

At the September meeting of the Chevron Burnaby Refinery Community Advisory Panel (CAP), representatives from Metro Vancouver and Fraser Health made a presentation updating specific air contaminants of concern identified in a 2002 study on local air quality. The presentation by Metro Vancouver's Environmental Control Officer Darrell Wakelin and Air Quality Planner Geoff Doerksen and Fraser Health's Dr. Lawrence Loh (Burnaby's Chief Medical Health Officer) and Regional Health Risk Assessment Specialist Dr. Goran Krstić was in response to questions raised by CAP members during their May meeting.

"CAP members were curious about any changes to some specific findings of a 2002 Human Health Impact Assessment Study conducted by the UBC School of Occupational and Environmental Hygiene," explained the refinery's Manager of Health, Environment and Safety, Jill

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

道份文件包含重要資料,請找人為來翻譯。 이 문서에는 중요한 정보가 담겨있습니다. 다른 사람에게 빈역을 부탁하십시오.

此文件包含重要值息,希望请人蒂您翻译。

ਇਸ ਦਸਤਾਵੇਜ਼ ਵਿਚ ਮਹੱਤਵਪੂਰਨ ਜਾਣਕਾਰੀ ਹੈ। ਕਿਰਪਾ ਕਰਕੇ ਕਿਸੇ ਨੂੰ ਕਹੋ ਕਿ ਉਹ ਤੁਹਾਡੇ ਲਈ ਤਰਜਮਾ ਕਰ ਦੇਵੇ। Donnelly. "CAP members had questions about some particular volatile organic compounds (VOCs) and sulphur dioxide emissions that had been identified in that earlier study. They wanted to know if the data and trends had changed over time and how current science may have evolved regarding any potential health impacts."

The UBC study assessed the potential impact of refinery air emissions on the health of people living in the North Burnaby neighbourhoods surrounding the facility. The University's School of Occupational and Environmental Hygiene conducted the study using data collected in 1998, 1999 and 2000 from two Metro Vancouver air quality monitoring stations near the refinery. One of the stations is located next to the refinery's tank farm and the other is on Capitol Hill. The study provided important information that helped the refinery

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Manager's Message

I have been in the energy industry and with Chevron for many years. In that time, I have seen numerous studies from around the world about the health impact of refineries on the people who work in such facilities as well as the people who live nearby. The results from these studies are clear: the people who are most exposed to health risks are those who work day in and day out operating and maintaining the equipment. Knowing this, Chevron has been effectively managing the health safety of employees and contractors who work at our facilities for many years.

STEVE PARKER GENERAL MANAGER

The question of the impact of the refinery on the health of neighbours is an understandable one and is the focus of our cover story.

Questions recently put forward by Community Advisory Panel members resulted in a presentation at CAP's September meeting by officials from Metro Vancouver and Fraser Health. The findings did not come as a surprise but it was good to see my expectations validated by scientific sampling and data that indicated refinery emission are well within the World Health Organization's very conservative guidelines.

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LOCAL AIR QUALITY STUDY

prioritize improvements in order to reduce air emissions.

"Responding to the request by CAP in May, Metro Vancouver and Fraser Health analyzed a large amount of more recent data gathered from the air monitoring stations," said Jill. "This was a huge undertaking and it was great to have the results so quickly. I think it's fair to say that CAP members found the results very reassuring."

The results of the recent analyses indicate that overall annual long-term sulphur dioxide and VOC levels near the refinery for the compounds analyzed have dropped and trends emerging over the last decade have shown steady improvement. On the rare occasion, local foggy conditions have caused sulphur dioxide to become trapped.

Reducing VOCs and Sulphur Dioxide

We've installed a sophisticated vapour recovery unit at the dock and over a period of time, virtually all of the vessels loading here have become compliant with that equipment. As part of our LDAR (Leak Detection and Repair) program, we test thousands of valves, flanges, and pumps that are in light hydrocarbon service every year, which has resulted in lower emissions. We've been conducting tank seal inspections which have also reduced VOC emissions. Additionally, we reduced the amount of sulphur dioxide emitted from our fluid catalytic cracker (FCC) stack."

Jill also points to other factors that may affect the readings from the ambient air monitoring stations. "The community monitors check the ambient air around them, which may be affected by other potential sources, such as vehicle emissions or construction activity, as well as the refinery operation. The fuel that we produce (and consequently car exhaust) is cleaner today than a decade ago, which may also contribute to the results. Similarly, emissions from ships in the inlet have been dropping which may be another factor."

If you'd like to learn more, representatives from Metro Vancouver and Fraser Health will be making an abbreviated presentation of their findings at the annual CAP Neighbourhood meeting on November 20. You can also refer to the joint MetroVancouver and Fraser Health presentation on the public CAP website at: www.chevroncap.ca/files/documents/ Attachment2FH_MVCAPPresentationFINAL.pdf

MANAGER'S MESSAGE CONTINUED

It is also gratifying to see that emissions have dropped over the past decade since a report by UBC was released in 2002. That study found that there was not a health problem then and there is even less of a potential problem today.

It is noteworthy that the recent report showed how much of a role weather plays in the levels of sulphur dioxide emissions. Temperature inversions can cause a build-up of levels and, now knowing this, the refinery can take steps to make sure emissions do not reach excessive levels. It is good to see that the refinery is sensitive to all conditions and has procedures in place to manage potential exposure to the community.

I encourage all our neighbours interested in this subject to attend the November 20 special meeting of the CAP, where this will be the main topic discussed. Metro Vancouver will make an abbreviated presentation and we welcome any questions you may have. I would like to extend a special thank you to Ray Lord, who has been the refinery's Manager of Public and Government Affairs for the past 13 years during which time he has made huge contributions to our community relations efforts. Ray recently accepted a new position with Chevron as Communications Manager for the Kitimat LNG project and we wish him all success. His replacement Jorge Marco is no stranger to Chevron nor to public and government affairs. Jorge will be joining us in early in November and was most recently with Chevron's operations in the Philippines.

The refinery took special measures to make sure Halloween was a safe and fun holiday for the youngsters. We continue to be committed to being good neighbours and I know that our employees are looking forward to a safe and happy winter and that you will find much to celebrate over the coming months.

Tech Talk

Winter Versus Summer Gasoline

Many people do not realize that the "blending recipe" for gasoline differs from season to season. Variations in outdoor temperatures mean the refinery must change its specifications for motor fuels in order for our cars to have optimum performance throughout the year. The gas you put into your tank at this time of year is actually different than the product available at the pump over the warmer summer months.

"The Canadian General Standards Board set the specifications for gasoline sold in Metro Vancouver," said the refinery's Operations Coordinator, Rob Pinchuk. "The specifications change in order to manage performance while keeping emissions as low as possible."

Gasoline consists of hydrocarbons that are mixed together to produce different grades of fuel. More butane is added to motor gasoline over the winter because of its high octane content; it's a good way to efficiently improve the seasonal quality of fuels.

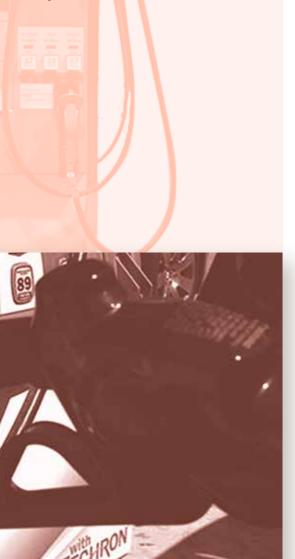
"We want more butane in our gas in the winter to make fuel more volatile. Volatility produces vapours for the spark plugs to ignite the fuel air mixture which starts your car engine on a cold winter day," said Rob.



UNDERSTANDING WHAT GOES ON AT THE REFINERY

There has to be enough butane added for a car's engine to ignite, but no more than will stay dissolved in the gas. Warmer summer temperatures will not allow for as much butane because of evaporation loss. Too much butane in gasoline in the summer can result in more odour generating vapours. Butane itself is almost odourless but can carry other components that do have odours.

The refinery does not simply switch from summer gasoline to winter gasoline production. Instead, it's a phased approach with 10 different distillation quality periods throughout the year with the dates and specs set by the Federal Govt. agency. Fuel specification periods can last from several months (during the winter) to as little as two weeks. The refinery switches over to the next gasoline specification one to two weeks before the fuel is available at local gas stations.



Safety Matters



PRE-ENTRY AIR TESTING IS A CRITICAL PART OF CONFINED SPACE ENTRY PROCEDURES

Confined Spaces

On any given day, staff and/or contractors at the Burnaby Refinery will enter a number of confined spaces be it inside a tank, a pressure vessel, a storage facility, or a concrete electrical junction box. These are not jobs that are taken lightly. Confined spaces can be extremely dangerous places for people given that they are not suited for human occupancy. They can be hard to get in and out of, have limited ventilation, and may contain hazardous substances.

Before any confined space can be entered, a detailed safety plan must first be in place and strictly followed.

"We follow very stringent protocols regarding all confined space entries," said Emergency Response, Safety and Security Lead Mike Ward. "Anyone entering a confined space at the refinery must be trained and knowledgeable about our rules and regulations. WorksafeBC requires a meeting of qualified individuals to review the work prior to the confined space being entered. This would typically include a maintenance team worker who will carry out the work, an operations group representative who is responsible for job safety, the job coordinator, a fire and safety representative, and someone who is authorized to approve the request for entrv."

Confined spaces at the refinery are entered to carry out inspections, to conduct routine maintenance and to perform required repairs.

Depending on the type of work to be done, at least seven pages of documentation must be completed including testing for hazards such as the presence of chemicals, instructions on how equipment will be prepared and cleaned, how breathing air will be supplied, rescue procedures should they be needed, isolation lists to prevent contaminants from entering the space, and a checklist for required personal protective equipment.

Mike classifies the confined space entries that take place at the refinery as mediumand high-risk. "High-risk entries must be approved by WorkSafeBC because they can be immediately dangerous to life and health," he said. "We do not perform these entries ourselves. Instead, we hire professionals who travel all over North America doing this kind of work. They have specialized training, the right equipment and the communications protocols to ensure these types of entries are done safely."

Across the Fence



Firehall Under Construction

Construction on the refinery's new firehall is progressing well with ground having broken on the project in September. All work is taking place during daytime hours and steps are being taken to minimize the project's impact on neighbours. Senior Design Engineer David Wu points out that a truck wheel wash is being used in order to reduce mud being tracked onto Penzance Drive. David anticipates the new firehall will be substantially completed by late December/early January. CONFEDERATION SENIORS CENTRE

Chevron Burnaby Refinery Community Advisory Panel Annual Neighbourhood Meeting

Neighbours are encouraged to attend the fourth annual community meeting of the Chevron Burnaby Refinery Community Advisory Panel (CAP) on Wednesday, November 20 from 7 to 9pm at the Confederation Seniors Centre at 4585 Albert Street in Burnaby.

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's operations.

The November 20 annual meeting will include an overview of CAP's 2013 activities and is a chance to provide suggestions on topics for the panel to discuss in the coming year. You will also meet with refinery management and members of the panel.

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 Advisory Panel Seeks Volunteers

The Community Advisory Panel (CAP) plays an important role in keeping an open dialogue between refinery staff and the neighbourhood's residents. CAP members help identify and resolve issues of mutual concern.

Opportunities currently exist for new members to participate on CAP. Involvement includes attending four meetings a year (meetings are held on weeknights between 7 to 9pm at Confederation Seniors Centre) which are facilitated by an independent public consultation expert. Discussions focus primarily on safety, environmental issues, refinery operations, emergency response, odour mitigation, and noise reduction.

If you would like to volunteer to be a CAP member or attend a meeting as an observer, please contact: Catherine Rockandel, CAP facilitator 604-898-4614 cat@growpartnerships.com

Community

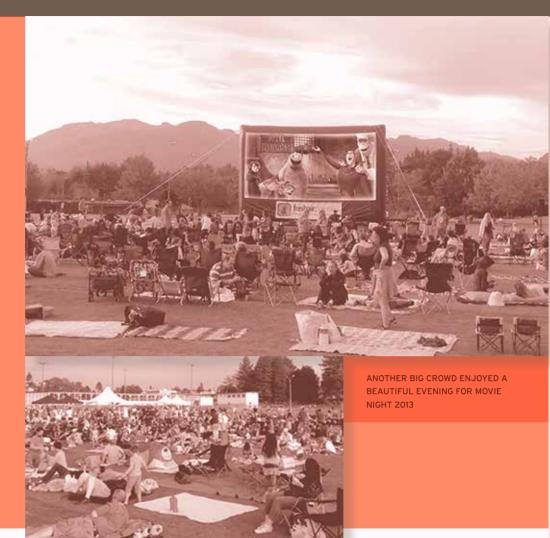
Community Corner

Chevron Movie in the Park Attracts Another Big Crowd

The popular animated film Hotel Transylvania was a big hit with the community at the August 25 Chevron Movie in the Park screening. The weather was perfect for a fabulous evening with an estimated 3,000 people in attendance enjoying the film plus all the other entertainment that has become a summer tradition in the Heights.

The evening is also a fundraiser for Burnaby Community Services, whose volunteers are in charge of the concessions. "We enjoy being part of this event every year," said BCS Executive Director Stephen D'Souza. "It continues to really attract the local community and bring people together."

This year's Movie in the Park raised over \$3,000 which will be used for Burnaby Christmas Bureau to help low-income families and seniors during the holiday season.



Alemant

Looking Back

BURNABY REFINERY WHARF LOOKING EAST 1960

Community Corner



SANTA SPREADS CHRISTMAS CHEER THROUGHOUT THE HEIGHTS

Light Up the Heights

With the darker nights and the cooler weather, our thoughts are turning to the holiday season. One of the cheerier things we have to look forward to is the Heights Merchants Association's annual Light Up the Heights festivities.

This year's Tree Lighting Ceremony is happening on Saturday, December 7 at Heights Fountain Square at Hastings and MacDonald. Join in the fun with holiday music, treats, kids' activities, and photos with Santa. An open-air market is also part of the celebration. And, the fun continues with strolling carolers and visits from Santa on the next two Saturdays leading up to Christmas.

For more information: www.burnabyheights.com

Halloween Happenings

It was a haunted Halloween on the Heights this year with special community activities planned by the Heights Merchants Association. Trick or treaters young and old enjoyed the festive fireworks, candy giveaways from participating merchants, as well as spooky train rides in Confederation Park.

It's another night when our community's spirit shines and the refinery goes to extra steps to make sure all the ghosts and goblins enjoy a safe and happy day. The refinery's truck terminal was closed from 5 to 9pm in order to reduce traffic through the neighbourhood and extra security patrols were put in place around the refinery to ensure this Halloween was a safe one for all.



LITTLE GHOSTS AND GOBLINS ENJOY TREATS FROM LOCAL MERCHANTS



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



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

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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