



## What *Really* Makes All Roads the Greenest Asphalt Plant in Canada?



On the southern edge of our asphalt plant site—just 50 feet from the north bank of the mighty Fraser River—a bold new sign proudly declares: “*Canada’s Greenest Asphalt Plant.*” The Fraser, stretching nearly 1,400 kilometers and teeming with fish species, is British Columbia’s longest river and home to one of the most sensitive ecosystems in the region.

The idea that an asphalt plant, traditionally associated with pollution, operates so close to such an environmentally important river might seem like a contradiction. So, we asked All Roads’ leadership the obvious question:

***What makes you so confident that this is the greenest asphalt plant in the country?***



**The Short Answer? Everything.**

“All of it,” says Rod Stephens, President of All Roads, with a grin. “It’s not one thing — it’s how all the systems work together that makes the real difference.”

Rod would know. He spent over two years navigating Metro Vancouver’s famously tough (but fair) approval process before overseeing the construction of the plant — smack in the middle of the 2020 pandemic.

He walks us through the technology and strategy that earned this plant its green credentials — and it’s an impressive mix of cutting-edge tech, thoughtful engineering, and a commitment to doing things differently.

## Cleaner Burn: The Ultra II™ Low NOx Burner

Let's start with what fires it all up — literally.

The plant uses an **Ultra II™ Low NOx burner**, a high-efficiency combustion system that drastically reduces nitrogen oxides (NOx), a major contributor to smog and air pollution.

“Think of NOx as the bad stuff you really don't want in the air,” explains Rod. “Our Ultra II™ low-NOx burner significantly reduces these emissions by precisely controlling the air-fuel mix, maintaining uniform flame patterns, and lowering peak combustion temperatures.”

The result? Faster heat-up and cool-down cycles, less noise, and dramatically fewer NOx emissions. In other words: a quieter, cleaner operation.

Yes, it's high-tech. Yes, it's more expensive. But the cleaner burn is worth every penny.

## Lowest Permitted Emission Levels

As the first new asphalt plant built in British Columbia in the 17 years leading up to 2020, we are subject to significantly stricter environmental standards than any other plants across Canada. Despite having the lowest permitted emission levels in the country, independent third-party reviews conducted on August 28, 2023, confirmed that our actual emissions are only about one-third of those already exceptionally low limits.

Parameter	Result	Permitted Level
Particulate (mg/Sm3 @ 16% O2)	0.59	30
Carbon Monoxide (mg/Sm3 @ 16% O2)	95.4	200
Total Hydrocarbons (mg/Sm3 @ 16% O2)	16.8	40
Flowrate (Sm3/min)	509	870
Temperature (°C)	100	

All results are at standard conditions of 20°C and 101.325 kPa (dry). There are no permit exceedances and the results are similar to previous testing. The

differences year to year are considered to be in a normal range of outcomes for this process.

## Independent Third Party Reports

- [EMISSION MONITORING REPORT](#)  
by A.Lanfranco & Associates Inc.
- [ODOUR MANAGEMENT PLAN](#)  
by Envirochem Services Inc.
- [FUGITIVE DUST MANAGEMENT ACTION PLAN](#)  
by Envirochem Services Inc.

## Clean Air, Inside and Out: The Baghouse & Blue Smoke Systems

Behind the scenes, the plant uses an **Ultraflo Baghouse filtration system**, which maximizes airflow while greatly minimizes dust and emissions compared to conventional pulse-jet systems. With fewer moving parts, it's also easier to maintain — a win-win.

And then there's the **Blue Smoke Capture System** — a component All Roads is particularly proud of.

“When you flip a burger and see that smoky sizzle? That’s ‘blue smoke.’ In our world, it means emissions — and we don't want that escaping into the air,” says Denis Labelle, VP of Operations, pointing up at the silos. “So we capture that vapor, reroute it into the drum, and use the heat to burn off the pollutants. It’s simple, but super effective.”

## Smarter Exhaust: Flue Gas Recirculation & Demisters

Next up is **flue gas recirculation** or FGR — a technique that reuses some of the exhaust gas, lowering combustion temperature and cutting NOx even further.

“Lower flame temps mean lower emissions,” says Dennis Eby, the Asphalt Plant Manager. “And we’ve also got **demisters** to remove oil mist from exhaust before it hits the air.”

The result? The visible steam rising from the stack isn’t pollution — it’s mostly clean water vapor. A sight that actually means things are working *right*.

## Eyes in the Sky: Real-Time Particulate Monitoring

Monitoring matters. That’s why All Roads has installed **particulate sensors** to continuously track air quality around the plant.

“It’s like having a Fitbit for our exhaust stack,” says Dennis. “If something goes out of spec, we know immediately — and can fix it fast.”

Not only does this improve operational control, but it also ensures that those living or working nearby are breathing easy.

## Recycle and Reuse: Circular Economy in Action

The plant uses high-efficiency condensers on its Hy-Way asphalt storage tanks to capture gas vapors and convert them back into liquid.

“That way, instead of releasing vapors into the air, we recycle them back into the tank,” explains Labelle. “It’s a critical part of our emissions-reduction strategy.”

And when it comes to raw material? They walk the sustainability talk. “We use a high percentage of **RAP — Reclaimed Asphalt Pavement** — in our mixes,” says Labelle. “Old roads get a second life. That’s good for the environment and the economy.”

## Dust Control that Doubles as “Breeze”

Walking through the plant during peak hours, you’ll notice a fine mist in the air — aimed to suppress dust, but also cools everyone off during hot summer days.

“Our **sprinkler and misting system** keeps dust from aggregate movement under control,” explains Eby, as droplets land on his safety vest. “All the runoff drains into our underground filtration system for further proper treatment.”

## **Below the Surface: Stormtech Water Treatment**

Speaking of underground — All Roads didn't stop at emissions. Beneath the plant lies an advanced erosion and sediment control system. It captures, filters, and stores stormwater runoff.

"When we built this place, we didn't just pave it and forget it," Stephens adds. "Our whole yard drains into an advanced **Stormtech detention and sediment separation system**. We treat stormwater on-site before anything goes back to nature."

"You can't call yourself green if you're only looking at what's above ground."

It's a level of environmental responsibility you don't always see — and it shows.

## **Fueling a Cleaner Future**

The choice of fuel matters. All Roads' plant runs on natural gas—the cleanest-burning fossil fuel available. "Natural gas has a much smaller carbon footprint than oil or diesel," says Stephens.

Eby adds that energy efficiency is further improved by using variable frequency drives (VFDs) on burners and exhaust systems. "They optimize power usage and reduce overall emissions," he explains.

It's another piece of the sustainability puzzle.

## **So, Is the "Greenest Asphalt Plant in Canada" Claim Legit?**

We'd say so. When you add up all the features — the smart burners, the vapor controls, the emissions monitoring, the recycled materials, the misting systems, the water filtration, and the clean fuel — the result is a facility that redefines what an asphalt plant can be.

By integrating all components through a modern system of Programmable Logic Controllers (PLCs), our plant produces asphalt in the most fuel-efficient manner possible. A finely tuned PLC configuration eliminates the inconsistencies of human

error, which is why we consistently emphasize the importance of using the '**Best Control Technologies Available.**'

“We didn’t do it just to get bragging rights,” says Stephens. “We did it because we live here too. We fish in this river, we breathe this air. If we’re going to build roads, we’ve got to build them the right way.”

**Together, these systems make the bold claim on the sign not just accurate, but well-earned. It's a model for what the future of industrial infrastructure can look like.**

**Cleaner. Smarter. Greener.**



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Read Online:

<https://www.allroadsconstruction.com/what-really-makes-all-roads-the-greenest-asphalt-plant-in-canada>