

**Minutes of the Parkland Burnaby Refinery
Community Advisory Panel (CAP)
Wednesday, September 18, 2019
6:30pm – 8:30pm
Refinery Office (Boardroom) 355 North Willingdon Avenue**

PRESENT

Michele Joel, Al Mytkowicz, Davis Vaitkunas, Tim Maryon, Dan Wood

Parkland Representatives:

Kel Coulson, Manager, Policy & External Relations; Alex Coles, Refinery Manager; Nick Middleton, Director, Health, Safety & Environment; Kate Groves, Director, Operations; Shannon Urquhart, Community Affairs Lead; Vicki Bowman, Environmental Team Lead

Regulatory Representatives

Metro Vancouver: Darrell Wakelin and Jason Mushtuk

Facilitator:

Catherine Rockandel, Rockandel & Associates

Guests: Catherine Carlson

Regrets: Dr. Aamir Bharmal, Fraser Health, Joanne Smith, Eileen Luongo, Aswinee Rath, Kathy Mezei, Dave Schick

CAP BUSINESS

1. Opening Remarks

- Catherine Rockandel welcomed CAP and shared member regrets. She led the introductions welcoming guest and potential CAP member Catherine Carlson.

2. Parkland Updates

a. General Refinery Operations – Alex Coles

- Since the last meeting Parkland had one recordable injury. An operator was stung by a wasp and the stinger got stuck in their finger. The operator required prescription medication, so this was considered a recordable injury.
- On August 10 we exceeded our Sulphur Recovery Unit (SRU) hour-to-hour SO₂ permit limit for one hour. This was due to loss of signal from an analyzer in the SRU which temporarily disrupted operation and resulted in the exceedance.
- We continue to address traffic congestion in the area. We are looking to move a large number of Area 1 & Area 2 staff to the Solo building in December with the balance of the employees that are to be moved after the turnaround.
- We have also hired traffic engineers to conduct a traffic study that will help us determine more sustainable mitigation measures to ensure our traffic can access and egress our site safely and effectively. We are also working on our traffic

management plan for the 2020 Turnaround, and we will see an increase in bodies on site this fall (about the same size as the 2018 Turnaround). We have already implemented some offsite parking at Kensington.

- We successfully completed a maintenance project on our Waste Water Treatment Plant. If interested, we would be happy to present the results.
- Parkland met with the City of Burnaby to discuss the new emergency response regulations. The meeting was positive and we expect that Parkland would provide necessary and appropriate information in the event of a Level 1 or 2 incident, and the City would be responsible for notifying and directing the public for a more significant Level 3 incident. The City is engaging neighbours to get feedback on their Community Safety Plan. If you have feedback for them we suggest you email them at burnabysafetyplan@burnaby.ca or attend an information session (one is on September 26).
- We are pleased to report that we have reached an agreement with the Unifor bargaining team on a new four-year collective bargaining agreement. The agreement reflects a spirit of partnership and represents a positive outcome for all parties.
- Dave Schick, our Director of Policy & External Relations, has accepted a three-year secondment position with the Canadian Fuels Association (the “CFA”). Dave will begin his new role as the CFA’s Vice President, Western Canada, on December 1. During this three-year secondment, Dave will lead the Association’s policy advocacy activities in Manitoba, Saskatchewan, Alberta and BC.

b. BC Utilities Commission Inquiry – Kel Coulson

- Parkland has been a full participant in the British Columbia Utilities Commission’s inquiry into gasoline and diesel prices in British Columbia. Parkland provided more than 200 pages of submissions to the inquiry along with other organizations, corporations and stakeholders. Given that the inquiry is still ongoing we can’t comment further at this time, but we will share a link to our submitted evidence: https://www.bcuc.com/Documents/Proceedings/2019/DOC_54405_C5-2-Parkland-Evidence.pdf

c. Biofuels Update – Kel Coulson

- The refinery continues to receive renewable feedstock in the form of tallow to complete our pre-commercial co-processing tallow runs. Refinery technical staff are increasing volumes in the co-processing tallow runs. Refinery staff are also actively working with and screening second generation feedstock options beyond lipids (e.g. sewage sludge).
- We hosted a few refinery tours over the summer including for reps from Tsleil-Waututh Nation as well as the BC government. Feedback from the tours was very positive, especially regarding our Green Refining initiatives and focus on Safe & Reliable operations.

Comments and questions about the update:

Q1: Are the traffic engineers looking at just vehicles or pedestrian traffic as well?

A1: Just vehicle traffic.

Q2: In terms of the biofuels, what does the scale look like (%)?

A2: In our co-processing trials we continue to add volumes, look at yields and figure out just how much feedstock can be run through the processing units. We haven't found that limit yet.

Q3: What material difference does that make?

A3: This makes a big impact. For context, the BC government's *CleanBC* target is 650 million litres of renewables per year. Parkland will be a significant material part of that target.

Q4: What are the implications of changing rules and regulations imposed on Canadian marketers and refiners?

A4: We're adapting to the changing policy targets. This is a complex and detailed topic and would make a good future CAP presentation.

3. **Presentation:** Emergency response program overview - Nick Middleton (Attachment One)

Comments and questions about the presentation:

Q5: In the slides, the neighbourhood is not listed as a recipient of the Information Advisories. Why is that? Is it because this is the responsibility of City of Burnaby?

A5: Information Advisories are intended for our regulators. Most of the time, these are used for Level 1 incidents that are pre-planned or do not have any anticipated public impact. We also share the content of the Advisories with CAP members.

Q6: What is the current protocol for emergency notification?

A6: We follow the Incident Command System (ICS) which is a global response process. The ICS process outlines which agencies need to be notified, in what order, and by whom. In the unlikely event of a Level 3 incident, if there were a need to evacuate or shelter in place the public would be directed by the City of Burnaby (Burnaby Fire). It is legislated who has that level of authority to ensure that all activities feed through a Unified command structure within ICS.

Q7: Have there ever been Level 3 incidents at refinery?

A7: Not that we are aware of in the last 25-30 years, but we will confirm in the meeting minutes.

Post meeting note: Since the inception of the Advisory process there has never been a Level 3 incident at Burnaby Refinery.

Q8: What about in Burrard Inlet?

A8: This area is under the jurisdiction of the Vancouver Fraser Port Authority.

Q9: Will there be any community input on the Public Information Packages for the BCOGC and E2 regulations?

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A9: No, the regulations are very prescriptive about what needs to be included in the packages. However, as part of the BCOGC regulation, Parkland will gather any feedback received about the Public Information Package and take it into consideration.

Q10: Can you share the high-consequence, low-probability scenarios from your risk assessments?

A10: No, these are confidential due to commercial and security sensitivities.

Q11: Okay, then can you share with us how Parkland would respond to an incident (not today, but in the future)? You could outline what would happen in the different operating periods during a Level 3 incident and share what other impacts might we expect in the neighbourhood. This may be a good presentation topic.

A11: Yes, we can present this in the future.

Q12: What does an emergency response drill on land look like?

A12: This has been a subject of a previous CAP presentation. We can review that again as part of a potential incident response presentation.

C13: It would be great if Parkland could post videos of training drills on the CAP website and photos.

Q14: What does FCC mean on slide 10?

A14: Fluid Catalytic Cracking Unit.

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

Date: Wednesday, Sept 18, 2019

Reporting Period: May 2019 through Sept. 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
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 shut down in order to carry out required maintenance. Possibility of elevated flaring.
Aug. 10, 2019		Sulphur Recover Unit (SRU) Exceedance of Permit Limit for SO₂ Permit limit of 5000 mg/m ³ exceeded for one hour. Parkland responded initiated investigation. Cause believed to be result of signal loss from H ₂ S/SO ₂ analyzer monitor leading to non-optimal operation of the SRU. No exceedances of SO ₂ ambient objectives observed at monitoring stations during this period.

B. Air Quality Complaints

Month/Year	Complaints	Confirmed	Comments
Total 2017	35	27	Analysis – January highest month (25% - 9 complaints)
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.
June 2019	3	2	1 petroleum odour, 1 oily sewer, 1 sulphurous odour complaint

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July 2019	4	4	2 oily sewer, 1 petroleum and 1 sulphurous odour complaint.
August 2019	10	10	3 oily sewer, 5 petroleum and 2 sulphurous odour complaints
September 2019	8	6	2 oily sewer, 3 petroleum and 2 sulphurous odour complaints.
Total to Date	39	34	

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 – survey done during marine loading
June 2019	No odour surveys
July 2019	Two odour surveys
August 2019	One odour survey
September 2019	One odour survey

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
June 13, 2019	NHT furnace and Desulphurizer reboiler NOx testing Audit for Q2
July 4, 2019	22T (Tanker Truck Loading Rack) inspection
July 24, 2019	Audit FCCU sizing test during co-processing trials
August 25, 2019	Inspection of temporary WWTP
September 5, 2019	On-site meeting to discuss revised Technology Scoping Report
September 11, 2019	Audit NOx Testing on ES07R Steam Boiler

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.
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
2 nd Quarter 2019	No exceedances of permit limits

Parkland Refining submitted their application to amend their permit in December 2018. MV issued Parklands amended Liquid Waste Permit on June 11, 2019. The key changes to their permit are:

- Increasing their instantaneous cyanide limit from 0.1 mg/L to 0.3 mg/L with the monthly average remaining at 0.1 mg/L. Typical authorized limits for cyanide in Sewer Use Bylaw 299, 2007 (as amended) is 1.0 mg/L
- Allow wastewater discharge with a TSS concentration up to 100 mg/L from the beginning of October to the end of March annually. The average monthly TSS concentration is to remain at 40 mg/L. Typical authorized limits for TSS in Sewer Use Bylaw 299, 2007 (as amended) is 600 mg/L.
- Parkland Refining submitted an application to authorize the use of a temporary waste water treatment plant while they carry out necessary maintenance to their existing treatment works on May 6, 2019. Authorization of the temporary treatment system was granted from June 15 – September 15, 2019, with the provision of a verification period between June 30 – July 7, 2019 to prove the effectiveness of the temporary system. Parkland Refining met this requirement to the satisfaction of Metro Vancouver staff.

F. SOx Curtailment Events

Date	Activity
2017	Five SCE triggered based on SO2 readings above 190 ppb permit set point.
2018	2018-01-01 1 Hr SO2 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. Plan accepted.
 - 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. September 5, 2019, Metro Vancouver staff met with Parkland Refining staff to discuss Parkland's re-submission. Metro Vancouver are currently awaiting their final revision.
- 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. Metro Vancouver currently awaiting Parkland Refining's application to amend their permit.
- Refined Technology Assessment Plan: engineering assessment of top-ranked technologies and dispersion modelling - submitted May 15, 2019. Submission has been reviewed and we are currently waiting for revised version for review.
- 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.

5. CAP Q&A

Q15: What process does Parkland implement to identify risks to the community from equipment/infrastructure failure before they occur?

A15: (Kate Groves) Everything we do at the Burnaby Refinery is based upon our Operational Excellence (OE) Framework. This framework is designed to manage various risks of our business at all levels and has many layers to ensure our equipment and our people are operating safely at all times. In general, for any risk the framework consists of a documented process that includes: an overview of the risk being addressed; the procedures used to address the risk; the resources, roles and responsibilities in order to follow the procedures; a measurement and verification plan; and a continuous improvement plan. These processes are reviewed as often as every other month and at least once per year depending on the level of risk being addressed. Essentially, these processes dictate our risk management procedures for everything from our equipment to our operators in the field.

We have 32 such processes that address risk management. These processes in particular may be of interest to the CAP:

- Compliance Assurance
- Loss Prevention System
- Risk Management
- Reliability
- Environmental Stewardship
- Emergency Management
- Security of Personnel & Assets

We also conduct external reviews of these processes every three years. For example, industry experts from the American Petroleum Institute (API) are at the refinery this week completing one of their routine audits. These help us benchmark against industry and identify any proactive improvements we can make.

If the CAP would like to learn more about our risk management systems and processes we can arrange for a full presentation.

Q16: What trends are you seeing? How does this facility perform against other facilities? What are the pros and cons of this facility?

A16: The refinery scored favorably last time against the industry standard for all refineries worldwide. Some recommendations were identified. None of these were classified as high priority items; there were two medium level priorities (corrections to procedures) and two to three lower priority items. However, if CAP is interested in a presentation on this related to our Operational Excellence framework we can do that.

Q17: In what ways does Parkland respond to and demonstrate that action has been taken on issues/complaints raised by the community on sound, emissions and odours?

A17: (Vicki Bowman) We investigate each and every complaint we receive, whether it relates to odours, noise, or any other type of unusual activity the residents are experiencing. For example, when we receive an odour complaint, it is usually through our Community Contact Line or via Metro Vancouver. If the complaint is made through Metro Vancouver, the officer taking the call will call the refinery's on-duty shift supervisor who will begin an investigation. They look at the refinery's operating conditions at the time of the complaint and will drive to the site where the odour was reported to physically investigate the smell. This way, they can identify what refinery activity, if any, may have contributed to the complaint, and they relay this information back to Metro Vancouver.

If the complaint is received through the Community Contact Line, the shift supervisor will follow the same process and follow up directly with the complainant.

Every month Parkland completes a report for Metro Vancouver that outlines all odour complaints received. Once a year these monthly reports are analyzed and these findings are reported to Metro Vancouver. Metro Vancouver may also come to the refinery to complete odour investigation tours. Parkland also has an Odour Management Plan with mitigation processes which are reviewed by Metro Vancouver.

Parkland encourages neighbours to call the Community Contact Line at 604-257-4040 as soon as they smell, see, or hear anything unusual. This way, our shift supervisors can immediately begin their investigation. It is much more efficient and accurate if they can investigate in real-time. Both Parkland and Metro Vancouver have real time access to monitoring stations data, which can help to pinpoint an issue.

C18: Sometimes as a neighbor you smell something but it's hard to describe what you're smelling when you don't know what it is.

A18: This could be an opportunity to provide CAP with a tour, whereby we tour the refinery to identify and discuss our various process and products we make.

Q19: CAP has heard from some neighbours that they would appreciate if Parkland could use a quieter leaf blower along the Trans Canada Trail?

A19: Parkland is looking at quieter option. There were also some beautification suggestions for this area. If neighbours have ideas for aesthetic enhancements, please send them via email to Shannon.

Post meeting note: Our facility maintenance team has looked into a battery-powered leaf blower, but unfortunately at this stage these are not as effective and would potentially result in more leaf blowing required to get the job done. We will keep an eye out for any other quieter versions that come on the market and in the meantime will only use the leaf blower during regular business hours.

Q20: Whose responsibility is it to pave the road at Eton and Rosser?

A20: Metro Vancouver (or its designated contractor) will be responsible for re-paving the areas affected by the construction of its Douglas Water Main project in that area.

6. **2019 CAP Meeting Schedule** – Catherine Rockandel

November 20, 2019 (Public Meeting) presentation TBD

Q21: How did we advertise the public meeting last year?

A21: There were two mail outs, a one-page flyer invitation and an article in the Neighbourhood News newsletter. We also sent an email to CAP for electronic notification distribution which we can do again this year.

C22: Other ideas discussed by CAP included: Distribution of notice to Heights Merchants Association, Burnaby Heights Resident Association, posters at the library, schools, Confederation Centre in neighbourhood.

7. **CAP Membership Sub-Committee Report** –

- Catherine provided a report on behalf of Joanne Smith, Aswinee Rath and Shannon Urquhart from the Membership Sub-Committee. After discussion, CAP voted to accept the application. All in favor. Carried.

ADJOURNMENT: Meeting adjourned at 8:30 pm