

**Minutes of the Chevron Burnaby Refinery
Community Advisory Panel (CAP)
Wednesday, September 21, 2016
6:30 – 8:30pm
Refinery Office (Boardroom) 355 North Willingdon Avenue**

PRESENT

Joanne Smith, Maziar Kazemi, Eileen Luongo, Aswinee Rath, Helen Ward, Michael Coyle, Rich Baerg, Al Mytkowicz

Chevron representatives:

Dave Schick, Policy, Government and Public Affairs Manager; Kel Coulson, Policy, Government and Public Affairs Rep; Kate Groves, Health, Environment and Safety Manager; Steve Parker, Refinery Manager

Metro Vancouver Representative:

Larry Avanthay, Darrell Wakelin and Jason Mushtuk, Regulatory Representatives, Metro Vancouver

Facilitator:

Catherine Rockandel, Rockandel & Associates

Regrets: Rob MacLean, Kathy Mezei, Davis Vaitkunas, Matthew Hartney

Guests:

CAP BUSINESS

1. Opening Remarks

- Catherine Rockandel welcomed CAP members after the summer holiday break.
- Dave Schick announced that Kel Coulson had joined Policy, Government and Public Affairs group. Kel has worked with Chevron as Lead Process Engineer. She provided an overview of her work experience that has included positions at Metro Vancouver and the City of Burnaby.

2. Chevron Updates

a. General Refinery Operations – Steve Parker

- Steve reported that the Burnaby Refinery continues to be a leader in system and process safety across the Chevron refining network.
- On June 19th at 4pm the Refinery experienced a BC Hydro power failure that shut down both of the refinery's feeder power lines. The refinery is designed to go into fail safe with back up power to support controls and safety systems. It took a full day to regain stable power from both feeders. The flare was more visible with black smoke from approximately 7PM to 2 AM due to loss of steam. Chevron is working with BC Hydro to improve reliability, as the refinery

- faces significant operational and environmental challenges in the instance where both power lines go down. Chevron has notified our regulators that we are working with BC Hydro to improve reliability. The Refinery is cooperating with Metro Vancouver on an investigation of the flaring due to this event.
- Chevron sets a higher bar internally with environmental performance which often goes beyond regulatory requirements. The refinery has seen improvements each year.
 - Chevron's Canadian Board of Directors has directed Chevron Canada Refining and Marketing to test the market and assess the sale of marketing and refining assets in Canada. This initiative reflects broad industry reorganization partially as a result of low and volatile crude prices. It is necessary for the corporation to be able to support overseas developments including large Australian LNG investments. Chevron is exploring the potential for selling assets including Canadian Refining and marketing to put cash back in business. The process should be complete by the end of the year with a report early in 2017. To date there has been a lot of interest in refinery and marketing network because the Canadian business is performing well. Chevron has been and will remain open and transparent on the process with employees and external stakeholders.
 - Chevron is currently participating in collective bargaining with its union employees who are members of Unifor on a three year agreement. Wages are bargained on a national level. That process is complete; now Chevron goes through bargaining on local issues which may take a number of months.

Comments and questions about the update:

Q1: Why is the refinery of more interest or value to someone else?

A1: Other companies may be able to derive greater value because they have advantaged links to distribution markets. For example: a Washington company may realize greater integration benefits from having the refinery as part of its operations

Q2: What is timetable for Union negotiations?

A2: Union agreements expired at end of January 2016. When we come to agreement it will be backdated. Suncor in Alberta is the lead negotiator at the nation level. The wild fires in Fort McMurray delayed the national level negotiations, which in turn delayed our local bargaining process

C3: In terms of the power outages, it was likely due to the supply line on Barnett Highway. They used to step back the poplars but they are so overgrown. In addition the Kask Brother's Concrete site is difficult to maintain due to the sand cliff

Q4: I read that back east a Shell refinery last (I don't recall them saying it was as recent as last October? I can't find this at all in a google search) October had a problem with thousands of migratory birds flying into its flare. Is this an issue at the Burnaby refinery?

A4: With normal operations the flare is not big enough to cause a problem.

Q5: The power outage required more flaring and there was some black smoke. Did Metro Vancouver investigate?

A5: Metro Vancouver responded that they are actively investigating and Chevron is cooperating with Metro Vancouver. More information will be presented at a future CAP meeting.

Q6: So what I heard you saying is that in case of a weather event, measures are in place but for unplanned, unknown events BC Hydro did not have comprehensive measures in place to help manage the impacts.

A6: Chevron is working with BC Hydro on improving protocols and monitoring equipment improvements.

Q7: What percentage of operations is covered by back up power?

A7: Back up power is provided to controls and safety systems. Equipment operation draws high voltage amps. There is not enough back up power for these. Equipment is designed to power down safely in the event of an interrupted power supply.

b. Other Chevron Updates – Dave Schick

- The Vapor Recovery Unit at rack is going down for planned maintenance. Chevron is bringing in a Vapor Destruction Unit as an alternative to control VOC emissions . The work has been authorized by Metro Vancouver and begins Sept 26.
- Chevron is currently evaluating opportunities to process alternate non-crude stocks such as bio feed, wood waste, bio solids and others to support or replace a small portion crude we use. This would allow Chevron to meet future regulations and improve its GHG emissions.
- Chevron is currently working in the Confederation Park Right of Way to remove invasive species such as Japanese Knot Weed and Ivy.

Comments and questions about the update:

Q8: Are other alternatives such as corn a consideration?

A8: Yes, alternatives could be lipids, corn oil, etc

Q9: Would they come by pipeline, truck or rail?

A9: It wouldn't come from pipeline, but possibly truck and rail. These are smaller quantities with low carbon intensity. Chevron is looking at how refinery would work with these types of products.

Q10: Would it involve new refinery infrastructure?

A10: You can refine lipids the same way you do crude

Q11: Potentially would you need more inputs?

A11: The research is looking at economic impact, from shipping to production, as

part of the low carbon fuel evaluation.

C12: This could be an interesting presentation topic for CAP's February 2017 meeting

c. SEEP Update – Kate Groves

- The remediation efforts at the foreshore are progressing towards the final remedy. The foreshore final remedy was accepted by the Ministry of Environment. It is currently being shared with the Department of Fisheries and Oceans with completion by summer 2017.

Comments and questions about the update:

Q13: Is the final remedy different than what you have now?

A13: It is more robust for the long term but very similar

Q14: What is the length of time that you are referring to in terms of long term?

A14: We are significantly over designing with a plan for it to function for over 30 years.

d. Other Updates – Kate Groves

- The Human Health Ecological Risk Assessment was posted on the CAP website on July 22, 2016. It includes a fact sheet and Q&A on deliverables for the project
- Ongoing upgrades to the Perimeter Extraction System (PES) consist of larger pipe, a new air compressor, and a dedicated oil-water separator. The PES is operating very well and providing an effective hydraulic barrier.

Comments and questions about the update:

Q15: Is the Human Health Ecological Risk Assessment a public information piece?

A15: The Ministry requires the Assessment and Chevron made it public

3. Presentation: Pipelines and the Burnaby Refinery – Dave Schick (See Attachment One)

Comments and questions about the presentation:

Q16: Can you clarify is the pipeline supplying the airport Chevron's or Kinder Morgan's?

A16: It is operated and owned by Kinder Morgan.

Q17: On the slide I am not sure if you are referring to rail or truck?

A17: Crude can come by rail and then be delivered by truck. Due to changes in the pipeline allocation system we are currently getting all crude we need from Trans Mountain pipeline. There is no crude coming by rail or truck.

Q18: Does the pipeline terminate at Westridge?

A18: Yes.

Q19: Does it come through the Kinder Morgan tank farm?

A19: Yes, the documentation on Slide 5 is from Trans Mountain.

Q20: If Trans Mountain has a pipeline in this area why do they not want to continue in the same pipeline right-of-way?

A20: The magnitude of the proposed changes constrains expansion in urban areas.

Q21: In urban areas does the pipeline run under the centre of the road?

A21: It is in the road access.

Q22: How deep is it buried?

A22: Don't know.

Note: Chevron has drawings that specify pipeline depth but it was not information we had available at the meeting.

Q23: What are the notes on Slide 8?

A23: This is an internal Chevron document. The notes show who owns what sites and where the lines run.

Q24: On Slide 11 in Confederation Park is the pipe is not encapsulated in concrete?

A24: The new pipelines are being laid in concrete trenches.

Q25: Why is knotweed being taken out of Confederation Park?

A25: It was required by the City of Burnaby and we committed to remove it.

Q26: What method was used to eradicate?

A26: The soil was removed down three feet, which removes the Knotweed. It was taken to specialized disposal site.

Q27: Is there any residual heat in pipes that run through park?

A27: Some of the product may have heat but pipeline is buried deep so unlikely this would be noticed on the surface.

Q28: Are the pipelines under pressure that run to the pumping stations shown on slide 4?

A28: Yes the pipelines are under pressure.as there are pumping stations to move it.

Q29: Are you familiar with Western Canada Marine Response? They were mentioned in a Burnaby Now article.

A29: Yes, they are funded by petroleum industry to deal with marine spills. They were previously called Burrard Clean. Any pipeline expansion would require a significant change in capacity.

4. CAP Q&A

- The increased contractors on roadway that meets Penzance coming down the hill on Gamma has created a safety risk. The lines are not good and sometimes vehicles cross the line. You have to ensure you are on right side lane. A related issue for people walking in that there is no sidewalk so pedestrians are on road. The City should put sidewalk there.

5. Metro Vancouver Update – Larry Avanthay

Reporting Period: May through August 2016

Overview of MV Update Content

Metro Vancouver has the authority to regulate the discharge of air contaminants and non-domestic waste to sanitary sewer within the region. The Chevron Burnaby refinery maintain 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 is a snapshot of some of the activities 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)
- Miscellaneous regional air quality management initiatives

a. Air Quality Complaints

Environmental Regulation and Enforcement maintains a 24Hr complaint service. Report identifies air quality complaints reported to Chevron from public agencies and which were investigated.

The air discharge Permit requires Chevron to maintain an Odour Management Plan. Chevron submit monthly summaries of their investigations into any odour complaints and the actions taken. Annual performance review submitted March 31st of each year summarizes the number, nature, and management of odour complaints that occurred during the past year.

Month/Year	Complaints	Confirmed	Comments
Total 2012	78		
Total 2013	70		
Total 2014	61		
Total 2015	41		Total complaints identified in Chevron's Odour Management Plan Annual Review submitted March 31 st . Total includes complaints referred to

			Chevron from MV as well as those complaints reported to Chevron directly from the public. MV referred a total of 30 complaints during 2015 so 11 complaints reported to Chevron directly.
January	3	3	
February	7	5	
March	0	0	
April	6	6	
May	4	4	
June	3	3	
July	4	3	One complaint attributed to Burns Bog fire (July 3 rd)
August	6	TBD	
Total 2016	33		14 air quality complaints attributed to reported oily sewer odour.

b. Odour Surveys

Date	Activity
Thursday June 30 th , 2016	Odour survey was conducted with area resident which included Penzance Trails and section of Trans Canada Trail to confirm locations of reported “oily sewer” odours. Survey also attended by Chevron environmental staff.
Friday July 1, 2016	Odour survey conducted of 4700 Blk Cambridge, Penzance Trails and TCT along section of Penzance. Joined by Chevron representative for a portion of odour survey.

c. Site Inspections/Meetings

Date	Activity
Thursday June 30 th , 2016	Review operating conditions associated with emission testing of <i>Emission source 11R Steam Plant Boilers - Boiler No. 4</i>
Tuesday, July 12, 2016	Site inspection prompted by public complaint of petroleum odour. Review of crude loading of ship and diesel barge loading.
Thursday, August 4, 2016	Review operating conditions associated with emission testing of <i>Emission source 23R Crude Splitter Furnace</i> .
Thursday August 25, 2016	Site inspection prompted by public complaints of an odour (4300 Blk Cambridge). Reviewed conducted of

	tank cleaning operation (Tank 32 Diesel - Emission Source 40T) activities. Inspection included odour survey.
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d. Permit Related Correspondence

Issue	
Tank Truck Loading Rack Vapour Recovery Unit (VRU) Servicing & Authorization of Alternate Controls	<p>Chevron made a formal request (August 24, 2016) detailing plans to service existing vapour control system (VRU) currently authorized to control hydrocarbon vapours from truck loading rack. Proposal identifies a comparable level of controls employing a vapour destruction unit (VDU).</p> <p>An Authorization (September 9, 2016) was granted for short term operation of a portable VDU to control odours from tanker truck loading rack.</p> <ul style="list-style-type: none"> -Restriction on total operating period for period of September 26 to October 7, 2016. - Requires continuous monitoring and recording of critical operational parameter (temperature) as well as specifying minimum temperature requirements. - Final report required confirming minimum temperature maintained during operation period. - VDU is recognized control works for control of hydrocarbon vapours/odours.

Comments and questions about the update:

Q30: During this interim period that Chevron are using these other controls are the gasoline vapors going to be burned?

A30: Yes, the vapour destruction unit (VDU) combusts the gasoline vapours. We have experience with this technology and similar application as Kinder Morgan (TMPL) use a similar system for petroleum vapours during marine loading.

Q31: You mentioned a sewer smell around a manhole is that what we would typically call sewer gas? What is generating it?

A31: It is typically described by resident as an oily sewer odour. Odour does resemble a sewer gas or septic type odour. Odour has been identified immediately adjacent to a number of sanitary manholes a number of which are municipal manholes including some which would also would include the sewer discharge from the refinery wastewater treatment plant.

Q32: You mentioned an inspection at the marine loading facility, was there a complaint

A32: Yes, the marine loading inspection was initially triggered by a public air quality complaint. Chevron were in the process of conducting a ship loading of crude oil so were on-site to view this activity.

C33: At the kid's playground I noticed a propane type of smell.

A33: There has been a sump or catch basin near the washrooms and kids water park in Confederation Park that had been reported as a source of sewer type gas odours. There is a chance that organic material builds up over time and goes anaerobic and contributes to the reported odors. This particular source is from a municipal sewer and is not believed to be tied into the sewer which contains the sewer discharge from the refinery.

C34: You commented that the public calls to report petroleum odours they detect in the neighborhood but I do not call every time I detect a petroleum odour as I attribute it at times to the fact I'm living next door to a refinery.

A34: It has been my experience that when people believe they are being negatively impacted by an odour, especially a petroleum type odour, they call and register a complaint. The City of Burnaby and other agencies are aware of our responsibilities related to air quality and public complaints and will either call us with the information or more typically provide the caller our number to report directly.

6. Review of November 30, 2016 Public Meeting - Catherine Rockandel

- Catherine reviewed the public meeting process and timing with CAP
 - CAP suggested presentation topics could include an update on Confederation Park activity; Chevron's role in environmental initiatives such as the Tier 3 – 2020 reductions; and Chevron's business from pipelines to gas stations and marketing strategies
 - CAP suggested lots of advance notification including posters at library and community centre
- The next meeting is: November 30th, 2016 from 7:00pm – 9:00pm. Location: Confederation Seniors Centre

ADJOURNMENT: Meeting adjourned at 8:25 pm