

CRITICAL CONTROL MANAGEMENT (CCM)

Breaking New Ground in Pellet Plant Safety

Photo: Courtesy of Skeena BioEnergy

Despite significant safety advancements in the pellet industry, the potential remains for pellet plants to experience major unwanted events (MUEs) such as explosions fires and fatal accidents, that are hard to prevent by traditional approaches to safety.

The Wood Pellet Association of Canada (WPAC) and the British Columbia Forest Safety Council (BCFSC) have partnered to pursue a process known as Critical Control Management (CCM) that already is or will be underway at every WPAC member plant in 2021.



“Critical Control Management will help companies understand their equipment better; employees will be able to operate and maintain the equipment safely and improve its reliability; and plant managers will know what activities are most important.”

– Gord Murray,
Executive Director, WPAC

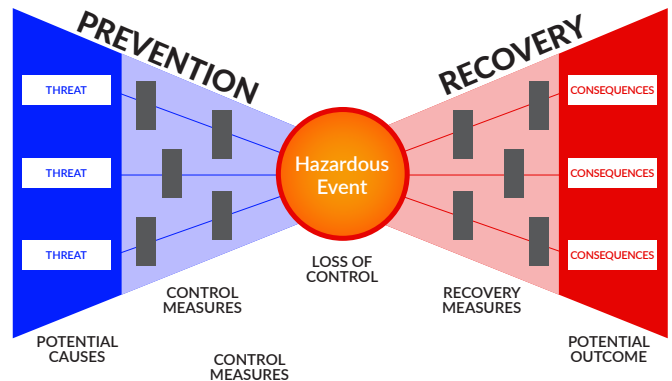


HOW DOES CCM WORK?

Plant operators identify potential MUEs or “Top Events” – like fires and explosions – each one of these Top Events forms the centre of a bow tie. All plausible accident scenarios that could exist around each MUE are considered and then critical controls that would prevent the Top Event are identified.

This approach relies on the Swiss Cheese Model where each slice of swiss cheese has holes and each hole represents a potential safety weakness. But when you layer the slices together, the holes don't line up, they create a collective barrier to safety weaknesses. This is the essence of CCM.

CCM is already widely used in mining, chemical, and oil and gas industries around the world, but it's new to the wood pellet industry.



“The bow tie is a great tool because it gives everyone involved a better understanding of how they need to work together to prevent an incident. We can now manage multiple layers of controls into a single process resulting in better safety at every level.”

– Cherie Whelan, BCFSC's director
for SAFE Companies



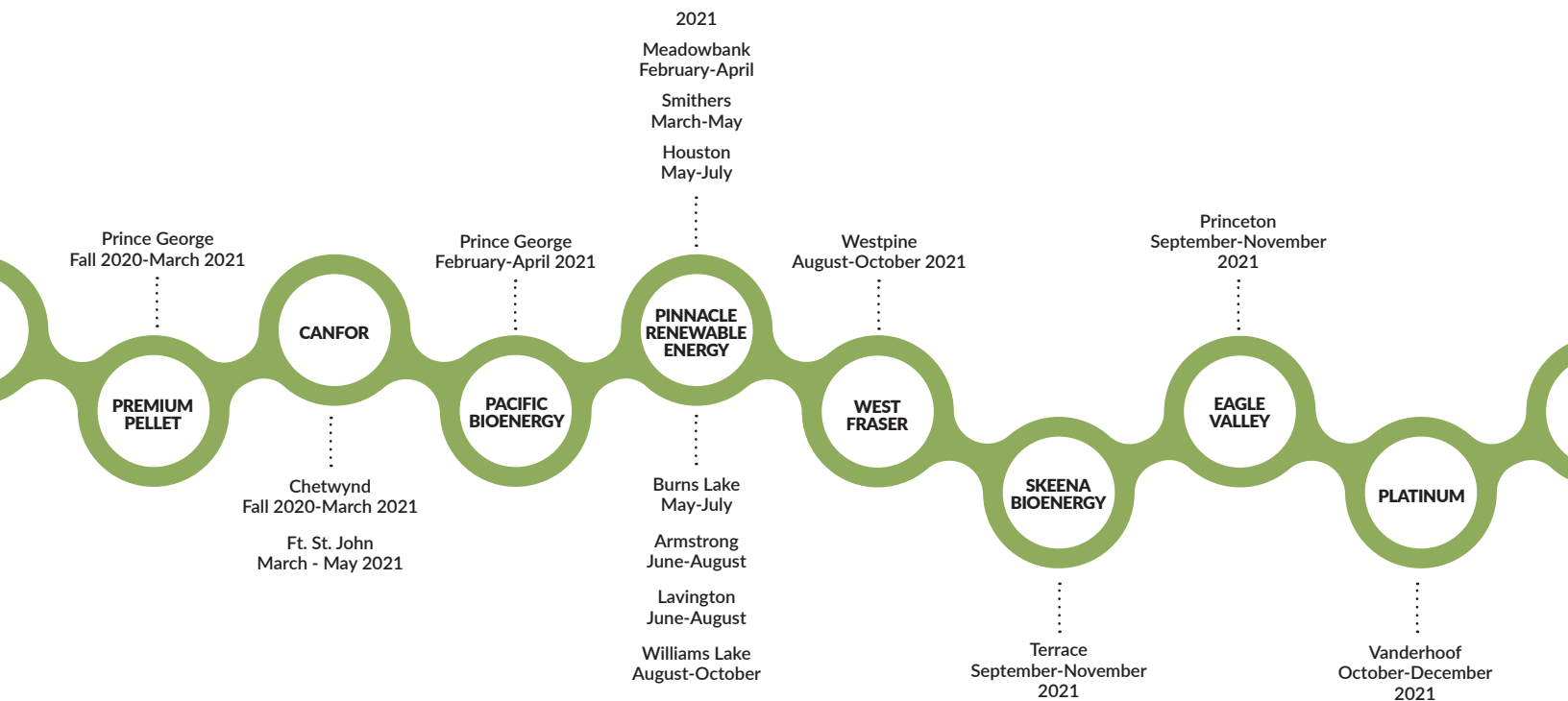
CCM COMING TO YOUR PLANT SOON

The CCM committee, comprised of representatives from WPAC, BCFSC and Dalhousie University, have developed an implementation schedule with the goal of completing bow ties and critical controls to WorkSafeBC by late 2021. In 2021, the primary focus is on potential fires and explosions.

BCFSC Safety Advisors, Bill Laternus and Tyler Bartels are providing on-site and online support to all 15 operations. They will provide education, training and mentoring in the necessary knowledge and skills required to identify the

site-specific critical controls. Further support will help the operations develop their internal systems to effectively manage these critical controls to ensure they operate 100% of the time.

WorkSafeBC is also funding a Dalhousie University Department of Process Engineering and Applied Science research project that will build on this work and transfer this knowledge to employees and employers throughout the wood pellet industry across Canada and internationally.



COMMITMENT TO SAFETY

British Columbia's wood pellet producers are devoted to running safe operations. In 2014, the Wood Pellet Association of Canada established the WPAC safety committee as a forum for industry participants to share knowledge and to work collectively on solving common safety concerns.

FOR MORE INFORMATION

Email: Gord Murray, gord@pellet.org

