

Neighbourhood News

SPRING 10

A NEWSLETTER FOR OUR NEIGHBOURS



Chevron Canada Celebrates **75**^{years} in BC



A RIBBON CUTTING CEREMONY ON JUNE 24, 1935 MARKED THE START OF CONSTRUCTION OF THE BURNABY REFINERY

Celebrating **75** Years
1935 - 2010



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.

Thus began Chevron's 75-year history in B.C. Much has changed over those years, from the pressures of World War II followed by the post-war boom years, to an age where safety and environmental concerns have taken centre stage. Burnaby has

grown up around the refinery and changes have been made to accommodate the community in which it now operates.

Greater Emphasis on Safety

Shift Supervisor John Morrison was 23 when he started work as an operator at the refinery in 1973. He earned \$3.60 an hour and reckons the cost of gas was about 50 cents a gallon (or approximately 11 cents a litre). "It was a pretty basic refinery at that

time and had been for about 20 years; then there was a modernization and expansion project in 1974-76 which doubled the processing capacity" remembered John. "All the control instrumentation was pneumatic. Now it's all digital and computerized. Ever since that expansion project, we've been constantly evolving and our safety culture has also become much more advanced."

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Manager's Message

ANDREW BREWER,
GENERAL MANAGER



For the past several weeks, working under the supervision of regulatory agencies, the refinery has been responding to the detection of an oily substance in a gravel trench below the refinery. I want to assure our neighbours that Chevron is as concerned as both the public and regulatory agencies with protecting the local environment, and is committed to safely conducting the required clean-up. We are working diligently with regulators, environmental specialists and engineers to ensure that the appropriate resources and methods are being effectively applied to that effort. We are committed to determining the cause, fixing the problem, and covering the costs of any clean-up.

Our neighbours are important stakeholders in the operation of the refinery and a great to provide valuable feedback is to volunteer for our Community Advisory Panel (CAP). This feedback assists us in our continuing efforts to be a good neighbour and to minimize any impacts of our operations. CAP also provides volunteers with the chance to meet others in the neighbourhood and learn about their points of interest. There are four meetings a year and the time commitment is not huge. Please refer to the article elsewhere in Neighbourhood News to find out more about this opportunity.

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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।

CELEBRATING 75 YEARS

Area 2 Operations Superintendent Dave Sharpe has also seen many changes in his 24 years including the way the refinery is run and improvements made in training. One of the greatest changes he has noticed is the attitude towards safety. “Our Loss Prevention System introduced in 2008 is a new way of looking at safety and maintaining an injury-free worksite. It’s yielding great results and has contributed to a safety culture that’s here to stay.”

From Full-serve to Self-serve: Greater Efficiency at the Pump

Retiree John Adams is one of the company’s unofficial archivists. He worked with Chevron Canada from 1974 to 2006 as a Marketing Engineer, Terminal Safety Engineer, and Wholesale Group Operation Coordinator. “When I first started, the company had just started converting its full-serve stations into self-serve ones with retail outlets. One of things I’m most proud of is the keen focus Chevron has on safety. In the 1990s there was also a real emphasis on having environmentally sound facilities. Chevron really jumped out and got ahead of the curve including

the installation of state of the art underground tanks. The companies that didn’t aren’t here anymore.”

Senior Business Consultant Dave Schick has been with Chevron for 21 years, working on the commercial and industrial side of things. “Our business has evolved in line with the way the province has changed. The resource economy is still important but its influence has lessened. Today, public transportation and the transportation of goods are major areas of our commercial business.”

What 75 Years of Service Means to Staff

“There are few companies in the world that last this long,” added John Morrison. “It shows that we’ve rolled with the ups and downs and stayed viable. That says a lot about the company and the people who work here.”

“It’s a testament to the quality of the organization we have,” says Dave Schick. “We’ve always worked hard to provide high quality products and this has put us in a good position today.”

Chevron Refinery Tech Talk

Pumps-

The Workhorses of the Refinery

Think about how many pumps might be in your home. There probably aren’t many unless you have a lot of fish tanks. Now imagine the refinery facility. There are some 430 pumps on the site according to Rotating Equipment Engineer Keith McArthur. They are critical pieces of equipment at the refinery and some have very unique properties.

“Because of the nature of some of the liquids we’re moving through our refining processes, many of our pumps have to be able to withstand very corrosive effects” said Keith. “Different alloys are used for various fluids. We have one pump casing made from an exotic alloy because the liquid its pumping has gritty debris which would erode a normal casing more quickly. Our alkylation plant has a couple of unique plastic pumps because the acidic material going through them eats metal.”

Like pumps elsewhere, the ones in the refinery are primarily used to move fluids. The types of fluids being moved through the refining process include crude oil, gases, diesel, and jet fuel as well as boiler feed water and caustic water.

Types of Pumps

The facility has two major types of pumps: centrifugal and positive displacement. The

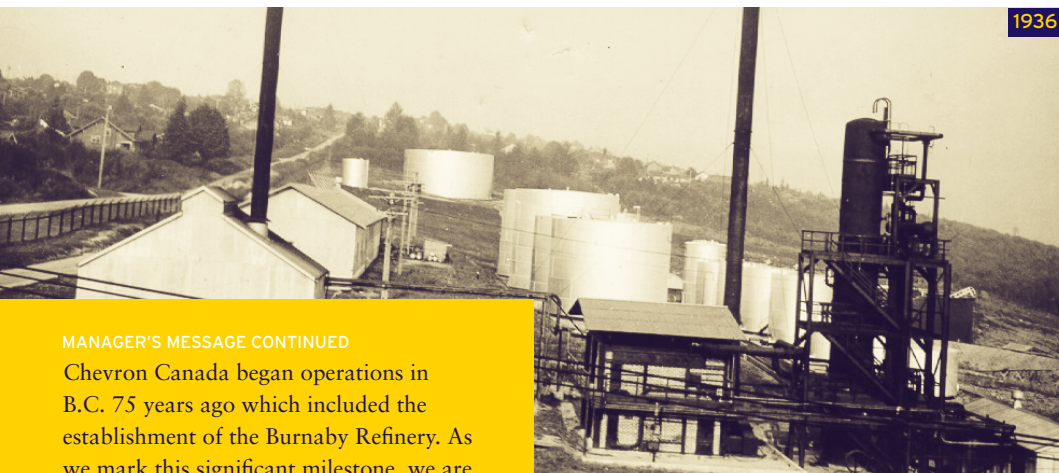
MANAGER’S MESSAGE CONTINUED

Chevron Canada began operations in B.C. 75 years ago which included the establishment of the Burnaby Refinery. As we mark this significant milestone, we are reminded of the hard work of many generations of people to establish and grow a successful business that has brought good things to our province, its employees, and its shareholders. By providing a valued and needed service, Chevron has become the leading marketer of petroleum products in B.C. and well-respected brand.

Our part of the world was a very exciting place to be during the recent Olympic Games. My family and I felt very lucky to be here. As we move towards the summer, we are all now looking forward to the warm sunshine. I hope everyone will enjoy the spring and summer months.

Chevron

Celebrating
75 Years
1905 - 2019





BURNABY REFINERY
LOOKING NORTH
FROM ETON STREET



Refinery Responding to Traces of Oil from a Seep Below Property in Area 2

For a number of years, Chevron has used a perimeter monitoring program to monitor subsurface groundwater conditions around the refinery. During a routine inspection of the monitoring wells on April 21, an oily substance was detected in a gravel trench along a CP rail right-of-way below the refinery's Area 2 processing section. Some material was also observed along a rocky foreshore area adjacent to nearby railway tracks. Although the amount of material appeared to be small, the Provincial Emergency Program, Environment Canada, Ministry of the Environment, Port of Vancouver, Coast Guard, Harbour Master and CP Rail were immediately notified. Subsequent notifications were also made to the City of Burnaby, Metro Vancouver, Fraser Health Authority, Tsleil-Waututh Nation and the Chevron North Burnaby Community Advisory Panel.

The area of the refinery involved in this seepage has been part of our perimeter monitoring program since 2004 and the focus of increased testing since late 2009. The amount of material found indicates that the situation is likely not the result of sudden failure or rupture of a pipe. At this time, engineers and environmental specialists believe the problem may be the result of subsurface migration through groundwater movement.

Source Control, Containment and Recovery

Chevron is as concerned as both the public and regulatory agencies with protecting the local environment and is committed to safely conducting the required clean-up. Chevron engineers are working with subject matter specialists to investigate potential

sources of the seepage from within the refinery property and testing of underground pipes and various lines within the plant are now underway. Our focus is to prevent any additional material from entering the environment and to conduct the required clean-up of material seen offsite.

Measures were immediately put into place to recover material from an interceptor trench that was installed at the base of the slope next to the railway tracks. Wells have been installed which may be used to facilitate hydraulic containment along the property boundary. In addition, a containment boom and two absorbent booms have been deployed across a 25m section of foreshore to prevent any migration beyond the immediate area. Crews are focused on a 5 metre area using absorbent pads to recover the material. Based on what we have observed and recovered at the foreshore since the seep was identified in late April, it is estimated that the total amount of material involved is less than 50 litres.

Working with the designated regulatory agencies, planning options for long-term interception and recovery are being identified. Those options include the design of an upgraded interception trench near the railroad right of way, identifying potential measures for beach protection and the installation of interception drill holes within the refinery to create a barrier for the material and prevent off-site migration.

If you have questions, or would like additional information, please call the refinery's Community Contact Line at 604-257-4040

Local residents invited to join the Chevron/North Burnaby Community Advisory Panel



Chevron recognizes that it operates in a residential community and that its operations can affect that community. It's vital that refinery staff maintain an open, constructive dialogue with our neighbours. That's why the refinery's Community Advisory Panel (CAP) plays such an important role. For the past 14 years, CAP has served to identify and resolve issues of mutual importance and concern to local residents.

Meetings are held four times a year on a weeknight from 7 to 9 pm at Confederation Seniors' Centre located at 4585 Albert Street in North Burnaby. An independent public consultation consultant facilitates the meetings. Discussions focus primarily on safety, environmental issues, refinery operations, emergency response, odour mitigation, and noise reduction.

Regulatory agency participation at CAP currently includes representatives from Metro Vancouver. Senior Chevron refinery management attend every meeting and special presentations are occasionally made by technical experts to help the committee better understand pertinent issues.

If you would like to participate on CAP to help identify and resolve issues of mutual importance, we'd like to hear from you.

To learn more about CAP, if you would like to attend an upcoming meeting as an observer or are interested in volunteering as a member, please contact:

Kim Barbero, CAP Facilitator,
Carah Worldwide Consulting, 778-989-7045
kbarbero@carahworldwide.com
or
Ray Lord, Public & Government Affairs
Manager, Chevron Burnaby Refinery,
604-257-4095, Ray.Lord@Chevron.com

Across the Fence

former work by adding kinetic energy to the liquid being moved. “Think of it as a big disk with veins,” said Keith. “As the ‘disk’ spins, liquids move from the centre to the edges along the veins. The volume of liquid moved is proportional to the discharge pressure of the pump, whereas positive displacement pumps always have a constant flow regardless of the downstream pressure.”

The power of the refinery’s pumps varies greatly with a range from one half horsepower to 600 horsepower. Compare this to a pump used in a typical back-yard swimming pool that’s usually around one-third horsepower.

Pump Maintenance

“We do annual oil changes as well as regular inspections of the couplings that connect the pumps to the motors that drive them. Every month workers take vibration readings to see if any bearings are wearing out, if the pump is going out of balance or if there are any mechanical defects.”

Newer process units have two redundant pumps which allow the unit to stay in service while one of the pumps is being inspected or repaired. Spare pumps are also kept on hand.

“Pumps are what drive all the processes here. Without pumps, nothing would move anywhere,” added Keith.



Looking for your Opinion

Refinery Researching Options for Neighbourhood Notification

The Burnaby Refinery has many systems and processes in place to protect its employees and the surrounding community during an unexpected emergency event. A key element of that preparation is communication with public safety authorities and local residents in the neighbouring community. In collaboration with the Chevron Community Advisory Panel (CAP), a group of local residents who meet regularly with company officials, the Burnaby Refinery is currently researching methods to improve communication with local residents during an emergency.

During any major emergency – like a natural disaster or significant incident at the plant, Chevron would work in close co-operation with the police and fire departments, the City of Burnaby and other agencies in a multi-party, unified incident command structure that would provide emergency information. However, in the event of an incident at the refinery with lower potential impact – for example, a release of catalyst dust or a widespread persistent odour, Chevron would take the lead providing information to neighbours.

There are many different ways that information could be provided and we'd like to hear your thoughts on your preferred method of notification from Chevron in the event of an emergency.

The following notification options are either in place now or being considered:

- Information letter hand delivered to your home or business
- Refinery’s community information line 604-257-4040
- Special incident update information phone number for recorded updates
- Twitter and/or Facebook
- Email (would require that you subscribe to an RSS feed that would be available on the Chevron refinery website)
- Text message (SMS notification) on your cell phone (would require your cell phone number)
- Automated call to your home phone (would require your home phone number)
- Radio announcements

We'd like to hear back from you on these options, or any others, via:

- Short on-line survey at www.surveymonkey.com/s/6LVT62Q
- Email at cclrefineryinfo@chevron.com
- Call or leave a voice message on our community line at 604-257-4040

**CLICK
HERE**

Thanks for taking the time to provide us with your input. We will carefully consider all responses as we continue our research, and we will report on the results in an upcoming issue of the Neighbourhood News.

1955



1962





BURNABY REFINERY
LOOKING NORTH
FROM ETON STREET



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Staff Profile

MEET HEATHER MICHEL



Chevron Canada's longest serving female engineer is also a Burnaby resident. Twenty-four years ago Heather Michel moved to Burnaby and started her job at the refinery as a chemical engineer. With ten years of engineering field experience, Heather's analytical skills opened a new door, and she began working with business systems to build IT tools and business processes. Her work helps solve business challenges and making efficiency improvements. Her professional engineering experience, coupled with maintenance and reliability system experience, allows her to affect improvements and standardizations across the global organization's eight refineries in the United States, Great Britain, and South Africa, as well as here in Burnaby.

"The thing I like best about my job is I have the ability to improve how IT tools are optimized to suit the business's need," said Heather. "I'm able to use my engineering background and apply it to IT systems in a way that makes a difference. It's great to be able to participate in an environment that always puts it best foot forward no matter what the challenge and to be part of a group of people who make things happen."

In addition to enjoying a demanding job, Heather and her husband are raising their two children in the Government Road area. She often has reasons to visit The Heights during her non-working hours as her daughter's best friends live in the neighbourhood. Her dog enjoys playing Frisbee in Confederation Park and Heather's young nephews are crazy about trains. They enjoy riding the rails

together at the miniature railway park whenever they visit. "One of things I like most about Burnaby is that it has a small town feeling," she said.

Heather is proud of her work and of Chevron. "Thinking back, my very first project at the refinery was to design and install a company sign that stood at the Willingdon gate for 20 years. It was beautifully carved in wood and graced the entry to the refinery site. Several years later, another new engineer had one made just like it for the entrance to the Area 2 processing section at the foot of Penzance Drive. When bringing friends and family by, I would always point it out as my first accomplishment with the company. After more than 20 years, the signs have been recently replaced, and I figure, they would still make great picnic tables!"

Community Corner

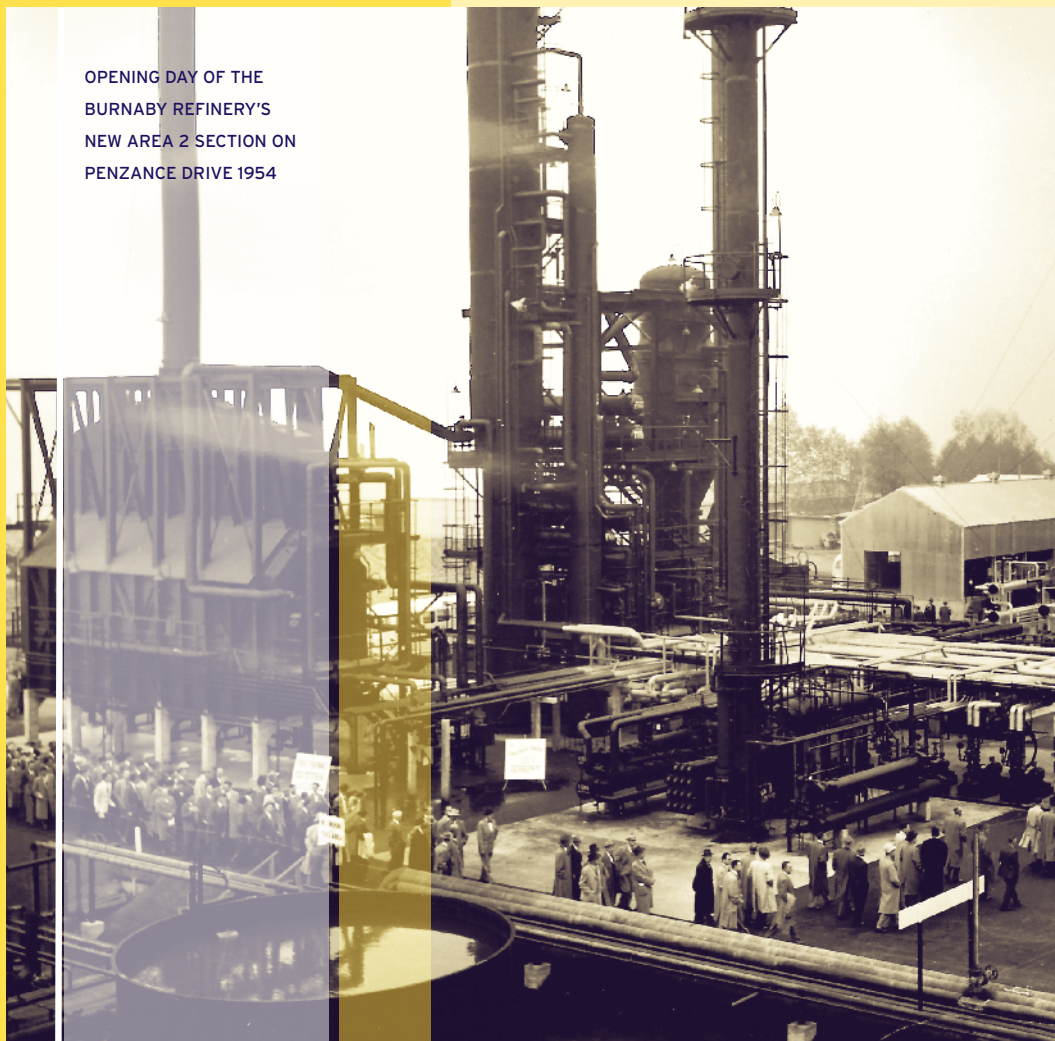


MOVIE IN THE PARK WILL FEATURE LOTS OF FUN, FAMILY ACTIVITIES

Third Annual Chevron Movie in the Park Coming Up

Mark your calendars! Sunday, August 29 will see the transformation of the Confederation Park playing field into a giant outdoor movie theatre for the third

OPENING DAY OF THE
BURNABY REFINERY'S
NEW AREA 2 SECTION ON
PENZANCE DRIVE 1954





TIES

year in a row. Please plan on joining us for this very family-friendly event. We'll have more details in our summer issue, but you can expect it to be another wonderful evening of outdoor fun and entertainment.



ACTIVE SENIORS STAYING HEALTHY WITH SAIL

Chevron Helps Seniors Stay Healthy

The Seniors Active in Living (SAIL) program, which operates out of the Confederation Seniors Centre, had a great Christmas present last December.

"Ray Lord and Joanne Jamieson, the refinery's Community Affairs representatives joined us in celebrating the holiday season at our Christmas luncheon," said program coordinator Lulu Chavez de Grajales. "Unexpectedly, they were carrying a remarkable present from Santa, a donation of \$ 5,000!"

SAIL is a health and wellness program that contributes to the physical and mental health of seniors and senior volunteers in North Burnaby through education, social and emotional support, and health monitoring. Volunteers, fitness trainers and practicing or retired health care professionals provide many senior-related services. For more information about the SAIL program contact the Confederation Senior's Centre at 604-294-1936.

(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.

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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