

**Summary Meeting Notes
of the Parkland Burnaby Refinery
Community Advisory Panel (CAP) Annual Neighbourhood Meeting
Wednesday, December 2, 2020
7:00pm-9:00pm
via Zoom Webinar**

CAP REPRESENTATIVES:

Kathy Mezei, Joanne Smith, Aswinee Rath, Davis Vaitkunas, Michele Joel, Daniel Wood, Tim Maryon, Catherine Carlson, Amy Smith, Judith Roche

PARKLAND REPRESENTATIVES:

Alex Coles, Refinery GM; Nick Middleton, Director, Health, Safety & Environment; Vicki Bowman, Environmental Team Lead; Jacki Hess, Fixed Equipment Integrity Team Lead, Chad Groves Director, Refinery Strategy & Business Planning; Kate Groves, Director, Operations; Jonathan Tyler, Senior Advisor, Policy & Incentives; Emma Luongo, Community Relations Advisor

METRO VANCOUVER REPRESENTATIVES:

Darrell Wakelin, Jason Mushtuk

FACILITATOR:

Judy Kirk, Kirk & Co. Consulting Ltd.

MEETING AGENDA and Q&A:

1) Introductions and Agenda Review:

The meeting started at 7:07pm. A few minutes were allotted for technical issues related to the video technology.

Judy Kirk welcomed all the attendees and thanked them for joining Parkland for the Annual Neighbourhood Community Advisory Panel (CAP) meeting via video webinar technology. Judy asked everyone to test the “Raise Hand” function and explained that this is a way questions could be asked, in addition to the “Chat” and “Q&A” options.

Judy conducted a brief review of the agenda for the meeting, introduced the CAP members, and advised Parkland representatives to introduce themselves at the beginning of their respective presentations.

2) Refinery Update – Alex Coles, Refinery General Manager

Alex Coles began by introducing himself as the Refinery General Manager and provided an overview of the location of the refinery and walked through the locations of Area 1 and Area 2, sharing an aerial view.

Alex Coles provided the following refinery update:

- Since our last CAP meeting in September 2020, we have had no recordable injuries and no process safety events.
- While we have continued to receive odour complaints in the past several months, there has been a decrease in gasoline-type complaints. This is related to recent improvements made at our tank truck loading rack. We continue to investigate each complaint and improve our odour-management process.
- Due to the windstorm on Monday, November 30, we experienced a power outage at the refinery. We are currently conducting start up procedures to bring operations back up to normal levels.
- There have been 4 environmental incidents since the last report in September 2020:
 - Described that for the past several months we've been experiencing fouling in our Sour Water Stripper (SWS) column in the Sulphur Recovery Unit (SRU). Two incidents related to that:
 - On October 28th, we slightly exceeded our Waste Water permit limit for monthly average **Cyanide**. The average was 0.15 mg/L, relative to a permit limit of 0.1 mg/L. We did not exceed our daily limit of 0.3 mg/L. The source was tracked to our Fluidized Catalytic Cracker, and process conditions have been improved to reduce cyanide levels.
 - On November 27th, we had a **SWS pump trip**, which caused a bump in operation in the SRU and a resulting exceedance of our hour to hour SO_x permit limit. Value reached was 6521 mg/m³ relative to a permit limit of 5000 mg/m³.
 - Investigation into **SWS fouling** is ongoing and team is actively working to mitigate the issue to prevent further related incidents.
 - Remaining two incidents related to interruptions in external power:
 - Nov 13th we experienced a **temporary interruption in external power**. While operations worked to resume normal SRU operation following the power dip, we exceeded our hourly SO₂ limit in the SRU for one hour from 4pm to 5pm, at 6,221 mg/m³ compared to a permit limit of 5000 mg/m³.
 - This week, on Dec 1st, we had a similar event in the SRU following a **full outage of external power** to the refinery on Monday, November 30th. The SO₂ was 5789 mg/m³ relative to permit limit of 5000 mg/m³.

- Alex acknowledged that there has been an increase in environmental incidents, which is not where Parkland wants to be. This year Parkland created focus teams at the refinery to assess environmental incidents from the past several years to identify areas of improvement, specifically in the areas of waste water, SRU performance and odours.

Alex indicated that the refinery is in the detailed planning portion of the 2021 Alky/Merox TA set to begin in 4Q2021. He continued that in this phase, they have frozen the scope of work and their planners are creating work packages for each worklist item. This event is not as large as the 2020 event that had around 300 worklist items that require packages. He indicated that the target is to have the worklist packages completed by February 2021, which gives the refinery enough time to put all the items into a single schedule and then work through optimizing the schedule and reviewing the work packages with contractors.

Q&A:

No questions were raised.

Safety update: COVID-19 response and ongoing management – Nick Middleton, Health, Safety, and Environment Director

Nick Middleton, HSE Director, introduced himself and gave an update on the refinery's COVID-19 response. Nick outlined the measures that have been taken to date, including face-to-face daily health checks, social distancing, PPE, and increased sanitation, and reported that there has been no workplace transmission of COVID-19.

Nick also gave an update on the emergency response drill that took place on November 4, 2020. Nick noted the inclusion, virtually, of a significant number of regulators, partners, and first responders. Nick outlined the drill scenario; a plane crash in Confederation Park, leading to a pipeline rupture and an oil spill into Burrard Inlet.

Q&A:

Question 1: In a real emergency how would the public be informed?

Answer 1: Nick Middleton outlined the Uniformed Command System that is in place that alerts both the regulators and the community via Burnaby Fire Department and/or the RCMP, if an incident were to occur.

Daniel Wood: Emergency Notification System Update

Daniel Wood of CAP gave an update regarding the Emergency Notification Subcommittee, and the work they are doing to liaise with the City of Burnaby to progress an emergency notification system (EMS). The subcommittee consists of members of the CAP: Davis Vaitkinas, Kathy Mezei, and Daniel Wood.

Daniel explained that under the Emergency Program Act, the City of Burnaby (CoB) has a statutory duty to notify. There have been attempts in past to develop an EMS process with city, but they have been unsuccessful. BCEAS (BC emergency alerting system), a provincial emergency alerting system, has not been granted to the CoB. Municipalities and First Nation groups have recently been notified that access to BCEAS has been postponed for an undefined amount of time.

Daniel indicated that the subcommittee was notified that city has identified EMS as a priority in safety plan that was released in August 2020. The City is currently in Phase 1 in development of an emergency notification system (input gathering and evaluation) and a public survey has been posted to their website.

Daniel stated that the process began in 2020 and will extend to 2025. The next step for the subcommittee will be asking the City for a copy of the public survey results and asking how they can provide feedback directly.

Q&A:

No questions were raised.

Metro Vancouver Air Permit Extension – Vicki Bowman, Environmental Team Lead

Vicki Bowman summarized the air permit extension request that was submitted to Metro Vancouver:

- An 18-month extension was requested by Parkland to allow for completion & review of technical studies for potential technologies to reduce facility emissions
- The permit extension request and related studies are under review by Metro Vancouver
- There is a 30-day public consultation period that is currently underway, ending on December 6, 2020

Q&A:

Question 1: What happens if this permit extension is not granted?

Answer 1: Darrell Wakelin explained that if the permit expires, Parkland would no longer be authorized to discharge air contaminants from the refinery or the tank farm.

Judy Kirk asked for clarification about how likely it would be that the permit extension would not be granted?

Darrell indicated that the process is currently in a public consultation period, after which, Metro Vancouver will take feedback from community and other agencies and Jason Mushtuk will be working on a permit recommendation memo for the decision maker. Darrell indicated that, in this case, given that the progress is being made, it would be unlikely that the permit extension would not be issued.

Judy Kirk asked who the decision maker would be for the permit extension.

Darrell indicated that Ray Rob, District Director at Metro Vancouver, will be decision maker, or alternately Kathy Preston.

3) Traffic and Tree Safety – Jonathan Tyler, Senior Advisor, Policy & Incentives

Jonathan Tyler, Professional Engineer at Parkland, gave an update on traffic mitigations, the Gamma parking lot, and tree safety mitigations.

Jonathan thanked the CAP members and other community members who have provided feedback on how Parkland can improve their operations. He then went through several concerns that have proven to be top of mind for many community members; traffic in the neighbourhood, contractor parking at the Gamma parking lot, and gave an update on the tree replanting at the N. Carleton gate.

Tree replanting: Jonathan indicated that many learnings from the issues that arose during the tree trimming and replanting process, and that Parkland committed to following a process in the future whereby we consult with the public and install mitigations before we do work that would impact sightlines, including trees removal.

Jonathan also summarized the key learnings from a traffic detour that occurred in August due to watermain work conducted by Metro Vancouver. A key lesson learned included the utilization of spotters on the route early to mitigate any potential traffic issues.

Jonathan also gave an update on the partial reopening of the Gamma parking lot which occurred on November 9, 2020. The lot was opened to accommodate overflow traffic brought on by reductions in car-pooling, and additional work that had previously been planned for earlier in 2020 that had been postponed.

Jonathan also indicated that a traffic report was conducted by a third-party traffic engineering firm in 2019. Jonathan briefly identified key results of the report, including the traffic flow in the North Burnaby neighbourhoods closest to the refinery. Jonathan indicated that Parkland would be working with the City of Vancouver to understand mitigations that could address issues that were raised in this report.

Jonathan also summarized the learnings from the issues that arose during the tree trimming and replanting process, and that Parkland will be following a process in the future whereby we consult with the public and determine mitigations before we conduct further tree trimming / removal that would impact sightlines.

Q&A:

Question 1: Are there plans to cut more trees around the tanks?

Answer 1: Alex Coles indicated that there may be work to trim trees that have been identified by Parkland's third-party subject matter experts as a hazard. He advised that before additional work on trees is done, Parkland will come back to CAP to discuss what process will look like and establish how we will engage CAP and the community prior to trimming trees.

Question 2: How many trees would be cut down in the future?

Answer 2: Nick Middleton answered that a study was recently conducted to answer that question, but unfortunately there hasn't been a chance to meet with the fire chief to discuss the results, but this information will be investigated. **(ACTION ITEM)**

Question 3: The tanks are still very visible, is there any chance the trees will be planted on the grounds?

Answer 3: Alex Coles answered that Parkland understands there is still some concern in the community regarding sightlines, and that there may be a good opportunity for further enhancement or camouflage the tanks. He indicated that Parkland will continue to work to make sure something is done to help mitigate this issue, and that this will be recorded as an action item. **(ACTION ITEM)**

Question 4: Are all those who use the Gamma parking lot taken by shuttle to the eastern part of the refinery?

Answer 4: Jonathan Tyler answered that those who park at the Gamma lot do take a shuttle bus to their work site. He explained that this process gives Parkland the ability to better control traffic on Penzance Drive to and from facility. He also added that flaggers are utilized during shift changes to improve traffic management.

Question 5: Can a copy of the study on traffic be sent to CAP?

Answer 5: Jonathan Tyler answered that the insights from the traffic report need to be better understood through working further with the City of Burnaby and the findings and outcomes will be shared with CAP at future meetings in 2021.

Judy Kirk asked for clarification about whether the CAP can get a copy of the traffic study.

Alex Coles indicated that Parkland must remain sensitive to the information shared in the traffic report, as it has implications for other stakeholders, like the city. More collaboration must be done before the traffic report is shared publicly.

Question 6: a) Why were the rhodos planted so closely together, and b) is there any chance of the rusty tanks being painted?

Answer 6: a) Jonathan Tyler indicated that this feedback will be discussed this with the professional landscaping company who did the planting. **(ACTION ITEM)**

Answer 6: b) - Jacki Hess spoke about the refinery's painting program that is part of the main maintenance on all the tanks Parkland owns and operates. She explained that tanks are painted for two main reasons: protection from external corrosion, and operational reasons, such as the prevention of heat loss or overheating from the sun. As conditions change, there is opportunity for us to assess how we plan our programs. An example of a changing circumstance is that trees that used to prevent line of sight were trimmed. We can take this into consideration as we look forward.

4) Tanks: Jacki Hess and Pete Turner

Jacki Hess, Fixed Equipment Team Lead, gave an overview of tank use and maintenance, and the refinery.

Jacki indicated that tanks at the refinery are used for a variety of services. Most of the tanks are in Area 1 which is the blending and shipping area. The two main types of tanks that we have in service are Floating and Fixed roof tanks; A floating roof tank is used for high vapor pressure liquid and a fixed roof tank is used for low vapor pressure liquid

Jacki then gave an overview of the three pillars of tank management:

- Industrial standard engineering design practices
- Ongoing inspections
- Risk Based Inspection

Peter Turner, Strategic Projects Director, provided an overview of future plans for tanks at the refinery.

Peter indicated that earlier this year, Parkland submitted an Air Permit amendment application to Metro Vancouver to support their goal of reducing permitted emissions limits for the refinery. At the same time, Parkland applied to add provisions to our air permit for 8 storage tanks that could potentially be built in Area 2. Peter indicated that a permit amendment was required because we did not have an existing provision for tanks in Area 2 (Parkland has provisions for new tanks in Area 1, but not Area 2) Pete explained that these tanks were in the conceptual phase and Parkland had not decided on exactly how many tanks would be required, or exactly where they would be built, so we took a conservative approach regarding the permit amendment.

Peter continued that in summer of this year it became clear that under a new provision in the regulations, Parkland was required to submit an EAO Project Notification, triggered by the very small GHG increase associated with the new tanks.

Peter explained that the EAO Notification went through public comment period and several members of the community raised concerns about the new tanks. He explained that Parkland responded to the concerns raised in the public consultation process. Pete provided an update that the EAO Project Notification has been closed.

Peter then provided an update with regards to Parkland's upcoming tank development plans at the refinery in both Area 1 and Area 2.

Q&A:

Question 1: What will the overall change in footprint be once the old tanks are removed and the new tanks are added?

Answer 1: Peter Turner answered that the overall footprint is not anticipated to change (with new Area 1 tanks being built in the existing pan tank area where there would be fewer, larger tanks), and that the new tank(s) in Area 2 would be constructed between the Gamma parking lot and the existing tanks.

Question 2: What will the height difference be from the existing tanks to the new proposed tanks?

Answer 2: Peter Turner answered that tank heights will not be materially different from height of other tanks that are currently in Area 1 or Area 2. The new tanks will also be screened by greenery or the tank truck loading rack.

Question 3: Will there be odours from processing biofuels?

Answer 3: Peter Turner answered that odours are not expected from the facility as a result of the processing of biofuels. He explained that the refinery is currently co-processing bio feeds, and all vapors

are kept inside the facility. Further, Peter indicated that, where necessary, in the tanks where biofeeds are stored, filters could be installed to mitigate odours.

Question 4: What size would you describe the 22 tanks being demolished?

Answer 4: Peter Turner answered that they would be described as small.

Question 5: Slide 18 says “The project notification proposed the future development of 8 storage tanks in Area 2”. Other than the general information provided on Slide 19 (Area 1 or Area 2), it is unclear to me when these tanks may be going ahead, where they will be located, and how large they will be. These tanks have been mentioned publicly for quite some time, so presumably Parkland has given some thought about where they could be going, how visible they could be etc.?

Answer 5: Peter Turner answered referring to the images in the appendix of the PowerPoint, that the 3D rendering indicates the planned location for area 2 and the general view. He also noted that the trees in the diagram are not an accurate representation. He indicated that with regards to timing, the majority of the tanks will be starting to be added next year (2021) and being completed by 2023.

Question 6: Are there any difference between lipids and bio feed tanks?

Answer 6: Peter Turner answered that the only material difference is that lipid tanks would be larger than advanced biofeed tanks.

5) Metro Vancouver: Jason Mushtuk

Date: Wednesday, December 2, 2020

Reporting Period: September 2020 through November 2020

Overview of Metro Vancouver (MV) Update Content

MV 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, MV’s 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.

1. Refinery Notifications

Date	Level	Discussion
2017 Total		7 Level One notifications
2018 Total		7 Level One notifications
2019 Total		4 Level One notifications
Nov. 30, 2019		Sulphur Recover Unit (SRU) Exceedance of Permit Limit for SO₂ Permit limit of 5000 mg/m ³ exceeded for one hour (6001 mg/m ³) Parkland initiated investigation. Cause believed to be result of compressor in the GHT tripped. No exceedances of SO ₂ ambient objectives observed at monitoring stations during this period.
Dec. 23, 2019		Sour Water Strippers Bypass to Flare One hour bypass of sour water strippers while repairs made.
Jan. 14, 2020		Sulphur Recover Unit (SRU) Exceedance of Permit Limit for SO₂ Permit limit of 5000 mg/m ³ exceeded for two hours (5377 mg/m ³). Parkland responded initiated investigation. Cause believed to be result of freezing level transmitter. No exceedances of SO ₂ ambient objectives observed at monitoring stations during this period.
Jan. 20, 2020		Sour Water Strippers Bypass to Flare Planned shutdown of sour water stripper for maintenance.
Jan. 22, 2020		Sour Water Strippers Bypass to Flare One hour bypass of sour water strippers while repairs made.
Jan. 30, 2020	One	Planned Shutdown Refinery wide shutdown for six to nine weeks for planned maintenance. Possibility of elevated flaring while units are brought down and back up again.
Jan. 31, 2020		Sour Water Strippers Bypass to Flare sour water stripper acid gas sent to flare preparing for refinery shutdown.
Feb. 1, 2020		Hourly Flare Flowrate Reporting - resulting from refinery shutting down.
Feb. 3, 2020		Hourly Flare Flowrate Reporting - resulting from refinery shutting down.
Feb. 4, 2020		Hourly Flare Flowrate Reporting - resulting from refinery shutting down.
Feb. 5, 2020		Refinery Power Loss – Power loss on evening of February 5th. Refinery mostly shut down so minimal elevated flaring.
Feb. 6, 2020		Refinery Power Loss – Brief interruption of power during afternoon of February 6.
April 13, 2020	One	Refinery startup post 2020 refinery turnaround
April 24, 2020	One	Refinery odour event. Odourous release from a refinery storage tank.
May 11, 2020		SRU Down - Acid gas to flare
June 18, 2020		Sour Water Strippers Bypass to Flare sour water stripper acid gas sent to flare – stripper feed pump repair
June 24, 2020		Two Sulphur Recover Unit (SRU) Exceedances of Permit Limit for SO₂

		Permit limit of 5000 mg/m ³ exceeded for total of seven hours (max 9743 mg/m ³). Parkland responded initiated investigation. First hour caused by imbalance in Sour Water Stripper column. Second exceedance result of power interruption in the FCC. No exceedances of SO ₂ ambient objectives observed at monitoring stations during this period.
June 24-25, 2020		Hourly Flare Flowrate Reporting - total of six hours over two days above the reportable flowrate of 50 m ³ /min.
June 25, 2020	One	Planned shutdown and maintenance on gasoline alkylation unit.
July 18-19, 2020		Sour water Stripper acid gas to flare
July 25, 2020		Sour water Stripper acid gas to flare
July 28, 2020		Sour water Stripper acid gas to flare
July 31, 2020		Sour water Stripper acid gas to flare planned for maintenance.
August 5, 2020		SO₂ High Alarm – Corrective actions initiated by refinery. High alarm was later determined to be a false alarm caused by faulty ambient monitor readings.
August 23-24, 2020		Sour water Stripper acid gas to flare
Sept. 25, 2020		Sour water Stripper acid gas to flare
Oct. 15-17, 2020		Sour water Stripper acid gas to flare resulting from scheduled maintenance.
Oct. 27-28, 2020		Sour water Stripper acid gas to flare resulting from sour water stripper column upset.
Nov. 13, 2020		Sulphur Recover Unit (SRU) Exceedances of Permit Limit for SO₂ Permit limit of 5000 mg/m ³ exceeded for total of one hour (max 6221 mg/m ³). Exceedance result of external power interruption. Root cause analysis by BC Hydro requested. No exceedances of SO ₂ ambient objectives observed at monitoring stations during this period.
Nov. 17, 2020		Intermittent Sour water Stripper acid gas to flare.
Nov. 22, 2020		Intermittent Sour water Stripper acid gas to flare.
Nov. 27, 2020		Sulphur Recover Unit (SRU) Exceedances of Permit Limit for SO₂ Permit limit of 5000 mg/m ³ exceeded for total of one hour (max 6521 mg/m ³). Exceedance result of upset in the sour water stripper. No exceedances of SO ₂ ambient objectives observed at monitoring stations during this period.
Nov. 30, 2020	One	Refinery Power Loss – Power loss during daytime. Intermittent flaring while plant restarts.
Nov. 30, 2020		Sour water Stripper acid gas to flare resulting from external power loss and shut down of SRU.
Dec. 1, 2020		Sulphur Recover Unit (SRU) Exceedances of Permit Limit for SO₂ Permit limit of 5000 mg/m ³ exceeded for total of one hour (max 5789 mg/m ³). Exceedance result of external power interruption.

2. 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)
Total 2019	75	64	Analysis – December highest month (16% - 12 complaints)
January 2020	13	4	3 oily sewer, 1 petroleum odour, 9 rotten egg odour
February 2020	6	6	3 oily sewer, 3 petroleum odour
March 2020	4	4	4 petroleum odours
April 2020	9	9	4 oily sewer, 5 petroleum odour
May 2020	18	18	1 sour gas, 10 oily sewer, 6 petroleum odour, 1 fishy odour
June 2020	10	10	4 Oily sewer, 6 petroleum odour
July 2020	9	9	1 Oily sewer, 7 petroleum odour, 1 fish/rotten egg
August 2020	12	11	4 Oily sewer, 5 petroleum odour, 1 chlorine, 1 burned diesel odour, 1 bleachy/chemical
September 2020	17	15	16 petroleum odour, 1 chlorine.
October 2020	13	13	6 Oily sewer, 7 petroleum odours.
November 2020	12	12	6 Oily sewer, 6 petroleum odours.
December 2020			

3. Odour Surveys

Date	Activity
2017 Total	Eight odour surveys.

2018 Total	Five odour surveys.
2019 Total	Eleven odour surveys.
January 2020	No odour surveys.
February 2020	Two odour surveys.
March 2020	One odour survey
April 2020	Two odour surveys
May 2020	One odour survey
June 2020	No odour surveys.
July 2020	No odour surveys.
August 2020	No odour surveys.
September 2020	Three odour surveys
October 2020	One odour survey
November 2020	One odour survey
December 2020	

4. Site Inspections/Meetings

Date	Activity
2017	8 inspections, 3 meetings with Parkland staff.
2018	5 inspections/monitoring audits, 4 meetings with Parkland staff.
2019	14 inspections/monitoring audits, 4 meetings with Parkland staff.
January 22, 2020	Boiler 4 NOx testing audit./Meeting to discuss permit amendment and complaints.
Feb. 2020	None
March 2020	None
April 2020	None
May 2020	One
June 2020	None
July 2020	Two
August 2020	None
September 2020	One
October 2020	None
November 2020	None
December 2020	

5. 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.
2019	One exceedance of TSS permit limit on March 9, 2019
Jan. 15, 2020	Ammonia, Fish Toxicity and cyanide exceedance – Violation letter sent
April 1, 2020	Fish Toxicity exceedance – Violation letter sent
October 28, 2020	Cyanide exceedance of the monthly average of 0.1 mg/L

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 wastewater 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.
- MV issued a temporary amendment to Parkland Refining’s Wastewater Discharge Permit to allow an increase in ammonia in their wastewater from 20 mg/L to 30 mg/L from January 17 – 31, 2020, in response to sour water stripper issues in the SRU as well as high volumes of rainwater.

6. 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	None
2020	None to date.

Parkland Refining continues to work through the new permit requirements from the MV initiated permit amendment. 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, 2021.

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. Reporting deadline extended to July 31, 2020 for Phase One reporting and August 31, 2021 for Phase Two reporting. Phase One reporting currently under review by Metro Vancouver staff.
- 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. Approved October 30, 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. Another meeting on October 3, 2019 to finalize Parkland's revisions. Metro Vancouver received their final revision on October 17, 2019. Report accepted on November 19, 2019.
- **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. On September 30, 2019, Metro Vancouver received Parkland Refining's application to amend their permit to reflect their interim limits. Finalized amendment application received February 11, 2020. Permit amended July 3, 2020 with reduced emission limits for SO_x and NO_x from FCC (ES19). Also authorized proposed installation of six fixed roof and two floating roof tanks. Permit amendment is considered minor as overall facility emissions are lower.
- **Refined Technology Assessment Plan:** engineering assessment of top-ranked technologies and dispersion modelling - submitted May 15, 2019. The revised Refined Technology Assessment Plan was submitted on October 17, 2019. Submission has been reviewed and accepted on January 24, 2020.
- **Refined Technology Assessment Report:** identify preferred emission control technology & implementation schedule - due January 31, 2020. Reporting deadline extended to July 31, 2020 for Phase One reporting and August 31, 2021 for Phase Two reporting. Phase One reporting currently under review by Metro Vancouver staff.

Permit Term

- Current permit expires on January 31, 2021.
- Parkland will need to apply for a new permit
 - studies conclude on August 31, 2021.
 - permit term provides 1 year for the permit application process.
- Permit application will be subject to Public Notification Regulation requirements.
- Parkland has applied for an 18-month extension of their current permit term to allow for completion of Phase One and Two of the Refined Technology Assessment and supporting dispersion modelling. The application went out for public notification on November 6, 2020. Currently under review.

Q&A:

Question 1: If I understood correctly, there have been three exceedances noted this year, and an increase in complaints year over year. What action has Parkland taken specifically to the exceedances and the increase in complaints?

Answer 2: Alex Coles answered that the exceedances that the refinery has experienced since the last meeting have actions currently underway. Focus is on the sour water stripper fouling mechanisms and on our control system response to external electrical power interruptions.

Vicki Bowman answered that the refinery is currently working diligently to have a focused team to work on various elements. Vicki explained that with respect to odours, that is an area we are looking at very carefully. There is a team on site that investigates each complaint as they occur. General analysis is also conducted on complaints monthly, with an in-depth analysis to identify themes and opportunities for improvement conducted annually. With regards to specific actions, CAP members may remember issues with regards to fishy odour complaints reported earlier this year. We are currently in the process of changing some odour filters to address those concerns. In addition, in the past month, we did improvements to tank truck loading rack system.

Question 3: I have been a resident in the area for a great number of years. I have often contacted Metro Vancouver with regards to odor complaints emitting from Parkland (Chevron). I would get a call back and speak with an MV officer who would do his/her best to answer my concern. I no longer get that call back. Why has that changed?

Answer 3: Darrell Wakelin indicated that Metro Vancouver makes callbacks to complaints if more information is needed or if further assessment is required. Unfortunately, there are not enough resources to give a call back for every complaint.

Alex Coles encouraged the neighbours to call the refinery if they are experiencing an odour event and that Parkland would respond to these calls.

6) 2020 CAP Review – Judy Kirk, Facilitator

Judy Kirk gave a brief overview of the CAP, and the general topics covered in 2020.

7) Roundtable:

Question 1: Will the frequency in 2021 of tank truck trips coming north along Willingdon be the same as in 2020? What is the current frequency in terms of trips per hour?

Answer 1: Alex Coles indicated that the frequency should generally be the same, and that the volume should be consistent year over year.

Question 2: What is a swing tank?

Answer 2: Peter Turner explained that swing tanks “swing” between services, allowing for maintenance work to be conducted on other tanks. He indicated that sometimes maintenance work can take a very long time, so swing tanks are needed to fill the gap during that time.

Question 3: Are there any plans to deal with vibration coming out from refinery when the stacks are turned back on?

Answer 3: Kate Groves recognized that when the refinery goes through startup activities or when there is increased flaring, vibrations can occur. Kate indicated that the refinery has replaced a substantial amount of that equipment in 2018 and since then has been doing a lot of work to troubleshoot and improve the control systems. She explained that there are a number of tactical things that are also being done, such as replacing steam control valves.

Question 4: Does the change in tank configuration represent an increased storage capacity? If so, will the refinery be expanding as a result? Do the larger tanks pose any kind of increased environmental risk due to their size?

Answer 4: Peter Turner explained that the total volume of new tanks will exceed the volume of tanks identified for removal. However, tanks have been removed without replacement over the past 20 years. Peter further explained that this increase in volume is not related to crude capacity. He reiterated the purpose of the new tanks is to have the ability to segregate different feeds and different products.

Question 5: Can Parkland install vibration monitors, so the refinery can monitor vibrations?

Answer 5: Alex Coles indicated that mitigations are underway, and that Parkland prefers to solve the problem and is hopeful as improvements are made, that vibrations will be mitigated.

Question 6: Do bigger tanks pose more of an environmental risk with regards to spills?

Answer 6: Peter Turner clarified that the new tanks will be of comparable size to the neighboring tanks and would be considered medium-sized tanks. With regards to environmental risk, Peter explained that the new tanks have a reduced risk because they are built to the most current industry standards.

Question 7: How has Parkland invested in climate change mitigations?

Answer 7: Alex Coles answered that Parkland’s focus has been on co-processing and introducing bio feed stocks into the refinery as its contributions to reducing their carbon footprint. He further indicated that the Burnaby Refinery is currently commercially co-processing and is the first refinery in Canada to do so, and an industry leader in this space.

Judy Kirk closed out the meeting at 9:00pm and thanked everyone for their participation.

Action Items:

Action item:	Responsible:
Report back on how many additional trees will need to be trimmed - Review report with fire chief	Nick Middleton
Explore options for tank painting	Alex Coles/ Jacki Hess
Discuss rhodo planting with landscape company	Jonathan Tyler
Share assessments and learnings from the traffic study with CAP	Jonathan Tyler