

**Minutes of the Parkland Burnaby Refinery
Community Advisory Panel (CAP)
Wednesday, May 15, 2019
6:30pm – 8:30pm
Refinery Office (Boardroom) 355 North Willingdon Avenue**

PRESENT

Joanne Smith, Eileen Luongo, Aswinee Rath, Kathy Mezei, Michele Joel

Parkland Representatives:

Kel Coulson, Manager, Policy and External Relations; Dave Schick, Director, Policy and External Relations; Shannon Urquhart, Community Affairs Lead; Kate Groves, Operations Manager; Nick Middleton, Health, Safety and Environment Manager; Chris Boys, Senior Environmental Specialist; Jonathan Tyler, Senior Clean Fuels Advisor

Regulatory Representatives

Metro Vancouver: Darrell Wakelin and Jason Mushtuk

Facilitator:

Catherine Rockandel, Rockandel & Associates

Guests: Tim Maryon, Dan Wood

Regrets: Al Mytkowicz, Davis Vaitkunas, Dr. Aamir Bharmal, Fraser Health

CAP BUSINESS

1. Opening Remarks

- Catherine Rockandel welcomed CAP and led an introduction of members
- She updated CAP on the recent resignation of Rich Baerg and welcomed guests Tim Maryon and Dan Wood as potential CAP members.

2. Parkland Updates

a. General Refinery Operations – Kate Groves

- Parkland has completed another safe reliable quarter
- The 2019 Turnaround was also completed on time and on budget with no safety incidents
- There were two environmental exceedances since the last CAP meeting in February. One occurred on March 6 due to a mechanical issue with the new de-pressuring system on the Polymerization Unit during start up, and the other occurred on March 9 in which our wastewater treatment plant exceeded its Total Suspended Solids (TSS) permit limit due to issues with the crude unit desalter operation.
- The team has begun planning for the 2020 Turnaround. It will be similar in size to the

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2018 turnaround. Parkland is reviewing lessons learned from recent turnarounds to understand how to better manage logistics and other issues.

- Parkland has a meeting planned with the City of Burnaby to discuss emergency notification. There should be an update for the September CAP meeting.
- In response to a CAP question about whether refinery shutdowns along the west coast have affected prices at the pump. The answer is yes, along with a multitude of other factors such as the price of crude, supply dynamic and taxes.

Comments and questions about the update:

Q1: How long is the 2020 Turnaround going to take?

A1: Turnaround planning is ongoing but is expected to fall within a 6 – 9 week execution window.

Q2: What is happening at the meeting with the City in June on emergency notification?

A2: There are new regulatory requirements from the B.C. Oil and Gas Commission (BCOGC). Parkland will be working with the City to align on public notification requirements as it pertains to the new regulation.

Q3: The CAP Sub-Committee on Emergency Notification developed a letter that was sent to the City about resident perspectives on emergency notification. Does CAP want us to re-send the letter to the City and Parkland?

A3: Yes please, and circulate the letter to CAP, too, so our new members can see it.

Q4: Why does Parkland need the City's permission to notify residents about an emergency situation?

A4: Parkland has established notification channels through its Incident Command System. However, we do not have the jurisdiction to evacuate residents or advise them on what to do in an emergency; this must be undertaken by public emergency services.

C1: Incident Command System notification processes could be an interesting presentation topic.

Q5: There have been a number of newspaper articles that suggest refiners (Parkland) are taking advantage of the current situation to increase prices at the pump. Is this true? If not, can you publish an article in your newsletter to explain the process and how gas prices are influenced by a number of factors?

A5: Prices fluctuate, and the current prices are influenced by a number of different factors including a product supply issue (which is evidenced by the current prices in California, too). Parkland is typically hesitant to comment on gas prices because there are many factors that influence pricing, and each time prices change it could be a different combination of these factors. This time high prices are largely due to a shortage of product, but in the future it could be for other reasons. The Canadian Fuels Association has helpful reading material on gas process, and there's an informative National Post article that offers additional commentary:

Canadian Fuels Association: <https://www.canadianfuels.ca/Fuels-and-Transportation/Whats-up-with-the-price-of-gasoline/> and

<https://www.canadianfuels.ca/Blog/February-2017/What-makes-up-the-cost-of-gas-at-the-pump/>

National Post: <https://nationalpost.com/news/canada/why-vancouver-is-still-getting-utterly-hosed-on-gas-prices>

Q6: Is the National Energy Board (NEB) allocating anymore space on the existing Trans Mountain Pipeline for Parkland?

A6: At this point we are not sure. The refinery is currently running at good utilization rates but this isn't always the case.

Q7: What if Alberta shuts off fuel to B.C.?

A7: If Alberta were to "turn off the taps" we would have to implement mitigation measures such as bringing in crude by rail, but this wouldn't be sustainable. The taps wouldn't turn off overnight, either, so we would likely have a bit of time to prepare. For example, we could source fuel from other jurisdictions.

Q8: Do you have crude stored at the refinery?

A8: Yes, we have limited crude storage capabilities in our tanks, plus there would still be some product in the pipeline.

Q9: Is any fuel coming in by rail now?

A9: Not currently.

[Post-meeting note: Since this meeting, Parkland has begun intaking crude by rail again.]

Q10: The two environmental issues that you reported at the refinery, what is the impact on the neighbourhood in terms of environment or air quality?

A10: During the first incident, we released LPG (propane) into the air above the 10kg reporting threshold. This was a relatively minor leak and we proactively shut down in a safe manner to repair it, only hitting the 10kg reporting threshold during the shutdown process. The propane would have dispersed in the air with no offsite impacts. The other incident was related to a waste water discharge above total suspended solids limits which may have impacted Metro Vancouver's waste water treatment facilities. This is why we report this directly to Metro Vancouver.

Q11: At the last meeting you mentioned you might have visuals for the new tanks. Do you have those?

A11: We are still working on the engineering for the new tanks and have not finalized the locations yet. We will share them when we have a better idea of final locations.

b. Biofuels Update – Dave Schick

- Parkland continues to trial manufacturing biofuels. A tallow run was completed last week and the next planned pre-commercialization run is late May. We are looking to understand the impact on operations and equipment.

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- Parkland is working with UBC on BC SMART (Strategy for Marine, Aviation, Rail and Trucking), which looks at ways to de-carbonize these industries. This initiative also includes regulators, airlines, the province, the port and major customers.
- Parkland is attending the Clean Energy Ministerial conference and will be sharing our co-processing efforts at our booth. Over 26 different countries are attending the conference. It is being held at the convention centre May 28 and May 29. It is free for the public to attend. <http://cem-mi-vancouver2019.ca/>

Comments and questions about the update:

Q12: How much tallow did you run? Do you envision a larger blend rate?

A12: We run approximately 1,000 to 2,000 barrels per day each week. We are evaluating how much we can consistently run through the refinery. The government has set a target of 650 million litres a year of B.C.-based production and we hope to supply part of this amount. We are still evaluating the impacts of co-processing on our facility.

Q13: If I bought gas this week, would it have had some tallow in it?

A13: Potentially, yes, some of the product you purchased at Chevron could have been produced with tallow. The renewable fuel meets the same specifications as regular fuel.

Q14: How do you test for emissions from this new fuel at the refinery?

A14: Emissions are tested in the same way as they are currently, under our air permit with Metro Vancouver. There has been no indication of a change in odours thus far. We are also working with Metro Vancouver to assess impacts to air quality to determine whether different testing is required. In this jurisdiction the focus is on both GHGs and air containments.

Q15: Would the emissions from a tail pipe change?

A15: We are still studying this, but there likely wouldn't be a change in the emissions from a tail pipe. However, overall GHG levels would be lower since the renewable fuel has a lower carbon intensity, based on a life cycle analysis from extraction to combustion.

c. Seep Presentation: Passive hydrocarbon remediation in the foreshore environment
Chris Boys (Attachment One)

Comments and questions about the update:

Q16: Is oil moving off the site?

A16: It was at the time but not anymore.

Q17: What stops product from going under colluvium, what is below colluvium?

A17: Oil and contaminants like to float. Colluvium is very dense and resists penetration by oil. Below the colluvium is bedrock that is about 600 feet down.

Q18: On the slide where it says “in between area,” why is there a space and no remediation there?

A18: The seep and contamination were not seen in this area.

Q19: What was the source of the seep?

A19: It was historic contamination and leakage from a dedicated sewer system that conveys water to the waste water treatment plant. That sewer system was replaced in 2012.

Q20: On slide 3 where were the initial 10 wells?

A20: Refer to slide 5, the original wells were in the red lined area marked “Original Perimeter Extraction wells 2010-11”.

Q21: How often do you check foreshore wells?

A21: Twice a year because contaminants are low. If they continue to be low or none then we will eventually stop monitoring.

Q22: If you have another problem but give up monitoring, then you won't know what's happening?

A22: There is the Perimeter Extraction System (PES) that will continue operating, and the lower bench monitoring wells will continue being monitored . We will likely keep monitoring foreshore wells in the summer for longer than winter monitoring. Winter monitoring is difficult because low tide is at night making monitoring not as safe.

3. **Presentation: Burnaby Refinery Social Investment** Shannon Urquhart
(Attachment Two)

Comments and questions about the presentation:

Q23: Does Parkland give money to employees to donate?

A23: Yes, this is part of the Parkland Pledge program. The amount ranges depending on how long you have worked here.

C2: Parkland would like to get input from CAP about what the community would like to see in terms of investments. For example: Updated signage near Trans Canada Trail; aesthetic upgrades to the truck loading rack or artist platform. This could include benches, beautify buildings, signage, replanting, etc. Please share with us your thoughts.

4. **Metro Vancouver Update** – Jason Mushtuk

Date: Wednesday, May 15, 2019

Reporting Period: February 2019 through May 2019

Overview of MV Update Content

Metro Vancouver has the regulatory authority specific to the discharge of air contaminants and management of non-domestic waste to sewer within the region. The Parkland Burnaby refinery has both an air discharge permit and liquid waste discharge permit that we administer. Both the permits have extensive monitoring and reporting requirements.

Typically our summary at CAP is a snapshot of some of the activities related to the administration of the permits conducted since the last CAP reporting period. Topics can include:

- Site Inspections
- Summary of air quality complaints
- Odour surveys
- Response to specific Incidents (i.e. Parkland Advisories)
- Regional air quality management initiatives such as Bylaw development.

a. Refinery Notifications

Date	Level	Discussion
2018 Total		7 Level One notifications
2018 Total		7 Level One notifications
January 21, 2019		FCC High Opacity PRBC notified Metro Vancouver that the FCC is running at higher than normal opacity but still within permit limits. Cause of higher opacity under investigation.
January 31, 2019	One	Burnaby Refinery – Planned shutdown of Poly and Penex units planned shutdown of the Poly and Penex operating units located in Area one. During this turn-around, possibility of periods of intermittent, elevated flaring as equipment is being safely brought off-line and subsequently restarted when the work is completed
Feb. 4, 2019		Sulphur Recover Unit (SRU) Exceedance of Permit Limit for SO₂ Permit limit of 5000 mg/m ³ exceeded for two hours. Parkland responded initiated investigation. Cause believed to be result of freezing H ₂ S/SO ₂ analyzer monitor. No exceedances of SO ₂ ambient objectives observed at monitoring stations during this period.
Mar. 14, 2019	One	Unplanned Shutdown Several units in Area 2 of the refinery will be shutdown in order to carry out required maintenance. Possibility of elevated flaring.

b. Air Quality Complaints

Month/Year	Complaints	Confirmed	Comments
Total 2017	35	27	Analysis – January highest month (25% - 9 complaints)

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Total 2018	24	20	Analysis – June highest month (25% - 5 complaints – 4 were oily sewer odours)
January 2019	4	3	1 oily sewer. 1 petroleum odour, 1 visible emission
February 2019	0	0	No complaints
March 2019	4	4	4 oily sewer odour complaints
April 2019	3	3	2 oily sewer, 1 petroleum odour
May 2019	3	2	2 petroleum odour complaints to date.
Total to Date	14	12	

c. Odour Surveys

Date	Activity
2017 Total	Eight odour surveys.
2018 Total	five odour surveys.
January 2019	One survey responding to complaints
February 2019	None
March 2019	One survey responding to complaints
April 2019	None
May 2019	One survey done to date

d. Site Inspections/Meetings

Date	Activity
2017	8 inspections, 3 meetings with Parkland staff.
2018	5 inspections/monitoring audits, 4 meetings with Parkland staff.
January 30, 2019	Audit FCCU Particulate/Metals testing for Q1
Feb. 26, 2019	GHT Furnace NOx testing audit for Q1
Feb 27, 2019	Splitter Furnace NOx testing audit for Q1
March, 2019	None
April 10, 2019	On-site meeting to discuss PRBC Technology Scoping Report
May 3, 2019	MVRU inspection and VOC capture test audit

e. Liquid Waste Permit

Date	Activity
2017	Metro Vancouver audit sampling of wastewater. No exceedance for any of the monitored wastewater parameters. 4 non compliance issues reported from quarterly monitoring reports.

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2018	One exceedance of fish toxicity test in Feb. 2018. No other exceedances reported. No exceedances of Metro Vancouver audit sampling of wastewater.
1 st Quarter 2019	One exceedance of TSS permit limit on March 9, 2019

f. SOx Curtailment Events

Date	Activity
2017	Five SCE triggered based on SO ₂ readings above 190 ppb permit set point.
2018	2018-01-01 1 Hr SO ₂ Objective of 70 ppb was exceeded with hourly average of 70.8 ppb. This did not trigger a SCE. No other SCE recorded.
2019	No SCE to date

MV continues to work through the new permit requirements with Parkland Refining. These include the following:

Data Collection

- Requirement to install on-site meteorological station - Completed
- Requirement to conduct off-site ambient monitoring of SO₂, PM and possibly NO_x, depending on the results of dispersion modelling.
 - Ambient AQ Monitoring Plan - Submitted June 29, 2018, revised and re-submitted September 12, 2018.
 - Ambient Monitoring Station to be installed & operational by December 31, 2018. Installation extension until December 31, 2019.

Dispersion Modelling

- First round of modelling includes one-hour & annual SO₂, 24-hour and annual PM and one-hour and annual NO₂ – This modelling was completed May 31, 2018.
- Second round of modelling will include one year of data from the on-site meteorological station – due January 31, 2020.
- Modelling will be used for the emission control technology assessment.
- Modelling scenarios will include permitted levels, upset events and non-standard operating conditions, such as when boilers are fired using fuel oil.

Emission Control Technology Assessment

- Technology Scoping Plan: outlines methodologies for assessing potential control technologies - submitted July 31, 2018.
- Technology Scoping Report: preliminary evaluation of possible options for Refined Technology Assessment - due December 31, 2018. After April 10th meeting between Metro Vancouver staff and Parkland Refining staff, the report was revised and re-submitted May 7th. Currently under review.
- Interim Solutions Plan: plan describing measures that Parkland will take to reduce emissions until a permanent technology solution is implemented - due December 1, 2018. Reviewed and accepted.
- Refined Technology Assessment Plan: engineering assessment of top-ranked technologies and dispersion modelling - due May 15, 2019.
- Refined Technology Assessment Report: identify preferred emission control technology & implementation schedule - due January 31, 2020.

Permit Term

- Permit expires on January 31, 2021.
- Parkland will need to apply for a new permit
- studies conclude on January 31, 2020
- permit term provides 1 year for the permit application process.
- Permit application will be subject to Public Notification Regulation requirements.

Comments and questions about the presentation:

Q24: Parkland has applied for two permit amendments – what are they for?

A24: 1 for cyanide and 1 for TSS. The amended permit will have an increase in the instantaneous TSS limits from October to April to allow for wet weather conditions. There will also be an increase in instantaneous cyanide limits to allow Parkland to maintain sufficient chlorine (bleach) levels to reduce odours. For both of these amendments, the monthly average for cyanide and TSS will remain the same. The cumulative exceedance limit will not increase

Q25: Why has Parkland applied for these increases?

A25: When there is lots of rain, Parkland's containment pools don't have capacity to settle solid waste and so there is a greater discharge of TSS. The Cyanide is because regulatory limits are low. When bleach is injected into the sewer, if too much bleach is used it forms cyanide but if they cut back on bleach then there is odor. It is a delicate balance. So Metro Vancouver allow for a higher instantaneous limit while keeping the monthly average conservatively low.

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5. **2019 CAP Meeting Schedule** – Catherine Rockandel
 - September 18, 2019
 - November 20, 2019 (Public Meeting)

6. **CAP Membership Sub-Committee Report** – Joanne Smith and Aswinee Rath
 - An overview of the interview process and application of Tim Maryon and Dan Wood was provided to CAP. After discussion CAP voted to accept the applications.
 - Promote CAP at Hats Off Day, Neighbourhood News

ADJOURNMENT: Meeting adjourned at 8:30 pm