

**Minutes of the Parkland Burnaby Refinery
Community Advisory Panel (CAP)
Wednesday, May 16, 2018
6:30pm – 8:30pm
Refinery Office (Boardroom) 355 North Willingdon Avenue**

PRESENT

Kathy Mezei, Joanne Smith, Eileen Luongo, Al Mytkowicz

Parkland Representatives:

Dave Schick, Policy, Government and Public Affairs Manager; Kel Coulson, Policy, Government and Public Affairs Rep; Alex Coles, Refinery Manager; Vicki Bowman, Environmental Team Lead, Joanne Jamieson, Community Affairs.

Metro Vancouver Representative:

Darrell Wakelin and Jason Mushtuk Regulatory Representatives from Metro Vancouver
Fraser Health: Dr. Aamir Bharmal

Facilitator:

Catherine Rockandel, Rockandel & Associates

Regrets: Michael Coyle, Aswinee Rath, Davis Vaitkunas, Rich Baerg, Jill Donnelly, Health, Environment, and Safety Manager; Peter Turner, Operations Manager

CAP BUSINESS

1. Opening Remarks

- Catherine Rockandel welcomed CAP members and provided an update on the membership including recent resignations from Helen Ward and Maziar Kazemi. She thanked both for their contributions to CAP and to Maziar who is no longer in the geographic catchment for his contribution to the Membership Sub-committee and the Emergency Notification Sub-Committee.
- Catherine also provided an update on the Membership Sub-Committee recruitment. Joanne Smith has accepted one of two available positions.
- Dave Schick announced Joanne Jamieson's upcoming retirement from Parkland. Joanne has provided administration and meeting support for CAP over the years.

2. Parkland Updates

a. General Refinery Operations – Alex Coles

- The refinery continues to focus on safe and reliable operations. Since the last CAP meeting in February there have been three reportable safety incidents. These involved two cuts to hands and one broken wrist, all involved contractors.
- In April Parkland completed the largest turnaround in the history of the refinery with 1200 people on site over two shifts. This presented challenges for traffic movement and the refinery team appreciated the neighbourhood's patience.
- The refinery is operating well but did experience a sulphur recovery exceedance of the air permit. Regulators were notified.

- Early in the turnaround, there was a fish toxicity incident due to a chemical imbalance.

Comments and questions about the update:

Q1: What is a level one alert?

A1: It was to make people aware that visible flaring will occur. Notification goes to many regulatory bodies including Metro Vancouver Air Quality and Fraser Health.

Q2: What is fish toxicity?

A2: It is a test that is completed to assess the quality of water. An external lab inserts rainbow trout in water that is to be discharged to check the level of toxicity to fish. This is a requirement of the Metro Vancouver water discharge permit that regulates discharges from the waste water treatment plant.

Q3: Did turnaround activities result in reduction of emission levels?

A3: The turnaround replaced the flare stack, but there were no specific emission control improvements. The introduction of Tier 3 fuel is intended to reduce emissions in low sulphur gasoline improves SO₂ from cars. This is being completed in advance of new regulations in January 2020 of 10 ppm. The refinery has been reducing since 2010 levels of 30 ppm.

Q4: Does that affect that the amount of CO₂ produced in the refinery?

A4: No, it does not affect CO₂

Q5: In terms of the fish toxicity event, was there not enough chemical in the water?

A5: The issue was that there was not enough waste water, due to the refinery being shutdown, which resulted in more treatment chemical than was needed.

C6: I have heard from friends on Gamma that are delighted that there is hardly any traffic very much appreciated, and asked that I share kudos with Parkland.

A6: We appreciate hearing the kudos and are pleased to hear our hard work to mitigate impacts of traffic were beneficial.

3. **Presentation: CAP Q&A – Kel Coulson (See Attachment One)**

A presentation in response to a number of questions raised by CAP prior to the meeting.

Comments and questions about the presentation:

Q7: In the presentation on page 2 you mention marine vessels. Where do they come from?

A7: Primarily from Washington State due to proximity and practicality most come from Pacific North West

Q8: In the presentation on page 3, if two thirds of pipeline capacity, does it come through as finished product?

A8: Yes

Q9: Is the refinery not dependent on rail because of the pipeline?

A9: Finished products come by rail but for refining we rely on the pipeline.

Q10: Where is the Husky refinery?

A10: It is in Prince George and serves the local market

Q11: Is the Burnaby refinery working on full capacity?

A11: Yes

Q12: Where does Husky refinery get its product

A12: By rail from Alberta

Q13: When you said you went out to people you supply product to, who did you contact?

A13: We sent letters to key customers including Translink, local Municipal Governments, BC Ferries to let them know our awareness and concern for disruption to supply chain and essential transportation services

Q14: Do you supply police and ambulance? Is BC Ferries stock piling fuel?

A14: Fuel trucks leave the refinery and go and refuel each ferry. BC Ferries does not have tanks so they need a reliable fuel supply

Q15: How big are the boats that come from Washington state? And, if the Refinery produces 55,000 barrels a day how many ships would you need?

A15: The number of ships from Washington State varies. One ship can carry 230,000 barrels of finished product.

Q16: Do the marine vessels show up with different products?

A16: Yes, each ship has compartments for different types of fuels. They are segregated for each product. This is how the refinery provides supply for Vancouver Island.

Q17: Why type of marine vessels does the refinery use?

A17: The refinery uses both barges and tanker ships. Since the change to Parkland the vessel complement has changed because when the refinery was owned by Chevron they had vessels that would come from other Chevron refineries.

Q18: How many ships come to refinery each day? And how many barrels does a barge hold?

A18: It varies but we can find out more details. A barge holds 40,000 to 50,000 barrels

Q19: The current pipeline has diluted bitumen and finished product. How is it separated?

A19: It is separated by what is called a Transmix. This mix is also re-processed by the refinery

Q20: Does the diluted bitumen and finished product move at the same speed?

A20: Yes

Q21: How does the pipeline get shut down if there is a break in the line?

A21: At each pump station, there is an isolation valve. When the computerized system identifies a pressure drop the technicians can isolate that area of pipeline and shut it down.

Q22: Can you estimate how many times the pipeline has been shutdown for leaks in the last year?

A22: In the past year to today May 16, 2018 there have been zero shutdowns. There are two government websites to review reportable pipeline spills. Federal – [pipelines regulated by NEB](#) Provincial – [pipelines regulated by OGC](#)

Q23: What makes a pipeline spill reportable?

A23: We could provide more information on the oil and gas regulations through an educational presentation.

Q24: So, in terms of potential expansion, if you had to answer yes or no what would you say

A24: You can't plan for a pipeline that is not built, so we can't speculate on what we don't know

Q25: Is there room for expansion on this site?

A25: Chevron did a good job of de-bottlenecking the facility

Q26: Why is the price of gas in Toronto a 1.30 and so much higher in Vancouver

A26: Vancouver has transit and carbon taxes that Toronto does not have. These are climate driven policy that hit the demand side of fuel prices making it more expensive.

C27: Yes, but the prices in Squamish and Whistler should be the same prices as in Clearbrook and Mission which do not have transit tax.

A27: The price differential could be due to individual operators increasing prices.

Q28: Are there differences between Canadian jurisdictions in terms of ambient air quality objectives?

A28: Metro Vancouver has more stringent objectives. Some of those other refineries referred to in the newspaper article you mentioned may have air shed challenges that have resulted in different investments and that resulted in SO2 reductions

4. Presentation: Co-Processing – Dave Schick (See Attachment Two)

Comments and questions about the presentation:

Q29: Is there number or percent to generate credits?

A29: You earn credits by either buying them from BC Hydro or blend using Government incentives to create lower carbon intensity.

5. Metro Vancouver Update – Darrell Wakelin and Jason Mushtuk

Darrell Wakelin provided an update on the Parkland Permit Amendment (**See Attachment Three**)

Jason Mushtuk provided an update for the reporting period.

Date: Wednesday, May 16, 2018

Reporting Period: February 2018 through May 2018

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 Chevron 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. Chevron Advisories)
- Regional air quality management initiatives such as Bylaw development.

a. Air Quality Complaints

Month/Year	Complaints	Confirmed	Comments
January 2018	1	1	1 oily sewer.
February 2018	3	3	2 oily sewer. 1 complaint of gas or crude oil odours – no location of odours provided by complainant.
March 2018	0	0	
April 2018	2	2	1 oily sewer. 1 complaint of heavy gas odour noted west of Area One.
May 2018	5	4	3 oily sewer. 1 complaint of oil odour noted east of refinery.
Total to Date	11	10	
Total 2017	35	27	Total complaints received by MV.
Total 2016	53	45	Total received by Chevron from MV and public was 63. Analysis – September highest month (16% - 9 complaints) – Increase related to oily sewer 22 in 2016 vs. 4 in 2015.
Total 2015	41		Total complaints identified in Chevron’s Odour Management Plan Annual Review submitted March 31 st .

b. Refinery Notifications

Date	Level	Discussion
May 5, 2018		Sulphur Recover Unit (SRU) Exceedance of Permit Limit for SO₂ Permit limit of 5000 mg/m ³ exceeded for 14 hours. Parkland responded by cutting feed rates and initiated investigation. Cause believed to be result of elevated temperature in sulphur pit resulting in release of SO ₂ from the pit. No exceedances of SO ₂ ambient objectives observed at monitoring stations during this period.
April 2, 2018	One	2018 Major Turn-Around – Start Up Start-up of the refinery is progressing following a scheduled maintenance turnaround. We are in the process of bringing the units back on-line over the course of the next few days. During start up, there may be periods of intermittent, elevated flaring as equipment is being safely brought on-line.
March 16, 2018	One	2018 Major Turn-Around – Final Stages Processing units to be brought back on-line over the course of the next two weeks. The first stage of the planned start-up will be relighting of the refinery flare expected on March 17th. During start up, there may be periods of intermittent, elevated flaring as equipment is being safely brought on-line and subsequently restarted when the work is completed.
January 31, 2018	One	2018 Major Turn-Around Regularly planned, periodic maintenance procedure of our processing units. These shutdowns are required to carry out inspection, cleaning, maintenance and repair work to ensure safe, reliable and efficient operations. This work can only be done while the units are not functioning. Work is scheduled to begin Thursday, February 1, 2018 with a phased shutdown of specific sections of the plant. The current schedule calls for the work to be completed by approximately the end of March, 2018.
January 26, 2018 (100 Hrs)	One	Burnaby Refinery – Power Outage Power outage during the morning of January 26, 2018. The loss of power took some refinery units off line. Potential for some elevated flaring as work to resume normal operations over the remainder of the day. SRU exceedance of permit restriction of 5000 mg/m ³ . No exceedances of AQ objectives of 0.07 ppm SO ₂ recorded at any ambient stations.
December 19, 2017 (1100 Hrs)	One	DHT Work Completed and Start-Up. Refinery beginning start-up of the unit. Expected to take a couple of days. Some elevated levels of flaring may occur as the unit is being safely brought on line.
December 8, 2017 (0730 Hrs)	One	Controlled Shutdown of the DHT Unit Controlled shutdown of the DHT unit to carry out required repairs.
February 5, 2017	One	Burnaby Refinery Power Outage Loss of power took some refinery units off line following a power outage during evening of February 4 th . System to manage flaring is operational.

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(0000 Hrs)		
February 22, 2017 (1700 Hrs)	One	Controlled Shutdown of Crude Unit Controlled shutdown of the crude unit in order to carry out repairs to process piping. The shutdown is expected to be completed by evening of 23 rd . There is the potential for elevated flaring as the unit is shutdown and subsequently restarted.
May 23, 2017 (2100 Hrs)	One	Burnaby Refinery – Power Outage Brief interruption (~6PM) in external power supply (BC Hydro). Experienced elevated level of flaring. SRU acid gas to flare. Audible alarms in area 2 (radiant heat from flare/H2S at Process Unit). One complaint from Capitol Hill.
Sept 8, 2017	One	Burnaby Refinery – Maintenance Event Controlled shut-down of Poly and Penex units for planned maintenance between Sept 8 th to 30 th .

c. Odour Surveys

Date	Activity
January 2018	None
February 2018	None
March – April 2018	None
May 2018	Two odour surveys responding to complaints.
2017 Total	Eight odour surveys.
2016 Total	Eight odour surveys.

d. Site Inspections/Meetings

Date	Activity
May 9, 2018	Meeting with Parkland staff to discuss findings of SRU exceedance investigation.
May 15, 2018	Site inspection and verification of SRU CEMs RATA testing, Area 1 inspection of Tank 69 odour filter system.
February 14, 2018	Meeting with Parkland staff to discuss permit amendment.
2017	8 inspections, 2 meetings with Parkland staff.

e. Liquid Waste Permit

Date	Activity
2018 1 st Quarter (Jan-Mar)	Quarterly sampling requirement in Liquid Waste Permit. Feb. 24/18 sample failed fish toxicity during refinery turnaround. Cause determined to be due to low bug population and over injection of polymer coupled with presence of non-toxic RTI chemical used for equipment cleaning being present in the waste water. No other exceedances of permit parameters.
2017-11-28 2018-01-17	Metro Vancouver audit sampling of wastewater. No exceedance for any of the monitored wastewater parameters.
2017-11-19	Qtr. 4 self-monitoring report identified a CN exceedance. Root cause analysis is the same as noted in the 2017-07-31 report. Violation letter issued.

	<p>Elevated CN Study</p> <p>June 15th Amending document to authorize intermittent interruptions in sodium hypochlorite injection to conduct sampling and analysis of cyanide in effluent.</p> <p>chevron for cyanide study - ltr and permit page.pdf: http://orbit.gvrd.bc.ca/orbit/lisapi.dll/app/nodes/23343845</p> <p>The conclusion reached was that continuous bleach injection of their effluent resulted in detectable cyanide formation.</p> <p>2017-07-31 Chevron Waste Water Cyanide Investigation Report - 100010.pdf http://orbit.gvrd.bc.ca/orbit/lisapi.dll/link/23344127</p>
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f. SOx Curtailment Events

Date	Activity
	No exceedances since last report.
2017-12-07 0135 – 0230Hr 0850 – 0915Hr	Two SCE triggered based on SO2 readings above 190 ppb permit set point at T23. 1 Hr SO2 Objective of 70 ppb was exceeded during both events with hourly averages of 75.9 ppb and 123.6 ppb respectively.
2018-01-01 2200Hr	1 Hr SO2 Objective of 70 ppb was exceeded with hourly average of 70.8 ppb. This did not trigger a SCE.
2017-03-20 0700 to 0800Hr 1700 to 1800Hr	Two SCE triggered based on SO2 readings above 190 ppb permit set point at T23. Interim 1 Hr SO2 Objective of 75 ppb was exceeded during both events with hourly averages of 82.9 ppb and 79.1 ppb respectively. Calm Stagnant inversion meteorological conditions. Chevron investigation did not confirm cause of missed alert but reported testing of system indicates it is currently working properly (June 1st email).
2017-10-28 0000-0100 Hrs	SCE triggered based on SO2 readings above 190 ppb permit set point at T23 (0030Hrs). Interim 1 Hr SO2 Objective of 75 ppb was exceeded with hourly averages of 112.8 ppb. AQ & CC investigation discovered that the SO2 analyzer had an upper level threshold set at 100 ppb, which caused concentrations above 100 ppb to be flagged as invalid. As a result Chevron would not have been aware that SCE trigger was met or been able to respond as required in their permit. AQ report issue has been resolved.

Comments and questions about the updates:

Q30: How do you know that cruise ships and ships are not contributing to air quality in this area?

A30: They are. However, changes in marine fuels are resulting in emission reductions from this sector. Metro Vancouver was involved in large Burrard Inlet Air Quality Study that assessed ambient air quality in the area.

Metro Vancouver primarily regulates point sources where we have authority and jurisdiction. Dispersion modelling includes background data that includes all emission sources, including vehicles and marine traffic, that contribute to the background concentrations.

Q31: When you re-permit the refinery do you reduce their emission allowance.

A31: In some cases, allowances stayed the same and in others they were reduced to ensure what we are authorizing is protective of the environment. The primary focus of the recent permit amendment was to require monitoring and studies that will guide emission reductions.

Q32: Can we have the same controls as in the USA?

A32: Metro Vancouver is evaluating the emissions allowances for the whole facility from scientific approach

6. 2018 CAP Meeting Schedule – Catherine Rockandel

Next meeting is September 19, 2018
November 21, 2018 (Public Meeting)

Q33: I was looking for the CAP website where is it located with the transition to Parkland.

A33: The Parkland CAP website is still located on the Chevron website as the IT transition has taken longer. See: <http://www.chevroncap.com> or parklandcap.ca

ADJOURNMENT: Meeting adjourned at 8:40pm