

THE BURNABY REFINERY'S

Neighbourhood News

A NEWSLETTER FOR OUR NEIGHBOURS
FALL 2014 - ISSUE 44



Preparations Underway for **Spring Shutdown**

The Burnaby Refinery shuts down sections of the refinery each year for scheduled maintenance - it is one of the ways we ensure safe and reliable operations.



This spring, the refinery will undergo one of its largest ever shutdowns: an approximate seven-week period beginning in mid-February. But a shutdown of regular operations does not mean that work will decrease at the refinery. Work will be ongoing 24/7 with many additional Chevron and Contractor employees on site to manage the large workload associated with a significant refinery turnaround.

Years in the Planning

Gord Bruce leads the shutdown team; his full-time job is to plan these events. His team expands as these regular maintenance events approach. As of this fall, he has approximately 10 people working full time on the spring shutdown with many others providing ongoing support.

“We started detailed planning for this event in October 2013,” said Gord. “We plan all the activities down to the hour so we know everything that has to happen in what order and which staff and contractors need to be involved. The goal is to execute all of the work safely, do a high quality job, and prepare the plant for a reliable run until the next scheduled outage.

Scope of Work

A number of process units will be undergoing their regular inspections and maintenance during the coming shutdown.

“The Fluid Catalytic Cracker (FCC), the sulphur recovery unit, one of our crude units, and a few smaller units will be part of this maintenance turnaround,” said

Maintenance and Reliability Manager Pete Turner. “This is our opportunity to get inside this equipment and do detailed inspections that can’t happen while the refinery is operating. We bring in specialists to support our team in completing the inspections. Any deficiencies are repaired, re-inspected, and then reassembled.”

“We will also be implementing a new cyclone system in the FCC, replacing existing equipment. The FCC is one of our most important process units,” said Gord. “This new equipment will not change the capacity of the unit, but it will improve reliability for many years to come.”

Physical work for this new system began last summer including pouring concrete for the area, erecting new structural steel, and installing some of the equipment which will be tied into the new system during the shutdown. Building as much as possible ahead of time shortens the overall length of the maintenance period.

Impact on Neighbours

The goal of all shutdowns is to minimize the impact on neighbours as well as consumers. Gord and his team work closely with all aspects of Chevron’s business to ensure there will be an adequate supply of product available during the time so we can all go about our business uninterrupted.

With the addition of 100-200 workers per shift including contractors and experts from within the Chevron family, there will be increased traffic through the neigh-

bourhood during the shutdown.

All personnel are required to respect our neighbors by adhering to speed limits as they drive through our community.

As part of the planning process, any work that could potentially result in excess noise is scheduled only during daytime shifts and barriers will be erected to muffle noise as much as possible. We will be testing for noise levels at our perimeter regularly during the event.

Increased flaring sometimes occurs when the refinery is taken offline as well as when operations start back up.

“We strive to minimize any impact of this event to our neighbors” said Gord. “If our neighbors notice any odors or excessive noise, we encourage them contact us so that we can investigate and take action to improve our performance.”

Pete summed it up this way, “Planning and executing turnarounds well is an important part of the business of running a refinery. For Chevron’s Burnaby refinery this means doing all of our work without safety or environmental incidents, and doing a quality job to set up the refinery for continued reliable operations. By having a dedicated team who focus on turnarounds exclusively, and a great network of company and contractor resources to support that team, we can ensure that we are well prepared to meet our vision of success.”

Manager's Message

Steve Parker, General Manager

As the end of the year approaches, refinery minds are already focused on one of the largest and most complex shutdowns we have ever planned. This February, for about seven weeks, we will shutdown part of the refinery in order to undergo important scheduled maintenance and capital improvements. This doesn't mean the facility will be a less busy place during this time... in fact it will be far from it. Hundreds of additional workers will be onsite each shift in order to complete the work as efficiently as possible.

This is a planned event; indeed it is so carefully planned, the likelihood of any significant surprises is small. I am confident that the shutdown will start on time and end as predicted. However, because of the complexity of this particular event, there will be challenges. And with so many people on site conducting potentially hazardous activities, we know we will need to be vigilant to maintain an incident and injury-free environment.

As discussed at our October Community Advisory Panel (CAP) meeting, events like this do affect our community. There will be more traffic in the area as workers and equipment move in and out of the refinery. However, we are committed to minimizing the impact of our shutdown activities and encourage neighbours to let us know if you notice anything out of the ordinary that you feel we can control better.

Our fifth annual public CAP meeting is coming up quickly. I hope you will take the time to attend on November 19 to learn more about refinery operations. Topics to be covered during CAP meetings in the upcoming year are often driven by questions raised by neighbours at the November public meeting. This is your opportunity to tell us what's on your mind. I am also pleased to see that membership on the CAP has increased; it is rewarding to see a broad representation of the community there.

Chevron defines operational excellence as running safely, reliably and efficiently. As such, 2014 has been a good year for the Burnaby Refinery... and, consequently, for our community too. I wish you all the best as the holiday season approaches and look forward to a safe and prosperous new year.



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Safety Matters

Being Incident and Injury Free

There is nothing that refinery employees hold more dearly than safety in the workplace.

“The ultimate goal of each day is for everyone to go home safely,” said Operational Excellence/Process Safety Management Team Lead Dave Sharpe. “Being incident and injury free is a Chevron-wide mindset, with several programs and tools used to assure this succeeds.”

Loss Prevention System

The Burnaby Refinery has been using LPS to maintain an injury-free worksite since 2008. The system is used in industries around the world.

“LPS manages personal safety attitudes; it asks you to do a mental assessment of what could go wrong in whatever it is you’re doing - and what is the worst that could happen - and then adjust your work to mitigate risk,” said Dave. “It teaches people to be proactive rather than reactive. Before beginning a task, staff assess risk, analyze ways to reduce it, and act to ensure loss-free operations.”

LPS is applicable to any type of loss, be it safety, environmental, production quality, reliability, efficiency, or financial. It causes workers to think hard about their actions and the safety consequences of those. They analyze whether they have the skills, tools and equipment to do a task safely. They also consider whether they know and understand the specific procedures related to the task.

Stop Work Authority

Creating an environment where workers feel they can speak up when they identify something is unsafe is another way the refinery encourages being incident and injury free.

“All employees have stop work authority,” said Dave. “They can exercise this right if they feel that anything is unsafe or has the potential to be. Even if this is not their area of expertise, we have created a culture where people can speak up and voice their concerns. Workers then discuss the issues, and if there are safety concerns these are corrected.”

Tenets of Operational Excellence

The refinery has 10 basic rules that guide its work from day to day. These tenets tell staff to always follow rules and regulations, always address abnormal situations, and always operate in a safe and controlled environment.

“Probably the most important of these is to always involve the right people in making decisions,” said Dave. “If a task requires us to go against one of our tenets, the reasons have to be vetted with subject matter experts, properly documented and signed off by at least two managers once the task has been determined to be safe to proceed.”

Process Safety Management

Process safety looks at how the refinery is operating and the broad potential impacts of an accident. It is different

from personal safety management which focuses on preventing incidents that affect an individual or team. Process safety has the potential to result in incidents with larger consequences such as spills, leaks, equipment malfunctions, over-pressures, over-temperatures, corrosion, metal fatigue, and other similar conditions.

Facility design is a key factor in process safety. Risk is eliminated by ensuring equipment does not operate outside of normal conditions. Changes made after equipment is first built are properly documented. And employees are trained so they understand the work that is going on and the levels of risk.

Layers of Protection

Creating layers of protection is an additional way the refinery safeguards against incidents and injuries. These range from training, to design and maintenance, procedures, inspections, alarms, and the experience of the operators. When these layers line up, the possibility of an incident is greatly diminished... the more layers of protection, the less likely an incident can occur.

Creating a safety culture

“Every worker goes through an initial incident and injury-free session when they start here,” said Dave. “Sessions are led by instructors who begin by relating their own experiences. They discuss our culture of safety and the tools we use. We emphasize the need to be vigilant, to speak up if anyone is ever at risk, and to welcome feedback rather than becoming defensive.”

Tech Talk

Winter Versus Summer Diesel Fuel

During the darker days and colder weather it feels like we all need extra TLC... that goes for your car engine too, whether it runs on gasoline or diesel. In Europe, over 70 per cent of the passenger cars are diesel. The number is much smaller here, but it is growing. And much of our mass transportation options rely on diesel including many buses, BC Ferries, trucks and trains.

“During colder weather, the recipe for diesel fuel has to change in order to improve its flow capability from your tank to your engine,” said Planning and Supply Chain Manager Allan Chang. “It’s harder for it to move when it’s cold so you need to compensate by making it lighter. We do this by removing its heavier components.”

Diesel’s Cloud Point

Diesel fuel has a “cloud point” - a temperature below which it tends to gel and form a cloudy appearance. This means it can solidify into a partially crystalline state if untreated. To keep your engine running smoothly, additives are used to change diesel’s low-temperature characteristics. Without these, the cloudy crystals would clog fuel filters and injectors in your engine. The crystals would build up in the fuel line, eventually starving the engine of fuel and causing it to stop running.

“Diesel fuel needs to be designed for the ambient air temperature,” said the refinery’s Public Affairs Manager, Dave Schick. “Because the cloud point changes throughout the year, so too does the way we make diesel fuel.”

The schedule for changes in the diesel recipe is based on climate data with specifications set by the Canadian General Standards Board. The recipe varies from one market to another... the diesel you purchase in Kamloops in the winter is not the same as what you would buy in Vancouver at the same time.

“It’s a gradual switchover from summer to winter fuel,” said Allan. “We start changing over in the fall and switch back in the spring.”

“It’s important if you’re driving a diesel-fuelled car between warm and cold climates in the winter to be aware of this,” said Dave. “You run the risk of using a product that’s not suitable.”

Demand and Supply

The demand for diesel fuel is growing and the product accounts for about a third of the refinery’s production. This may be in part because of diesel’s efficiency... you can go approximately 30 per cent farther on a tank of diesel than on regular gasoline. The Canadian market is challenged to find enough low-temperature diesel in the winter months, noted Dave, and some has to be imported.



Across the Fence



Area 1 Fence-line Trailers

The refinery has replaced the contractors' trailers along the fence line in Area 1. Prior to installing the new trailers, the area was dug down approximately 2.5 metres and then leveled. Trees, which will grow no higher than the fence line, have been planted to mask neighbours' views of the trailers. These trees should not interfere with views of the North Shore, indeed, views should be enhanced given the elevation of the trailers has been lowered.

Chevron Burnaby Community Advisory Panel Annual Neighbourhood Meeting

The fifth annual public meeting of the Community Advisory Panel (CAP) is taking place on Wednesday, November 19 from 7 to 9pm at the Confederation Seniors Centre at 4585 Albert Street in Burnaby. This is your chance to learn more about how the refinery operates as well as about the role of CAP.

CAP was created in 1996 to facilitate dialogue and foster understanding between the refinery and its neighbours. CAP members include residents who meet regularly with refinery management and regulatory officials to review planned activities and current issues related to the refinery.

The November 19 meeting will include a presentation from Process Engineering Team Lead Chad Groves entitled Refinery 101.

"My goal is to give neighbours a better understanding of what we do here," said Chad. "I want to remove some of the mystique so we're not just a big plant operating behind a fence. I'll give a high level overview in layman terms - you won't need to be an engineer to understand! And, I'll try to address some of the questions that often come up at CAP meetings such as environmental compliance, the production of clean fuels, and the role the refinery plays in our economy."

The meeting will also include an overview of CAP's 2014 activities and a chance to provide suggestions on topics for the panel to discuss in coming months. Refinery management and members of the panel will be in attendance.

More information about the meeting is available by calling the refinery's community relations office at 604-257-5030 or visiting the CAP website at www.chevroncap.com.

Community Corner



Christmas at Overlynn Mansion

Your chance to step into the festive halls of the Height's finest heritage mansion is coming up on Saturday, November 29 and Sunday, November 30. Overlynn Mansion (401 North Esmond) opens its doors from 10am to 4pm both days for its tenth annual fundraiser in support of Action Line Housing Society.

For two days each year, neighbours can join in on the 1907 mansion's dazzling salute to the Christmas season. A variety of local artisans will be on site offering specialty gifts, crafts, baked goods and poinsettias.

Admission is by donation and benefits affordable seniors supportive housing and assisted living at Seton Villa. For more information: <http://christmasatoverlynn.wix.com/overlynn>.



Light up the Heights

Another chance to get in the Christmas spirit comes our way Saturday, December 6 with the Heights Merchants Association's annual Light up the Heights event. Santa, carollers and other merry characters will be spreading good cheer at Heights businesses along Hastings Street. Sweet treats and seasonal songs will make your spirits bright from noon to 5pm with the traditional tree lighting ceremony taking place at 5 at Fire Hall #5 at Hastings and Carlton.

"The tree-lighting ceremony is a really special gathering of the community and a sweet pause in the middle of the holiday frenzy," said HMA Executive Director Isabel Kolic, who looks forward to seeing many neighbours at the popular event.



Frozen Memories

It was a beautiful and warm August evening when up to 2,000 members of the community gathered at Confederation Park for Chevron's annual Movie in the Park event. This year's film, Frozen, was a popular choice with young and old alike.

Burnaby Community Services coordinated the concessions, which this year included three food trucks. All proceeds benefit its many social service programs including the Christmas Bureau.

"It was great to see all the families who came out and enjoyed all the pre-movie activities as well as Frozen itself," said BCS Executive Director Stephen D'Souza. "Everyone, including those with low incomes, newcomers, and non-traditional families, was made to feel so welcome. It was great to see Chevron thinking about all families."

"It was a great evening," agreed Heights Merchants Association's Isabel Kolic. "There was a fantastic turnout and a really nice vibe."

Community Corner



Chevron's Fuel Your School Program

This fall when you pull up to your Chevron town pump in Burnaby, the Tri-Cities, the North Shore and Surrey and fill up your tank with 30 litres or more of gasoline, you will also be supporting schools in those neighbourhoods. Chevron Canada has partnered with My Class Needs (myclassneeds.ca), a registered Canadian charity that helps connect deserving K-12 classroom projects with interested donors through a crowd-funding website.

For the Fuel Your School program, Chevron is donating \$1 for each 30+ litres of fuel purchased at Chevron retail

stations in the aforementioned areas between November 1 and 30, 2014 up to \$565,000. Burnaby schools will receive up to \$125,000 of that total.

"Teachers can request funding through My Class Needs with preference given to science, technology, environment and math projects," said Chevron Canada spokesperson Adrien Byrne. "We ran a pilot last year in Surrey and were able to support some very interesting projects. This is a great program which aligns with our corporate objective of supporting education. Our children are the future of BC and we're pleased to be able to offer additional resources to our province's classrooms."

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 general information about the refinery 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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Looking Back Chevron Burnaby Refinery at Night: 1954

