

# WOOD PELLET AND BIOENERGY SAFETY SUMMIT

November 5, 2024 Prince George, BC



**BC Forest Safety**  
Safety is good business



**CANADIAN BIOMASS** MEDIA PARTNER



## BACKGROUND

The Wood Pellet Association of Canada's (WPAC) Safety Committee is committed to having a safer industry with greater cooperation and an improved reputation with the public and regulators.

To help foster this commitment, on November 5, 2024, the Committee hosted the Wood Pellet and Bioenergy Safety Summit with the BC Forest Safety Council (BCFSC), WorkSafeBC and media partner Canadian Biomass. Twenty wood pellet producers, operators and regulators across Canada met in Prince George, BC, to discuss current safety initiatives and trends creating a safer foundation for our industry. We gratefully acknowledge WorkSafeBC for its generous funding of this program.



Twenty people participated in the 2024 Wood Pellet and Bioenergy Safety Conference to discuss current safety initiatives and trends.

### WORKING TOGETHER: WPAC AND WorkSafeBC

WPAC and WorkSafeBC met the day before the Summit, to review the outcomes of the 2024 Work Plan, as well as proposed items for the 2025 Work Plan. 2024 saw the progression of several key projects:

- **Rotary Drum Dryer:** A **symposium** was held in April 2024, and a working group was established. The group has been working on a report that includes recommendations for safer operations of rotary drum dryers. The report is expected in Q2 2025.
- **Process Safety Management (PSM) Implementation:** A steering committee was established. The development of an implementation guide, work plan and self-assessment worksheets continues. Key performance indicators and metrics will be established early in 2025.
- **Mobile Equipment:** Bowtie analysis sessions were held on mobile equipment and pedestrian interface.

- **Proposed WorkSafeBC Combustible Dust Regulation:** A session on the proposed regulation was held during the Summit. Further activities are planned in 2025 to spread the word about the regulation and what it means for the industry.
- **Safety Hero:** WPAC members nominate workers who promote and support safety. The safety heroes receive a gift certificate and are acknowledged on pellet.org and Canadian Biomass. With winners announced every two months, there have been **four safety heroes**. The campaign will continue into 2025 and beyond.

In addition to the continuance of the projects above, proposed initiatives for 2025 include measuring the success of previous safety projects, psychological health and musculoskeletal injury (MSI) and winter fiber truck loading /unloading.

## COLLECTIVE COMMITMENT TO A SAFER INDUSTRY

On November 5, 2024, the annual Wood Pellet and Bioenergy Safety Summit was held at the Courtyard Prince George in BC. Twenty people from coast-to-coast across the wood pellet and bioenergy sector gathered, wanting to learn more and collaborate with their peers.

The group heard from the WPAC Safety Committee on current and future projects including a session on the drum dryer initiative. WorkSafeBC gave an update on trending safety initiatives in British Columbia. Participants dove deeper into process safety management (PSM), a safety initiative the industry has committed to adopting and integrating over the next five to seven years. The group learned about the proposed new WorkSafeBC Combustible Regulation and participated in a session on workplace mental health.

The wood pellet industry welcomed everyone from the bioenergy sector, recognizing the shared challenges and interests, with an [open invitation to join the monthly WPAC Safety Committee online meeting](#). Throughout the day, live polling was conducted so participants could share real-time feedback about their goals and priorities to shape the direction and take ownership of WPAC initiatives and projects.

### WPAC SAFETY COMMITTEE PROJECTS: 2024 AND BEYOND

Julie Griffiths, WPAC Safety Committee Chair and Quality, Sustainability & Environmental Program Coordinator for Shaw Renewables, provided an update on the Safety Committee projects throughout 2024, including rotary drum dryer, mobile equipment bowtie, the new proposed WorkSafeBC Combustible Dust Regulation and the safety hero program (see section Working Together: WPAC and WorkSafeBC on page one for more details).

Live polling was conducted to collect participant's input on their thoughts about safety in the industry. Everyone said that safety was either "great" (minimal gaps) or "okay" (obvious and sometimes significant gaps) at their plant or in the industry overall.



Julie Griffiths provided an update on the WPAC Safety Committee Work Plan.

The group mentioned many things when asked how the industry could help improve the safety rating. The top ways participants said could improve safety were:

- Process safety management
- Sharing and communication
- Buy-in and participation
- Mental health

### 2025 SAFETY WORK PLAN RECOMMENDATIONS FROM PARTICIPANTS:



**Mental health**



**Incident investigation**



**Preventative maintenance**



**Worker engagement**



**Behaviour-based safety**



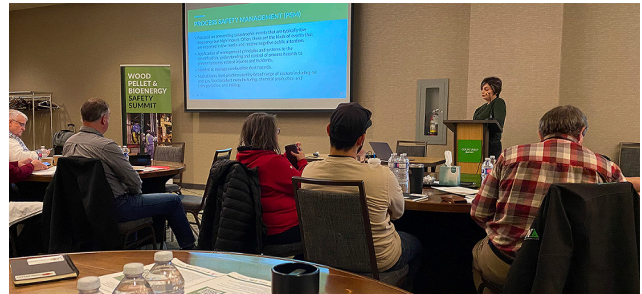
**Between batch furnace cleaning**



**Benchmarking**

**PROCESS SAFETY MANAGEMENT (PSM): WPAC'S COMMITMENT**

Process safety management (PSM) is a significant focus for the WPAC Safety Committee over the next five to seven years. Dr. Fahimeh Yazdan Panah, WPAC's Director of Research and Technical Development, provided a status update on the three-phase PSM implementation plan. A steering committee has been established, phase one self-assessments have been developed, and a commitment statement has been drafted. The next steps include official sign-off from members, operations using and providing feedback on the self-assessments, and establishing key performance indicators for the PSM implementation project.



Fahimeh Yazdan Panah outlined WPAC's PSM implementation plans.

Participants were asked what they felt would be the biggest challenge for PSM implementation. The number one answer was leadership/management buy-in, followed closely by resources.

**PSM IN WOOD PELLET FACILITIES**



The 2023 research project *Integrating Process Safety Management into Canadian Wood Pellet Facilities that Generate Combustible Wood Dust* outlines PSM best practices, implementation tools and strategies that should be established based on CSA Z767 Process Safety Management Standard.

The research showed that the industry is further ahead than they think. Each PSM element was present in operations in varying degrees of formalization and completion. PSM gap analysis tools (self-assessments) and industry best practices are being developed to formalize the elements and close gaps.



**PROCESS SAFETY MANAGEMENT (PSM):  
SPECIFICS OF IMPLEMENTATION**

Bill Laturnus, Senior Safety Advisor, Manufacturing with BCFSC, guided the group through a review of the management of change (MOC) self-assessment (a gap analysis tool). Breaking out into smaller groups, participants were asked what needed to be added to the MOC self-assessment document and what resources were needed to close the gap.



Participants reviewed the MOC self-assessment and provided input.

The group provided valuable input, including:

- Consider how to include regulatory changes in the process
- Add a section on roles and responsibilities (including sign-off) and a matrix of action owners
- Develop a task tracker
- Internally define MOC
- Determine how results are going to be shared across the industry
- Facilitate the roll-out
- Consider moving the element conduct of operations – senior management responsibility to phase one

The Safety Committee will take these recommendations and strive to implement the changes across the self-assessments.

Find the latest PSM tools and resources at:  
[pellet.org/safety/safety-initiatives/process-safety-management-psm](https://pellet.org/safety/safety-initiatives/process-safety-management-psm).

**DRUM DRYER HAZARDS AND OPPORTUNITIES FOR IMPROVEMENT**

One of the projects the WPAC Safety Committee focused on in 2024 was rotary drum dryer safety. Fahimeh Yazdan Panah spoke about the progress the newly established working group has made on the project and initial recommendations.

Drum dryers pose a risk of fires and explosions. Incidents occur more frequently than observed in media or described in literature. Root causes range from mechanical failure to improper startup and shutdown procedures.

Recommendations for risk reduction include preventative maintenance, explosion protection and extinguishing, and formalized operating procedures. The working group will investigate and systematically examine near misses, assess risks, explore suitable risk reduction approaches, and standardize knowledge across the industry.

A final report is expected in the first half of 2025.



Participants were asked what the first word that comes to mind when they think about safety in rotary drum dryer operations.

## GET READY FOR BC'S NEW PROPOSED COMBUSTIBLE DUST REGULATION

Bill Laturnus provided a high-level summary of the proposed BC Combustible Dust Regulation.

There are four sections in the proposed regulation:

- **Section 1:** Identification, Assessment and Management describes how to assess and manage combustible dust hazards.
- **Section 2:** Risk Controls (General) provides general methodologies for controlling hazards identified in combustion risk assessment and combustible dust management plan.
- **Section 3:** Risk Controls (Machinery and Equipment) provides methodologies for controlling hazards related to specific machinery and equipment.
- **Section 4:** Risk Controls (Fire and Deflagration Control) provides methodologies for controlling fires and deflagrations.

These risk controls are performance-based rather than prescriptive for broader application of requirements.



Bill Laturnus outlines the four section in the proposed new Combustible Dust Regulation.

A critical part of the new proposed regulation for facilities to ensure they have is the right qualified person. This can be a single person or a team of people who must *“be knowledgeable of the work, the hazards involved and the means to control the hazards by reason of education, training, experience or a combination thereof.”* (OHSR 1.1)

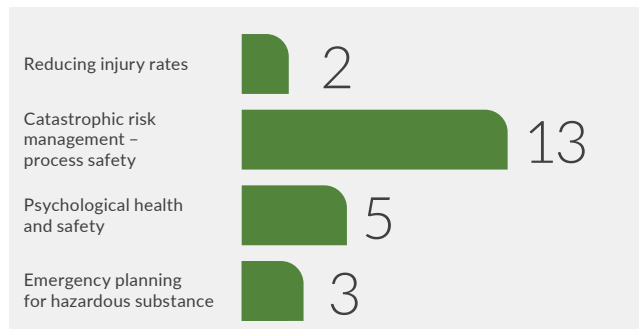
## WorkSafeBC: TRENDING SAFETY INITIATIVES

Mike Tasker, Occupational Safety Officer, spoke to WorkSafeBC’s current focus, which includes:

- **Reducing the provincial injury rate:** With many significant issues that cause injuries under control, the focus is on the more finite injuries.
- **Catastrophic risk:** Implementing process safety management (PSM).
- **Emerging and stubborn risks:** Including psychological health and safety and musculoskeletal injury reduction.
- **Regulatory enhancements:** Combustible dust, first aid and emergency planning for hazardous substances.



Mike Tasker spoke to participants.



Feedback from the group showed the WPAC Safety Committee is currently focused on the right thing: process safety management.

**MENTAL HEALTH:  
HOW TO SUPPORT OUR TEAM**

With one in five Canadians experiencing a significant mental health or addiction issue this year, Shirley Hogan, Manager of Education and Projects with the Canadian Mental Health Association Northern BC, gave a session about supporting teammates with mental health, which was valuable and timely. She discussed understanding mental health and resilience and provided tools to help attendees reach out and communicate with their colleagues.



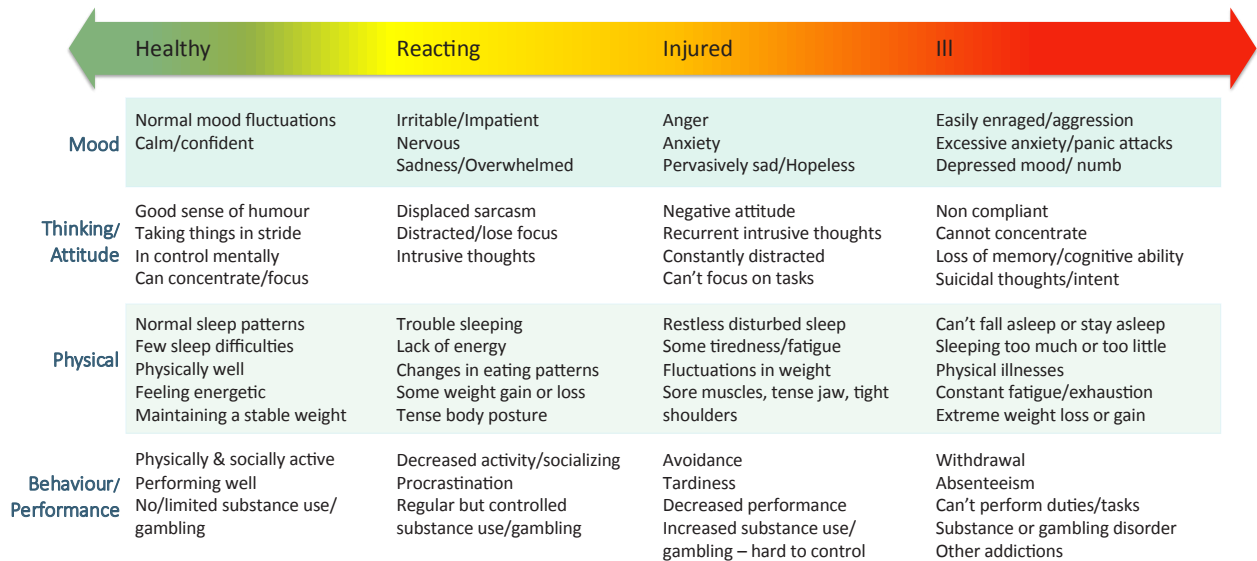
Shirley Hogan talks about things to look for in the workplace for challenging mental health.

Mental health is a key component to having good health and is just as important as social/spiritual and physical health. Yet, it continues to be stigmatized in society today, and employees may hide mental health issues from their employers.

A 2019 Ipsos study showed that 50% of employees would like executives to help normalize the mental health conversation, and 82% said they would be more productive if they said there was better mental health support.

Shirley talked about how we always have mental health, but just like physical or social/spiritual health, it can fluctuate. Mental health is a continuum. When we are well, we feel calm, fit and rested. As we move across the continuum to reacting or being injured, we can become anxious, have outbursts and avoid. It's important to note that when we are ill, it is entirely treatable.

The image below shows what each part of the continuum looks like and the things to look out for.



What to look out for during the different stages of the mental health continuum, courtesy of Canadian Mental Health Association.

## MENTAL HEALTH: HOW TO SUPPORT OUR TEAM (CONTINUED)

How to have a conversation with a colleague:

### 1. Before—prepare:

- What have you noticed?
- What are the person's strengths?
- Am I the best person to have the conversation? If not, who?
- Where to hold the conversation? Is it a safe space?
- How do you want to start the conversation?

### 2. During—practice active listening:

- Be curious
- Don't make judgements
- Ask questions – clarify
- Repeat back what you heard
- Look for non-verbal messages
- Validate feelings and concerns
- Use pauses/silence

### 3. After—follow-up:

- Ensure follow-up happens.

## HOW MENTAL HEALTH CHALLENGES MIGHT SHOW UP AT WORK:



**Absenteeism**



**Presenteeism**



**Forgetful**



**Lack of cooperation**



**Decreased focus / concentration**



**Risk-taking behaviours**



**Anger**



**Insubordination**

Shirley encouraged participants to take these ideas back to their workplaces—to talk about mental health as a team, discuss the use of “sick time,” and find ways to say what we are thinking to each other.

## OBSERVATIONS AND KEY TAKEAWAYS

- The WPAC Safety Committee will incorporate the group's feedback into the WPAC 2025 Safety Work Plan and activities.
- Mental health was seen by many as an important safety initiative and will be incorporated into the WPAC 2025 Safety Work Plan.
- Developing industry-wide PSM tools that will be serviceable for all members will require WPAC to engage with the Safety Committee and the PSM Steering Group to collect input and improvements for each tool, including the self-assessments.
- Reviews of each self-assessment will occur at the monthly Safety Committee meetings.
- The WPAC Safety Committee will consider ways to increase attendance at the Safety Summit, including holding the event at a different time of year, safety training credits and other engagement activities.

## RESOURCES

For more information, visit [pellet.org/safety](https://pellet.org/safety).

## WPAC SAFETY COMMITTEE

Want to join the WPAC Safety Committee? We meet on the second Wednesday of every month. Visit <https://pellet.org/safety/safety-committee/> to learn more and sign up.

*We gratefully acknowledge WorkSafeBC for its generous funding of this program.*