

Neighbourhood News

SPRING 12

A NEWSLETTER FOR OUR NEIGHBOURS



Burnaby Refinery Permits



Working to Minimize our Environmental Impact

The refinery operates under two Metro Vancouver permits: one for air quality and the other for liquid waste discharge. These permits regulate the quantity and quality of air emissions and waste discharges. They also specify procedural requirements surrounding control monitoring, testing and reporting.

In the words of the refinery's Health Environment & Safety Manager, Jill Donnelly, "These permits set firm limits for how much of a particular constituent we can emit or discharge."

Air Quality Permit

The Metro Vancouver air quality permit regulates the discharge of emissions that are produced as part of the refinery's manufacturing processes and are specific to the Burnaby refinery site.

"The products we manufacture must meet strict clean fuels specifications that we all know have made a tangible contribution to the region's overall air quality" said Jill. "Provincial and federal regulations govern the fuels we produce for consumption by industry, businesses, Ferries, Translink, airlines and the motoring public. Changes in these regulations can affect the refinery's manufacturing processes. In those instances, we must continue to ensure we

meet Metro Vancouver's requirements for a net zero increase in permitted emissions. Metro Vancouver data shows that regional air quality has improved over the past two decades and the refinery has contributed to this significantly by producing cleaner fuels for public use and by improving equipment and operating performance at the refinery itself."

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Manager's Message

JIM GABLE
GENERAL MANAGER



As a complex business located within a metropolitan area, the Burnaby Refinery operates under an array of regulatory permits and must meet a high level of compliance. Metro Vancouver issues permitting restrictions for our operations. Provincial and Federal regulations determine strict specifications and standards for the products we manufacture. But the biggest influence on how we operate is our corporate culture and its emphasis on partnership with the local communities where we operate. So nothing we do here happens without considering its impact on our immediate neighbours.

We call this part of "The Chevron Way," which defines how all 60,000 Chevron employees across the globe operate. This system of values such as Protecting People and the Environment and Partnership regularly comes up in conversations. It explains our standards, who we are, what we do, and what we believe. It establishes a common understanding not only for those of us who work here, but for all who interact with us. At the heart of The Chevron Way is our vision ... to be the global energy company

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THIS DOCUMENT CONTAINS IMPORTANT INFORMATION.
PLEASE HAVE SOMEONE TRANSLATE IT FOR YOU.

這份文件包含重要資料，請找人為您翻譯。

이 문서에는 중요한 정보가 담겨있습니다.
다른 사람에게 번역을 부탁하십시오.

此文件包含重要信息，希望請人為您翻譯。

ਇਸ ਦਸਤਾਵੇਜ਼ ਵਿਚ ਮਹੱਤਵਪੂਰਨ ਜਾਣਕਾਰੀ ਹੈ। ਕਿਰਪਾ
ਕਰਕੇ ਕਿਸੇ ਨੂੰ ਕਹੋ ਕਿ ਉਹ ਤੁਹਾਡੇ ਲਈ ਤਰਜਮਾ ਕਰ ਦੇਵੇ।



METRO VANCOUVER AMBIENT AIR QUALITY MONITORING STATION NEAR ETON STREET & MADISON AVENUE

MANAGER'S MESSAGE CONTINUED

most admired for its people, partnership and performance. We strive to conduct our business in a socially responsible and ethical manner. We respect the law, support universal human rights, protect the environment, and benefit the communities where we work across the globe.

Examples of The Chevron Way at work here in Burnaby are evident throughout this issue of Neighbourhood News.

From our cover story about the permits we operate under, to the many ways we ensure the refinery's operations remain safe and reliable, to our long-standing involvement in many community initiatives, working to be a good neighbour has always been part of our values.

Winter may not be quite over yet and I know all of us at the refinery are looking forward to the arrival of another beautiful west coast spring - we can already see signs of it everywhere.

Please don't hesitate to contact us anytime with questions you may have about our operations and our involvement in the community. Until our next issue....

BURNABY REFINERY PERMITS CONTINUED

Waste Discharge Permit

Metro Vancouver also issues permits that govern the refinery's discharge of treated effluent water to the Municipal sewer system. These controls are in place to protect public infrastructure as well as workers' health and safety. They also ensure that environmental impacts and costs incurred to build and operate that infrastructure are minimized.

Compliance Monitoring

"The refinery submits regular reports with all our emissions data, to Metro Vancouver's Regulation and Enforcement Division" explained Jill. "In addition to regular inspections and on-site tests, there are three local ambient air quality monitoring stations located outside the refinery." Metro Vancouver also responds to public inquiries regarding odour complaints received from local residents if and when they occur.

The Burnaby Refinery has always worked hard to achieve a high degree of compliance with its permits by making continuous improvements. "We've made significant changes over the years in many areas including the installation of new, more reliable equipment and instrumentation. We've also worked to reduce water consumption in several refining processes, thus minimizing what needs to be treated and subsequently discharged."

Enforcement

The refinery is required to notify Metro Vancouver if permit levels are exceeded. Investigations are then conducted to identify corrective actions and to prevent recurrence. "Process upsets may be caused by such things as external power interruptions or equipment failure and these can cause exceedances," said Jill. "That's one of the many reasons why steady, reliable refinery operations are so important."

Safety at the Refinery

Management of Change - Helping Achieve Operational Excellence

How often have you started a simple home renovation project without being fully prepared only to discover that you don't have the right tools or safety equipment, the job is more than just a weekend task, you should have hired a contractor or obtained a permit, and your credit card is suffering from the unexpected expense? At Chevron, we recognize the value of careful planning as it can go a long way mitigating risks for ourselves, our facility and the surrounding community. We do not make any changes to our equipment without a detailed plan that anticipates the potential regulatory, environmental, safety, maintenance, and operational impacts the change may bring about. It's a practice the refinery has been using for over ten years called Management of Change or MOC. This formal process manages change in a methodical, systematic way that helps improve the plant's incident free, reliable operation.

What is the Management of Change Process?

Management of Change is a business process that's been fully adopted by Chevron and is based on a widely recognized American Petroleum Institute (API) industry standard. Anytime we change a piece of equipment or manufacturing process at the refinery, an MOC is generated. It effectively guides staff from idea generation through approvals, planning, engineering, construction, implementation and even maintenance procedures once the change is made.

"We generate over 200 MOC's a year," said Design Engineering Supervisor Jim

CHANGE AHEAD

Klassen, who administers the process. “It could be changes associated with a new pump being installed, the addition of a section of pipe or a large capital project involving significant construction. All approvals, decision dates and reviews are documented and the system is audited on a regular basis. It’s a very thorough approach that outlines all the work that needs to be done before, during, and after making the change. For instance, before a project is started, a risk assessment is conducted, required engineering is considered along with who needs to be involved and what authorizations and approvals are needed. It’s an effective method for approving changes and ensuring arbitrary ones are not made.” MOC’s also help document what operating standards and safety reviews need to be done and the type of training required.

Contributing to Safe Reliable Operation

“Using the MOC methodology helps us reduce risk at the refinery because there is better planning, documentation and communication,” said Jim. “It is another system we use to improve our reliability and avoid upsets or incidents. An MOC requires you to involve the right people and to be consistent and thorough. It’s been key in the refinery’s ongoing efforts to achieve operational excellence.”



Chevron Refinery Tech Talk

ONE IN A SERIES OF ARTICLES THAT
WILL HELP YOU UNDERSTAND WHAT
GOES ON AT THE REFINERY.



Valves Help get the Job Done

It’s more than a simple open and shut case when it comes to the subject of valves used at the Burnaby Refinery. There are literally thousands of these devices all around the plant, controlling everything from flow rates to pressures. Many resemble the ordinary manual valves like a common water tap you might find around your own home. But some are far more sophisticated automated valves made of special materials to resist harsh conditions and high temperatures.

The Role of Valves at the Refinery

Valves are a key part of the smooth operation of the Refinery. They are used to control the flow of fluids through pipes by regulating a product’s temperature, pressure or level. They are also used to control the stopping or starting of equipment and a wide variety of safety purposes. All valves used at the refinery must be certified for critical service and they are all tested regularly to ensure they are in good working condition.

Automated Valves

Some of the refinery’s valves open and close automatically while others can be remotely programmed to do their intended job.

A tank that’s being filled with product has sensors that detect when the level is rising. These sensors send messages to the valve to shut off when the required level has been reached. A feedback system on the valve confirms the valve’s position. Valves are also used to control the amount of steam needed in heat exchangers that regulate the temperature of a specific product.

The refinery uses many kinds of valves depending on the type of service required, from rotary butterfly ball valves to sliding stem and gate valves. They can be anywhere from three-quarters of an inch to over 12 inches in diameter.

Joe Baxfield, who looks after all the automated safety systems in the refinery, estimates that 90 per cent of the plant’s valves are used in process control applications while the remaining 10 per cent are part of the plant’s critical service systems.

Keeping Everything Working Properly

While valves are fairly basic devices, they still require scheduled maintenance. “We regularly test valves that are critical to our processes,” said Joe. “We make sure these are always operating properly. Every five to 10 years, many are completely rebuilt by specialized maintenance technicians.”

“Some of our valves are used in processes that are highly corrosive so they are part of our ongoing maintenance program,” added Brad Newman, who works in preventative maintenance of the refinery’s valves and other instruments.

Leak Detection and Repair Program

The refinery has had a comprehensive Leak Detection and Repair Program (LDAR) in place since 2000 that monitors air emission sources from various pieces of refinery equipment. The program inspects block valves, control valves, pressure relief valves, pumps, compressor seals, flanges and threaded connections that are in light product service. All pieces of equipment that are identified in this category as potential emission sources are monitored and inspected on a regular basis. Annual testing is also conducted and any needed repairs are completed.

Across the Fence



REFINERY
SHIPPING AND
BLENDING
FACILITIES

Tank Work along the Fence Line

The refinery has been working on Tank 120, one of its larger Area 1 tanks, since late last year. The tank, which is close to the fence line along McGill Park, has been cleaned and inspected and is now undergoing repairs and upgrades.

During the cleaning and maintenance work, crews have worked to mitigate any noise or odour impacts on nearby residents. Several steps have been put in place including odour control measures and noise abatement procedures. “The cleaning process was the noisiest as it required vacuum trucks,” said Tank Program Coordinator Dave Williamson. “We positioned the trucks as far away as possible in order to reduce our impact on neighbours and we’re also looking into the use of sound panels to further absorb noise.”

“The remaining work we need to do will involve some crane lifts to move large steel plates,” said Dave. “But this will be intermittent and we’re doing our best to minimize work related noise.” The work on Tank 120 has proceeded on schedule and is expected to be completed by late March.

Area 2 Seepage Update

Significant progress has been made in the refinery’s efforts to manage the seepage of an oily substance near the Area 2 processing section of the plant and along part of the Burrard Inlet foreshore.

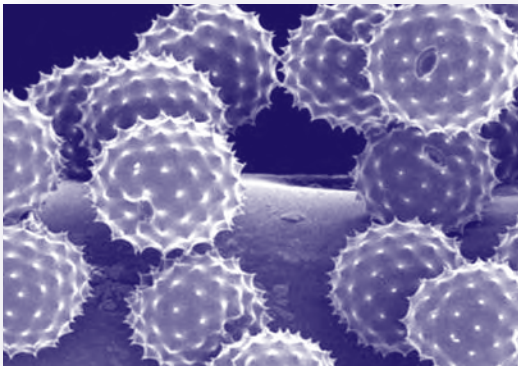
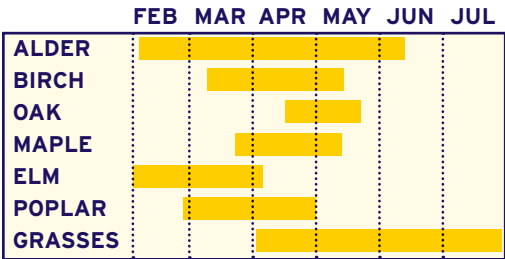
Activities to respond to this seepage have been underway since its discovery in 2010 and remain a high priority. 44 extraction wells were installed last year along the Area 2 north perimeter creating a “hydraulic extraction system” to prevent further migration of material beyond the refinery property. Extensive testing to monitor the effectiveness of the system has been on-going. Progress has also been made with interim remediation measures in place on the Burrard inlet foreshore and with the recovery system now installed along the railroad tracks below the refinery.

In addition to the commitment to mitigate and contain any potential impacts related to the seepage, the refinery provides bi-weekly reports to the Ministry of Environment which are available at www.chevroncap.com. The website also includes pertinent technical reports and assessments that Chevron has undertaken in its ongoing management of this seepage.

Internal and external experts are assisting to complete the identification of subsurface hydrology and flow paths in the area and to assist in assessment of the interception and recovery efforts. In addition, the refinery has been working with oversight by designated regulatory authorities as it continues efforts to contain and recover the material, prevent further migration from the property and protect the local environment.

Pollen Alert

Spring will soon be sprung; the grass is growing and local trees and shrubs are pollinating! In coming weeks you may start noticing an abnormal amount of yellow particles on your car and around your house, don’t panic. Those particles have blown in from your neighbourhood trees and plants. If you would like to know which plant is likely responsible for the deposits, check out the pollen forecast at www.theweathernetwork.com/pollenfx/poyvr. It will tell you the current source of pollen and its estimated concentration around Metro Vancouver.



HIGHLY MAGNIFIED POLLEN GRAINS

Community Corner

Gadabouts Christmas Luncheon: A Burnaby Tradition

The City of Burnaby's Citizen Support Services has been organizing monthly Gadabouts outings for housebound seniors for some 25 years. Volunteer drivers pick up participants who are unable to use regular transit and bring them to a central point where a bus whisks them away for great adventures, such as the recent visit to a restaurant to celebrate Chinese New Year.

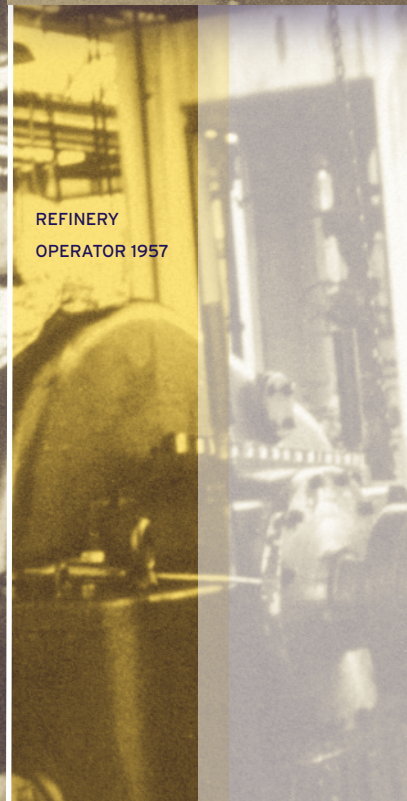


One of the most highly anticipated events of the year is always the Gadabouts Christmas luncheon. "It's a traditional Christmas dinner with all the trimmings and for many of the guests it's the only holiday dinner they'll enjoy as in many cases their families are not close by," said Administrator Anne Waller. "The seniors look forward to it each year and we're so grateful to sponsors like Chevron who have long been supporters of the program. We were especially touched this year as we received an additional donation from the refinery's employees which we can put towards our outings."

If you would like to know more about the Gadabouts programs or to volunteer, please call 604-294-7980. Watch for the 17th edition of the Burnaby Seniors Resource Guide coming out in early summer. This free publication available in local libraries and seniors centres includes all the programs and activities available for Burnaby seniors.



REFINERY MANAGER JIM GABLE (L) AND BURNABY COMMUNITY CONNECTION'S STEPHEN D'SOUZA (R) WITH A DONATION ON BEHALF OF REFINERY EMPLOYEES AND CONTRACTORS



REFINERY
OPERATOR 1957

(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, 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 report odours or air quality issues you may also 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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Refinery Staff and Contractors Help Out Burnaby Christmas Bureau

Christmas shined brighter for many low-income families in Burnaby last December because of the generosity of countless numbers of individuals and organizations. Burnaby Community Connections' executive director, Stephen D'Souza, noted that several large donors recognized the huge need for assistance and stepped up to the plate in a phenomenal way.

Stephen was a special guest at the Burnaby refinery's Christmas luncheon. "Refinery staff decided to do something different this year, something more community based that engaged employees in seeing what they could do for neighbours who might be financially strapped. Everyone – staff and contractors – came to the lunch with incredible gifts for the bureau. It was really an eye-opening experience to attend the lunch as it made me realize what a great sense of community there is amongst the staff and contractors who work there. It was a reminder of what the Christmas Bureau stands for – looking out for each other and the strength we have when we all work together. I'd like to send a special thank you to the refinery folks who organized the Christmas Bureau lunch and all the other events throughout the year that Chevron supports in this community."



MEMBERS OF THE BURNABY NORTH SECONDARY SCHOOL'S VIKINGS MARCHING BAND WERE ON HAND TO ADD SOME REAL EXCITEMENT TO A RECENT REFINERY SAFETY WEEK EVENT. SPECIAL THANKS TO THE STUDENTS AND TO BAND LEADER PETER WENZKE FOR THE LIVELY IMPROMPTU PERFORMANCE!