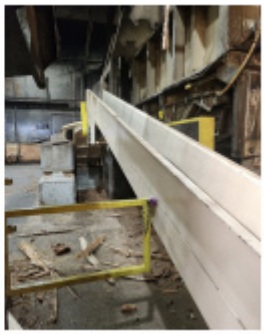
Safety Innovation Helps with Debris Accumulation



Sharing safety innovations is vital for our industry because it encourages a spirit of continuous safety improvement. By exchanging ideas and solutions, we collectively make our workplaces safer by reducing risks, and prioritizing workers' well-being. Each Safety Innovation submission sent to the Manufacturing Advisory Group (MAG) reflects a commitment to industry-wide safety that helps us move forward together, ensuring safety remains a top priority. We would like to highlight a recent contribution from West Fraser Quesnel Plywood.

West Fraser's Safety Innovation tackled the recurring issue of debris accumulation at the lathe's step feeder, which was previously cleared manually with a long-handled rake. This task was physically demanding and required working in a confined space.

The difficult and challenging manual task was replaced with a **CONVEYOR SYSTEM** featuring a slow-moving drag chain to transport debris build-up to a waste conveyor, which then deposits it in the loader area. The conveyor solution is also movable, allowing the waste conveyor to be lifted out of the way, and also allows the cross conveyor to be easily removed.

During maintenance of the step feeder, the ramp can lay flat for easy access. As an added benefit, any major repairs required to the conveyors can be performed in the shop while production continues.

Employees identified this manual task as a hazard and shared their concerns with the lead team. The maintenance team then developed the conveyor system to effectively handle the debris. The entire system was designed and built by an in-house welder.

Download a PDF of this Safety Innovation to share with your company.

If you have a manufacturing safety innovation to share, submit your idea by email to Bill Laturnus at blaturnus@bcforestsafe.org.

MAG Q4 Workshop

MAG members participated in a workshop focussing on **Workplace Mental Health Skills for Managers**, led by Shirley Hogan from the Canadian Mental Health Association. The workshop addressed mental health and substance use disorders, which affect one in three Canadians, and the impact on employee well-being and performance.

During the workshop, participants enhanced their knowledge and skills through various activities to learn how to support employees facing mental health challenges. The activities included interactive discussions, where participants could share their experiences and learn from one another, and real-case scenarios that provided practical examples of how to handle different situations.

Highlights of the workshop included:

- Building mental health knowledge
- Navigating the language of stigma
- Utilizing the 4R Action Toolkit™ for effective results
- Cultivating approachable leadership practices
- Reviewing the Duty to Inquire and Accommodations
- Applying the 4Rs in urgent situations
- Recognizing healthy boundaries

Sinclar Lakeland Sawmill Tour

In December, the MAG members met in Prince George, BC for their quarterly meeting and workshop. Following the meeting, the group toured the Sinclar Lakeland Sawmill. In 2014 the sawmill underwent a rebuild and since then has made significant strides in minimizing fugitive wood dust accumulations and mitigating wood dust hazards. MAG would like to thank Sinclar for sharing their on-site safety initiatives and providing a behind-the-scenes look at their lumber facility.

Wood Dust Project Focusses on Retesting Wood Dust for Explosiveness

In late 2024, the BC sawmill industry initiated an important initiative that focussed on retesting wood dust for explosiveness and ignitability. The initiative compared the new results against a 2013 FP Innovations report that focussed is on burnt wood dust, process wood dust, and fugitive dust. Additional samples may be collected from associated wood product manufacturing operations if conditions permit to allow for further examination.

The BC Forest Safety Council (BCFSC) has engaged Jensen Hughes, based in Halifax, to lead this initiative, with Kayleigh Rayner Brown as the project lead. BCFSC will support her throughout the process.

Collected samples will undergo Explosion Severity and Ignition Sensitivity testing at Jensen Hughes' laboratory in Halifax. This initiative demonstrates a proactive approach to enhancing safety within the industry with samples gathered from across the country including all major operational and fibre supply throughout BC. The results will better address process dust hazards and prepare for future combustible dust regulations and addressing safety concerns and improving industry practices with dust hazards.

Recent Article Featured in Canadian Journal of Chemical Engineering and Chemical Institute of Canada News

The Chemical Institute of Canada News, featured a research article on ***Integrating Process Safety Management into Canadian Wood Pellet Facilities that Generate Combustible Wood Dust***. João B. P. Soares, Editor-in-Chief of the Canadian Journal of Chemical Engineering (CJCE), also highlighted this article in the December issue.

The project aimed to develop a PSM integration tool for wood pellet production and forest products manufacturing, serving as a foundation for a long-term industry-led strategy. The tool includes a PSM survey for gap analysis, self-assessment worksheets, best practices identification, factsheets, and an implementation strategy. Key contributors were Kayleigh Rayner Brown, Bill Laturnus, Gordon Murray, Fahimeh Yazdanpanah, Chris Cloney and Paul Amyotte.

WPAC's Safety Committee: Helping Make the Industry Safer for Over a Decade

I can't believe it has been over a decade since the Wood Pellet Association of Canada's (WPAC's) Safety Committee was established. Our initial focus was combustible dust in response to tragic sawmill explosions in British Columbia. Over the years, activities have expanded to all health and safety matters.

The committee's mission is "to improve the wood pellet industry's collective safety performance, earn a reputation with regulatory authorities and the public as an industry that is highly effective at managing safety, and learn and share best practices regarding safety." As we enter 2025, I want to reflect on a few past successes and share our Work Plan for the year.

Past initiatives

I am very proud of the WPAC Safety Committee's work over the past 10 years. We have developed an ongoing, open, collaborative relationship with WorkSafeBC and the BC Forest Safety Council—one that is built on trust. We have even taken our learnings here in Canada and shared them with customers in Japan, holding two safety sessions focused on safe biomass material handling and storage in 2023. Other successful initiatives included:

Critical Control Management was our first sustained Process Safety Management (PSM) initiative. It helped improve understanding of operational hazards and ensure the effectiveness of safeguards. It was also the first

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initiative where Bowtie analyses were used in the industry. They are now developed for most plant processes.

The *Inherently Safer Design* project focused on the elimination of hazards and treatment of hazards at the source rather than relying on only add-on equipment and procedures.

Deflagration Isolation was designed to improve pellet industry practices regarding equipment isolation, with an eye on minimizing the impact of the potential of combustible dust fires, explosions and deflagrations within wood pellet plants.

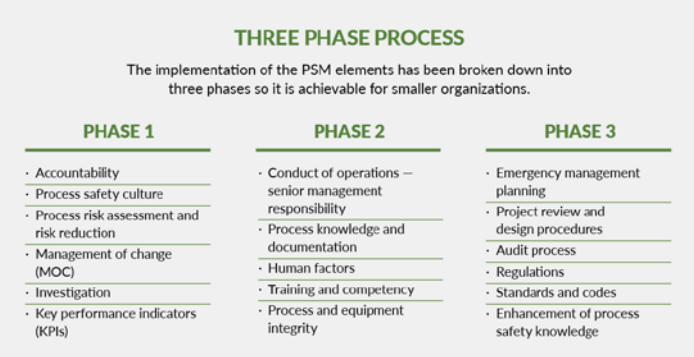
The *Combustible Gas* report summarizes the key actions plan operators can take to manage the risk of combustible gas in drum dryers.

wpaclearning.com is a free online operator training program developed by operations for operations to provide training and improve safety competency. I encourage everyone in wood pellet operations to use the program.

Ongoing and future initiatives

WPAC's Safety Committee continues to listen to the Canadian wood pellet sector and focus on activities that reflect their needs. We have several ongoing initiatives planned for 2025 and a few new ones.

Process Safety Management (PSM) is a core focus for the WPAC Safety Committee over the next five to seven years. Around the world, PSM is becoming key to worker safety and managing risk. It protects personnel, equipment and production uptime and is associated with lower maintenance costs, insurance and capital.



PSM is a three-phased process. In 2025, WPAC's Safety Committee will focus on implementing Phase 1 elements.

The PSM initiative has been broken into three phases so it is more accessible and achievable. In 2025, the Committee will determine key performance indicators for the entire PSM implementation process to establish what success looks like. Focusing on Phase 1 implementation, we will roll out gap analysis worksheets to all operations.

Every workplace has unique hazards that can impact the safe operation of mobile equipment. These hazards must be identified, assessed and controlled to minimize the risk of damage or injury. In 2025, the Committee will hold bow-tie analysis sessions and a symposium on *Mobile Equipment Safety* to understand the risks associated with mobile equipment in wood pellet plants.

Drum dryers present the risk of fires and explosions due to combustible dust and conditions that can lead to the generation and accumulation of combustible gas. A symposium held in 2024 initiated the *Rotary Drum Dryer Safety* project, which led to a dedicated Working Group reviewing past incidents and developing enhanced, safer operating procedures. The Group will publish a report and share its findings in 2025.

The annual Wood Pellet and Biomass Safety Summit is a place to learn more about key safety issues and to network with others in the industry. Photo: BCFSC.

WorkSafeBC has proposed amendments to part 6, Substance Specific Requirements of the Combustible Dusts section of the Occupational *Health and Safety Regulation*. To help wood pellet companies understand these proposed changes, the Safety Committee will summarize and share them and prompt operations to assess their readiness to implement them.

We will continue to profile *Safety Heroes* every two months to acknowledge employees who support safety. You can submit nominations at pellet.org.

The Safety Committee also plans to hold our annual *Wood Pellet and Biomass Safety Summit*, where we will dive deeper into many critical safety issues affecting the industry today. Stay tuned for an announcement of a location and dates.

New to 2025: Along with the continuing safety initiatives listed above, we will review the impacts of previous safety initiatives, take a closer look at mental health and *musculoskeletal injuries (MSI)* and update *winter fibre truck loading/unloading* standard operating procedures.

We warmly welcome new members to the WPAC Safety Committee. We meet on the second Wednesday of every month at 11 am (PST). Members include the BC Forest Safety Council, the wood pellet and biofuel industry and academic institutions. To read the Work Plan and sign up, please visit pellet.org.

WPAC's Latest Safety Hero: Brian Penney, Safety Manager at Drax Entwistle

Congratulations to Brian Penney, Safety Manager at Drax's Entwistle facility in Alberta, the latest Wood Pellet Association of Canada Safety Hero. Brian's outstanding contributions have made the workplace safer and better for his colleagues.

Brian continuously meets monthly safety objectives and supports the facility's 55 employees to ensure objectives are met. An example of his dedication was putting in extra time and energy during an 11-day shutdown to see to it that everyone went home safely at the end of every day.

"Brian invests tremendously into the safety of the Drax Entwistle team," said Houston Ukpabi, Plant Manager, who nominated Brian for the award. "He mentors every new hire to make certain they are onboarded and trained properly and guides employees who need support to ensure they can proficiently follow safety procedures. He is constantly fostering positive change at our plant."

We will continue to recognize the efforts of our colleagues who ensure we all go home safely every day. By acknowledging this work, we are reconfirming our commitment to safety and raising awareness of the actions we can all take—big or small—daily to make our sector safer.

Do you know a safety hero? Nominate someone today online here.

Brian Penney, Safety Manager, Drax Entwistle.