used to contain the work area during abatement, white hazard tape, and pieces of plaster and stucco. A subsequent hazardous materials survey noted that drywall joint compound, vinyl floor tile, and floor mastic were also still present in and around the building. This firm failed to safely contain or remove hazardous materials from the site, a repeated violation.

#### HIH Roofing Ltd. | \$2,500 | Fort St. John | January 19, 2017

This firm was replacing the roof on a single-storey house. WorkSafeBC observed two workers on the 4:12 sloped roof, with one of them working within 1.8 m (6 ft.) of the roof's edge. Both workers were wearing fall protection harnesses but neither was attached to an anchor, and no other form of fall protection was in place. The workers were exposed to a risk of falling from heights up to about 4.5 m (15 ft.). The firm failed to ensure that fall protection was used, a repeated and high-risk violation.

#### Key-West Asphalt (333) Ltd. | \$15,925.51 | Chilliwack | February 16, 2017

This firm was paving a public highway. A worker was operating a gravel grader (shoulder paver) that was missing its seat, requiring the operator to stand instead of sit. The worker lost balance and grabbed the steering wheel, which came off. The worker fell off the back of the grader and sustained injuries. WorkSafeBC's inspection found that in addition to the missing seat and faulty steering wheel, the grader was also missing guards for the gear and sprocket assembly and the belt pulley. WorkSafeBC determined that the grader was unsafe and issued a stop-use order. The firm failed to ensure that equipment used in the workplace was capable of safely performing its function, a high-risk violation.

#### Moonrise Construction Ltd. | \$5,000 | Maple Ridge | January 31, 2017

This firm was installing siding on a two-storey house under construction. WorkSafeBC inspected the site and observed two workers, one of whom was the site supervisor, working at the edge of the second-floor roof. The workers were exposed to a risk of falling about 5.5 m (18 ft.). Neither was using a personal fall protection system, and no other form of fall protection was in place or available on site. The firm failed to ensure that fall protection was used, a repeated and high-risk violation.

#### Sarao Framing & Forming Ltd. | \$10,000 | Vancouver | March 29, 2017

This firm was framing a new two-storey house. WorkSafeBC observed four of the firm's workers on the second floor. Two of the workers, one of whom was a supervisor, were on top of work platforms that did not have guardrails, exposing the workers to a risk of falling 5.3 m (17.5 ft.). Another worker was observed straddling roof trusses to cross an opening and was exposed to a risk of falling 7.8 m (25.5 ft.). None of the workers were using personal fall protection systems and no other form of fall protection was in place. This firm failed to ensure fall protection was used, a repeated and high-risk violation.

#### Two Pillars Construction Ltd. | \$12,951.38 | New Westminster | January 3, 2017

This firm was constructing a 26-level highrise building. WorkSafeBC observed two workers on level 13 adjusting fly form table legs by swinging a large hammer toward the unguarded edge of the floor. Neither worker was using a personal fall protection system and no other form of fall protection was in place, exposing the workers to a risk of falling 39.6 m (130 ft.). The hammers were not tethered to prevent them from falling and injuring someone below. The firm's failure to ensure that fall protection was used was a repeated and high-risk violation. The firm's failure to use effective restraints to secure objects from falling and endangering workers was a repeated violation.

#### Universal Flagging Inc. | \$46,365.17 | Langley | February 27, 2017

This firm was providing traffic control services at a sewer construction project. WorkSafeBC observed that the traffic control persons (TCPs) were not positioned correctly in relation to the traffic control zone, and that they were positioned too close to construction equipment. The traffic control plan in place was inadequate as it did not accurately reflect the layout of the worksite, the speed limit, or the proper positioning of TCPs. The firm failed to ensure that traffic control plans were communicated to workers and that TCPs were adequately trained. The firm also failed to designate a supervisor to ensure that traffic control requirements were implemented as required. These were high-risk violations.

#### Zgemi Inc. | \$2,500 | Victoria | April 3, 2017

This firm was one employer of several on site renovating an occupied residential apartment building. WorkSafeBC inspected the site and found that the firm disturbed known asbestos-containing materials without ensuring appropriate containment precautions were followed. Failure of this employer to ensure appropriate safe work procedures in the control and handling of asbestos potentially exposed its workers, workers of the other employers, and the building's occupants to elevated concentrations of airborne asbestos fibres. This was a repeated and high-risk violation. The firm also failed to safely contain or remove hazardous materials, and failed to have a qualified person ensure and confirm in writing that hazardous materials had been safely contained or removed. These were repeated violations.

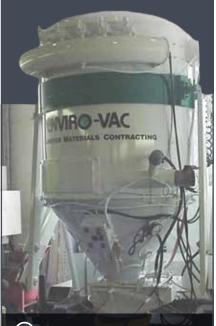
#### Manufacturing

#### Catalyst Paper Corporation | \$75,000 | Crofton | April 3, 2017

One of this firm's workers was operating a bulldozer on top of a hog fuel pile. The worker was pushing hog fuel from the bottom to the top of the pile, which was about 18.3 m (60 ft.) high with steep drops on three sides. The bulldozer came too close to the outer edge of the pile, rolled down the face of the pile, and overturned. The worker was partially ejected out

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# Penalties (continued)

the rear window of the cab of the bulldozer and sustained fatal injuries. WorkSafeBC's investigation found that, although the firm had developed written procedures for checking in on the well-being of workers working alone, the procedures were not implemented. Further, a specific work plan pertaining to the worker involved was not completely implemented or monitored. This amounted to a failure by the firm to ensure the health and safety of its workers, a repeated violation. Further, the firm failed to ensure the worker used a seatbelt while operating the bulldozer. These were all high-risk violations.

#### J.H. Huscroft Ltd. | \$60,945.74 | Creston | March 16, 2017

This firm operates a sawmill. A worker was repairing a broken chain drive on a sorter bin. While performing this work, a mobile stacker machine travelled toward the worker. The worker was caught between the stacker and the sorter bin, and sustained fatal injuries. WorkSafeBC's investigation found that the firm did not have lockout procedures in place that would have prevented the stacker from operating while the bin was being repaired. The stacker did not have a functional travel warning device that could have warned the worker, and the worker was not wearing high-visibility clothing that could have alerted the stacker operator to the worker's presence. The firm did not ensure effective communication among its workers at this workplace. The firm's failure to provide its workers with the information, instruction, training, and supervision needed to ensure their health and safety was a high-risk violation.

#### Wadlegger Logging & Construction Ltd. | \$12,390.94 | Clearwater | March 2, 2017

One of this firm's sawmill workers was cleaning and aligning boards at the in-feed to the re-saw. The worker's glove was caught in the unguarded chain and sprocket of the chain drive for the in-feed rollers, and the worker sustained serious injuries. WorkSafeBC inspected the site and observed several areas along the workstation that had exposed chains and sprockets. The worker and a representative of the firm confirmed that the chain and sprocket where the worker had been injured was not guarded at the time of the incident. The firm failed to appropriately guard every gear and chain sprocket, a high-risk and repeated violation.

#### Wesgar Inc. | \$69,803.71 | Port Coquitlam | March 3, 2017

This firm operates a sheet metal manufacturing facility. A worker was feeding metal sheets by hand into a metal-forming feed roller machine. The worker's gloved hand was caught in the rollers, injuring the worker. The feed roller lacked guarding or a safety device to prevent operators from contacting in-running nip points. In addition, the worker had not been provided with adequate training and instructions on the machine. The firm failed to ensure that the machine was properly equipped to prevent operator contact with in-running nip points. The firm also failed to provide its workers with the information, instruction, training, and supervision needed to ensure their health and safety. These were repeated and high-risk violations.

#### **Primary Resources**

#### All Seasons Mushrooms Inc. | \$62,129.28 | Princeton | March 13, 2017

During an inspection of this mushroom substrate composting facility, WorkSafeBC observed that there was no guard in place on the bale breaker outfeed, giving workers access to a toothed drum at the machine's point of operation. The equipment was not de-energized and locked out. In addition, WorkSafeBC observed five open electrical control boxes containing uninsulated energized electrical equipment in an area frequented by staff. Both violations were repeated and high risk.

#### Fu Sheng Liang / Judy J V | \$3,895 | Near Saanich | April 21, 2017

A worker on a commercial crab fishing vessel got caught up in a line of traps and went overboard. There was an inadequate emergency response to the event: There was no overboard retrieval system available; the VHF marine radio's single-touch distress key system had not been set up; there were difficulties in communicating with emergency responders; and, the only other crew member on board did not have first aid certification and did not provide initial first aid. The worker did not survive the incident. The firm failed to ensure the health and safety of its workers, a high-risk violation.

#### Paradigm Logging Ltd. | \$2,500 | Quesnel | April 25, 2017

WorkSafeBC inspected the site of this firm's falling operations and observed several violations: failing to use a sufficient undercut, undercuts being higher than backcuts, not maintaining sufficient holding wood, and brushing standing trees during falling. The firm failed to take the necessary precautions to protect workers during hand-falling or bucking operations, a high-risk violation. Further, the firm failed to ensure all obstructions were cleared and a safe escape route prepared before falling or bucking started, a repeated violation.

#### **Tiyam Vegetation Management Corp. & Superior City Services Ltd. / Coast Salish Environmental LLP | \$2,500 |** Chilliwack | April 18, 2017

This firm was the prime contractor for clearing a parcel of land in preparation for development. A worker was hand-falling a tree. The tree fell opposite to the faller's intended direction. As it fell it struck another tree, breaking off its top. One of the trees struck a second

worker, a bucker, who was processing trees in the danger zone. The bucker sustained serious injuries. WorkSafeBC's investigation found that the faller's undercuts were 50 to 70 percent of tree diameter, contrary to the 30 percent undercut acceptable by WorkSafeBC. This contributed to the tree falling in the direction opposite to its intended direction. The bucker was new to the job site and had not received new employee orientation or training. The supervisor, a representative of the firm, did not adequately supervise the bucker's work to ensure the bucker stayed away from falling activity. The firm failed to meet its obligations as a prime contractor to ensure that workplace activities relating to occupational health and safety were coordinated. The firm also failed to provide its workers with the information, instruction, training, and supervision needed to ensure their health and safety. These were high-risk violations.

#### Western Canadian Timber Products Ltd. | \$59,355.35 | Harrison Hot Springs | March 10, 2017

This firm was engaged in a logging operation as an employer and prime contractor. WorkSafeBC inspected the site and observed two pieces of equipment working in close proximity: one feller-buncher operated by one of this firm's workers and a second feller-buncher operated by a worker from another firm. The first feller-buncher placed several cuts on the uphill side of a large diameter tree. The second feller-buncher pushed over the tree from the downhill side. As the tree fell it brushed the operator's cab on the first feller-buncher, scraping the operator-side window and jamming wood debris into the machine's guarding. No supervisor was on site at the time of inspection and the firm did not ensure that adequate planning was in place for mechanical falling work. The firm permitted the use of a mechanical harvester in a manner that posed a reasonably foreseeable risk to the harvester operator, and failed to ensure that the required two tree-length radius was maintained prior to falling trees. These were repeated and high-risk violations. The firm also failed to provide its workers with the information, instruction, training, and supervision needed to ensure their health and safety, and failed to do everything reasonably practicable to establish and maintain a system to ensure compliance with the *Workers Compensation Act* and the Occupational Health and Safety Regulation. These were repeated violations.

#### **Transportation and Warehousing**

#### 0837040 B.C. Ltd. / CC Enviro | \$2,500 | Coquitlam | March 10, 2017

This firm had performed asbestos abatement work at a house scheduled for demolition and had issued a clearance letter for the abatement. WorkSafeBC inspected the site and observed asbestos-containing materials still on the site, including drywall joint compound, ceiling texture coat material, sheet vinyl flooring, and paper insulation. The firm did not check that all asbestos had been removed and cleaned up, and sealcoat was not effectively applied. The firm failed to ensure the safe containment and removal of hazardous materials as required, a repeated and high-risk violation.

#### Trade

#### Dollar Tree Stores Canada, Inc. / Dollar Giant | \$109,370.02 | Victoria | April 3, 2017

WorkSafeBC inspected this firm's retail worksite and observed broken floor tiles in several areas of the main floor. These floor tiles had previously been identified as asbestos-containing materials (ACMs) in the building's asbestos inventory. Workers were observed

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#### WORK SAFE BC

### Penalties (continued)

walking across the broken tiles while performing their shelf restocking work. The supervisor on site had reported the damaged tiles to the employer but had not been given any direction about how to address the problem. The firm failed to ensure that friable ACMs were controlled to prevent the release of airborne asbestos fibres. This was a repeated and high-risk violation.

#### Service Sector

#### Earls Cove Financial Corp. | \$4,363.75 | Kitimat | April 5, 2017

This firm employs custodial and maintenance staff who may come into contact with asbestos-containing materials (ACMs) as part of their work. In October 2015, WorkSafeBC ordered the firm to have a qualified person perform an inventory of all ACMs in its workplace. As of March 2017 the firm had not complied with the original order or follow-up orders, and has stated that it does not intend to comply. The firm is being penalized for its failure to comply with an order of the Board, a violation of the Workers Compensation Act.

#### Vernon School District #22 | \$628,034.57 | Vernon | April 7, 2017

This employer conducted renovation work at one of its school sites. WorkSafeBC learned that the employer had caused its workers to perform work in areas where there was a high risk of disturbing asbestos-containing materials (ACMs). The employer did not conduct a hazardous materials survey or a risk assessment, and did not obtain an asbestos inventory for the building. Workers were not informed of the presence of ACMs and were not provided with protective clothing or equipment. Sampling conducted later confirmed the presence of ACMs in the building, and the employer stopped work. The employer failed to ensure necessary precautions were taken to protect workers before beginning work that would disturb ACMs, a repeated and high-risk violation. The employer also failed to ensure that a qualified person inspected the building to identify hazardous material before renovation began.

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