

THE BURNABY REFINERY'S

Neighbourhood News

A NEWSLETTER FOR OUR NEIGHBOURS
WINTER 2015 - ISSUE 45



80 Proud Years of Reliable Operations

Chevron Canada has lots to celebrate this year: 2015 marks 80 years of doing business in BC and of refining operations in Burnaby



Overlooking the Burrard Inlet, the refinery's groundbreaking ceremony took place on June 24, 1935

It was in June 1935 that ground was broken on a 55-acre site at the foot of Willingdon for the original Stanovan Refinery. In an area that was largely still forested with few neighbours for miles around, the first delivery of crude oil was received in December. By January 1936, refinery operations were underway, with a design capacity of 2,000 barrels a day.

Looking Back Over the Years

Chevron Canada has produced a video documenting our first 80 years in BC; it can be linked to from our website: www.chevron.ca. Facilities Planning Manager Kate Groves was one of the forces behind its creation.

"When I look at the video it reminds me how the refinery has been part of BC's economy for 80 years and that we've been part of growing our province all that time by providing vital transportation fuels," she said. "Every year there's a new set of challenges and every year we meet these and remain competitive. An anniversary as important as this one is a good time to reflect on that."

"We're very proud of our legacy in BC

and to see how we've grown from our humble beginnings to what the refinery is today," said General Manager Steve Parker. "We've been part of the fabric of the provincial economy for a long time and our work has made people's lives better. We are well and truly embedded in the Lower Mainland and play a role in providing a secure and stable supply of fuels. I've said it before: it is good for customers to have a refinery so close to their market as it creates dependability of supply."

2014 Year in Review

The Chevron culture emphasizes the importance of meeting three objectives: safety; reliability; and profitability. When all three are achieved, we believe we have a winning performance. And, from all three perspectives, 2014 was a good year.

Safety performance has improved every year for the past five years with 2014 seeing the refinery's best safety record over that time. 2014 was also the most reliable year the refinery has ever had in its long history with a minimal amount of

unplanned down time. Safe and reliable operations are necessary for achieving sustainability. Refining is a capital-intensive business and being able to meet our profitability objectives means we can reinvest in the plant. We are seeing that today as we are currently in the midst of our biggest ever plant shutdown.

The Refinery's Outlook

Plans for 2015 include working to maintain our safe and reliable performance including during this major turnaround period which will see several infrastructure improvements.

"Over the long-term, we have the view that Chevron will remain integral to the BC economy," said Kate. "We will safely and reliably provide our customers with transportation fuels, meet new regulations and stay competitive in our industry."

Manager's Message

Steve Parker, General Manager

This is a special year for the refinery... we're turning 80. Our longevity has given us years of experience to build on and we excel in providing British Columbians with the transportation fuels vital to growing the provincial economy. We are also consistently reinvesting in the refinery's infrastructure so we can continue to play this important role. Our outlook depends on our ability to remain safe, reliable and profitable. With a strong year like 2014 under our belts we are poised for a healthy future.

Safety is a key measure of our success and this is a field where Chevron is leading the way worldwide. We follow best practices and are always looking for ways to improve. We have recently adopted a new way of thinking about safety in regards to human performance and that system is the subject of this issue's Safety Matters article. We're all excited about implementing this new approach to take us to the next level.

Changes are coming to gasoline specifications which will require us to increase our capacity to remove sulphur from our products. This is a natural part of our business that has been occurring regularly for several decades. While we do not yet know what new equipment will be required, the refinery is in good shape to do the upgrades to meet these new standards. You can find out more about this in our Tech Talk article.

Finally, I would like to thank our neighbours for your patience as we work through our current shutdown/turnaround period. Not all turnarounds are created equal and this year we are conducting major repairs and replacements of equipment. In fact, this is likely the biggest shutdown in the Burnaby Refinery's history with many contractors coming and going and a large amount of equipment being delivered. We know this affects the neighbourhood and we are monitoring traffic and noise levels carefully. We are taking proactive measures not to cause annoyance and are here to respond to any concerns you may have. We appreciate the community accommodating this additional activity which allows us to maintain and update the refinery to help ready us for the next 80 years.



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Safety Matters

To Err is Human...

A New Way of Thinking about Safety

The Burnaby Refinery has many tools, programs and procedures that contribute to its safe operations. Over the past number of decades, safety has improved tremendously. A new way of thinking about safety was recently introduced at the refinery, which, we believe, should take the facility to the next level in terms of safety performance.

Human Performance Safety Solutions

"Human performance safety is not a new program but rather a new way of thinking," said Jill Donnelly, the refinery's manager of health, environment and safety. "Its purpose is to proactively prevent unwanted outcomes that are triggered by human error. It's about reducing the consequences of the error, rather than necessarily eliminating errors altogether."

Jill's favourite example to explain the concept is one we all can relate to.

"Imagine you're driving on the highway," she said. "If it's an especially long drive, fatigue can set in and you could start nodding off. You might start veering off the road. But there are rumble strips: they're a system solution that is there to prevent an accident from happening because of human error."

Human performance safety acknowledges that errors are going to happen. No one wants them to; no one sets out at the beginning of their day intending to make a mistake... but they still can happen. Instead of asking "why" an error occurs, human performance safety asks "how" it happened. By getting at the root of the problem, the potential for that error to happen again can be addressed and measures taken to prevent it.

Human Performance Safety in Action

"An example of human performance safety at the refinery is something that we've been doing for years when we work at heights and use scaffolding," said Jill. "All our scaffolds have toe boards on them as well as netting beneath them. That way, tools shouldn't roll away or fall off the scaffold... and potentially onto anyone working beneath. No one would intentionally drop a tool, but it could happen. With these measures in place, if someone does drop a tool, it stays on the platform."

Currently, the refinery is applying a type of human performance safety measures to motor vehicle safety on site by reducing speed limits. There may also be opportunities to expand automatic prompts if a worker enters unusual commands on a computer by having it ask "are you sure?"

"These are system solutions that we can apply across a broad range of areas," said Jill. This way of thinking forces us to look at all the factors contributing to an incident or potential incident... some of them considered "latent"- from equipment design, procedures, protective equipment and training to communications. If one person can make that mistake so can others if we don't learn from it."

All Burnaby Refinery supervisors spent a day with a human performance safety expert recently. They discussed the concept and are now looking forward to using it in a way that will prevent incidents from happening.



Tech Talk



Reductions Coming to Sulphur Content in Gasolines

The fuel and auto industries are working in collaboration with the Canadian and US federal governments on new specifications called Tier 3 Gasoline regulations which will see a significant decrease in the amount of sulphur in gasolines. The new regulations call for a reduction of sulphur content from 30 parts per million (ppm) to 10 ppm starting in 2017. The objective is to lessen the impact of vehicle emissions on air quality and public health

Initiative Requires Collaboration

Discussions regarding the new specifications and the timing of their introduction have been ongoing for several years. New car engine designs produce fewer emissions but require gasolines with less sulphur in order to perform as designed. The vehicle engine and the fuel it uses are an integrated system so the vehicles and

the sulphur-reduced fuel need to come to market at the same time. The timing of the initiative has been aligned with American car manufacturing, where most of the cars purchased in Canada originate.

Preparing for Change

To prepare for the new specifications, the Burnaby Refinery needs to improve its capabilities to remove sulphur from gasoline

“We haven’t chosen our approach to meeting the new specification but we will need new tools for sulphur removal” said Manager, Policy, Government and Public Affairs, Dave Schick. “Because of the time refineries will need to do the capital work, the government has included banking/trading provisions which mean that any gasolines we produce in 2014, 2015 and 2016 that have less than 30 ppm sulphur content can be used as credits in 2017, 2018, and

2019. Then, by 2020, we will meet the 10 ppm specification. It’s the same result, with benefits accrued earlier.”

The Burnaby Refinery is already producing lower sulphur gasolines in order to gain credits and is working on finding the most effective equipment and new processing techniques. The design work for a long-term solution is underway.

“It’s been a coordinated effort,” added Dave, “and, by reducing sulphur content sooner, we’re reducing the impact cars have on air quality earlier as these gasolines also improve emissions from older vehicles.”

Across the Fence



Turnaround Update

The refinery is in the middle of one of its largest maintenance turnarounds ever. Normal operations ceased in mid-February and will not return until April. The goal of any turnaround is to inspect and maintain equipment - and to do it in a way that is safe and affects residents as little as possible. However, with work going day and night and an additional 100 to 200 workers on site per shift, there is bound to be some impact. Work that may be noisy has been scheduled for daytime shifts. We will be testing noise levels at our perimeter regularly. Barriers have been erected to muffle noise wherever practical. We appreciate your patience as you manage extra traffic in the area. All personnel are required to adhere to speed limits as they drive through the community. If you notice excessive noise or odours or have any other concerns, please contact us so we can investigate and take action.

Temporary Parking Area During Turnaround

Additional space has been created on site at the refinery to handle the excess need for parking at the refinery during the current turnaround. The back corner of the tank truck lot off North Rosser Avenue has been cleared of its modular trailers in order to provide this service. The area will remain available for refinery parking past the turnaround, although its use will be greatly reduced. The additional workers required during the turnaround have been encouraged to use Willingdon and Penzance to come to and from the refinery.

Ongoing Work in the Tank Farm

Tank 67 in Area 1 will be coming out of service for a compliance inspection after the current turnaround concludes. The tank will receive upgrades to assist in maintaining product quality. A double bottom floor with leak detection will be installed. This floor will protect against

underside corrosion and its interior will be coated. A floating suction that hovers just under the surface will also be added.

The American Petroleum Industry mandates tank inspections every 20 years; inspections are also an excellent time to upgrade equipment.

During the initial cleaning process, caustic scrubbers and carbon filters will be used to eliminate any odours. Any vacuum trucks required will be surrounded by sound-absorbing panels to reduce noise. All work will be conducted during the dayshift between Mondays and Thursdays. It is expected the tank (which is not visible to neighbours) will be out of service until the end of September.

Four years after the groundbreaking ceremony, this aerial photograph was taken in 1939.

Chevron Canada: 80 Years Young

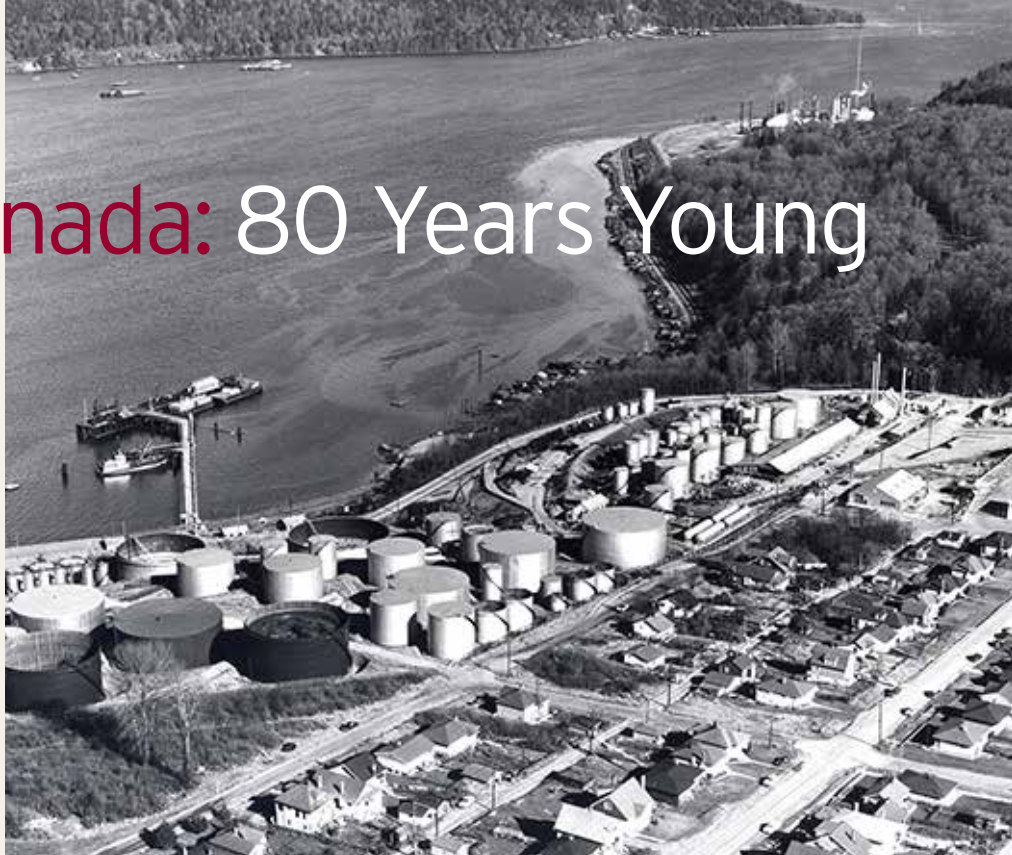
Chevron Canada: 80 Years Young!

2015 is a special year for the Burnaby Refinery... we're turning 80. While our longevity has given us years of experience to build on, we are also constantly renewing our investment in our facility, our products and our community. We have the energy and commitment to take the refinery well into the future, providing jobs and helping to ensure our province's economic prosperity.

Looking Back to our Beginning

It was 1935 and Burnaby was in the midst of the Great Depression with hundreds of people out of work. But there was reason for optimism. Standard Oil in California thought the time was right to expand its operations in Western Canada. Standard Oil of British Columbia Ltd. was incorporated in March of that year. By June, ground had broken on a 55-acre site in North Burnaby, marking the beginning of the original Stanovan Refinery at the foot of Willingdon Avenue. In an area that was largely still forested with few neighbours for miles around, the first delivery of crude oil was received in December. By January 1936, refinery operations were underway, with a design capacity of 2,000 barrels a day.

Much has changed since then, from the pressures of World War II to the post-war boom years, to an age where safety and environmental concerns have taken centre stage. Burnaby has grown up around us, and the refinery has made changes to accommodate the community in which it now operates.



Engaging our Community

One of our core values is an unwavering commitment to being a good partner focused on building productive, collaborative, trusting and beneficial relationships. From 1971 to 1974, we worked with our neighbours to gain support for an expansion. At a city council meeting attended by a thousand people, we were given the go ahead on the project which was finished in 1976 - the same year Chevron Canada was incorporated.

In 1996, a Community Advisory Panel was established to facilitate dialogue and foster understanding between the refinery and the residents of our adjacent neighbourhoods. CAP volunteers have been key partners in identifying and addressing issues of mutual importance and concern and we are grateful to them for their donations of time.

Meeting New Standards

The Burnaby Refinery has modernized as the market demanded higher quality fuels including technology to reduce sulphur in diesel from 5,000 parts per mil-

lion down to 15 parts per million, sulphur in gasoline from 1,000 parts per million down to 30 parts per million, and lowering the benzene content of gasoline, just to name a few.

Over these 80 years in BC, we have helped build British Columbia's economy safely and reliably and we understand that our continued success depends on our ability to operate responsibly: to get results the right way. Today, we continue to be a leader in personal safety and we have taken extensive actions to protect people and the environment by enhancing process safety to prevent serious incidents.

Our business and social investments boost local economies by creating jobs, improving livelihoods and supporting local businesses. Chevron Canada has been a significant contributor to the province's history and economy and together with our colleagues around the world, we are working toward our vision of being the global energy company most admired for our people, partnership and performance.

Community Corner

2014 Fuel Your School Program an Overwhelming Success

Elementary and secondary students in five school districts are benefiting from projects funded through Chevron Canada's Fuel Your School program which is run in association with My Class Needs (myclassneeds.ca), a crowd-funding website. Last November, every time customers at Chevron stations in Burnaby, the Tri-Cities, the North Shore, and Surrey filled their tanks with 30 litres or more of gasoline, Chevron donated \$1 to My Class Needs. The initiative raised \$565,000 (\$125,000 of which was allocated to Burnaby schools) - the maximum commitment.

"The program was hugely successful and exceeded our and My Class Needs' expectations," said Chevron Canada spokesperson Adrien Byrne. "We were able to fund 470 projects that will impact some 20,000 students. There were lots of interesting projects including many that combined arts and science such as film equipment to explore new trends in film and animation at one school. We were also able to assist with many requests for iPads and laptops, construction equipment, science kits, and robotics and electronics. It was wonderful to contribute to supporting our children and their education."

Hats Off Day

The Heights Merchants Association is bringing Hollywood to the Heights at this year's Hats Off Day on Saturday, June

6 from 9:30 am to 4 pm. Bring your family and friends and join your neighbours as the entire Heights community celebrates together. Hastings Street between Boundary and Gamma shuts down and the crowd takes over to enjoy the traditional parade and street party. Some 60,000 people are expected to take part in what Burnaby Now readers have voted as our city's best festival every year since 2005.

Get in on the action at your local town pump. The Chevron station on Hastings and Willingdon will feature hands-on children's activities, entertainment, and giveaways. We look forward to taking our hats off to you, our neighbours and customers.

Giro di Burnaby

The 2015 Giro di Burnaby will be taking over our neighbourhood on July 16. The action gets underway at approximately 6 pm with Mayor Derek Corrigan starting the 30-lap women's race. Councillor Pietro Calendino is scheduled to start the 45-lap men's race around 7:15 p.m. And, the awards presentation will follow at about 8:30 pm.

Chevron is proud to once again sponsor this exciting professional cycling event that attracts teams from around the world. The course is a 1.3-kilometre loop with riders reaching speeds of up to 60 kilometres an hour. Check out the event's website (girodiburnaby.com) for information on the best places to view all the action as well as details on street closures.

Community Contact Line

(604) 257-4040

Chevron's Burnaby Refinery welcomes your calls and feedback. If you have any comments or concerns, please do not hesitate to call our Community Contact Line: 604-257-4040.

This line is staffed on weekdays between 8 am and 4:30 pm. Your call will be directed to the most appropriate person who can respond quickly. In the event of an emergency, or significant maintenance work underway that may contribute to unusual operating conditions, information and regular updates for the public are made available.

If you are calling after hours or on a weekend, please follow the paging instructions. Your call will be forwarded to our on-duty shift supervisors. If you would like to report an odour or if you notice anything that you think is unusual, please let us know. Your calls are very important to us and we will respond as quickly as possible.

To contact the Metro Vancouver air quality officer **604-436-6777**

For the refinery website, visit www.chevron.ca/operations/refining

For information about the Chevron/ North Burnaby Community Advisory Panel, visit www.chevroncap.com



Neighbourhood News is a quarterly newsletter produced by Chevron's Burnaby Refinery for residents of the Heights, Capitol Hill and surrounding areas of North Burnaby.

We invite your comments, questions or suggestions for future articles.

Please contact us at Neighbourhood News, Chevron Canada Limited, Burnaby Refinery, 355 North Willingdon Avenue, Burnaby, BC, V5C 1X4.

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