

**Minutes of the Chevron Burnaby Refinery
Community Advisory Panel (CAP)
Wednesday, May 11th, 2016
6:30 – 8:30pm
Confederation Seniors Centre**

PRESENT

Joanne Smith, Maziar Kazemi, Kathy Mezei, Eileen Luongo, Aswinee Rath, Matthew Hartney, Helen Ward, Rob MacLean, Michael Coyle, Davis Vaitkunas

Chevron representatives:

Dave Schick, Policy, Government and Public Affairs Manager; Jessica Wolford, Policy, Government and Public Affairs Rep; Chris Haswell, Operations Manager; Steve Parker, Refinery Manager

Metro Vancouver Representative:

Larry Avanthay and Darrell Wakelin, Regulatory Representative, Metro Vancouver

Facilitator:

Catherine Rockandel, Rockandel & Associates

Regrets: Rich Baerg, Al Mytkowicz

Guests: Kel Coulson, Lead Process Engineer; Mack Atkinson, Process Engineer; Chris Boys, Environmental Specialist

CAP BUSINESS

1. Opening Remarks

- Catherine Rockandel welcomed CAP members. She announced that long-term member Pat Connell had recently resigned due to other commitments. She thanked Pat on behalf of CAP. Catherine provided an overview of the agenda and invited CAP and Chevron management in attendance to provide introductions.

2. Chevron Updates

a. General Refinery Operations – Steve Parker

- Steve reported that the team works together to ensure safe, reliable, profitable work. This year the refinery is reporting a personal safety milestone with zero injuries. This is the second time in the past three years. In addition the contractors are also reaching a milestone of ten years with no days off work due to injury.
- Chevron divides safety into two areas personal and process safety. The Burnaby refinery adheres to world-class standards and industry best practices around process safety. In addition the refinery uses internal audit process to scrutinize

practices. Last December auditors spent several weeks auditing the Burnaby refinery. The refinery had world-leading reviewers audit refinery processes. The lead expert was the ex-head of the Chemical Safety Board in the US. He spent the past week assessing refinery and conducting internal audits. The result was that the Burnaby refinery ranked in the second quartile, at number 19 out of 44 refineries for process safety.

- The most recent turnaround was conducted with no injuries, and the refinery is running at maximum production because demand is high, despite world reductions. This has not translated into profitability because of a surplus of production on the west coast relative to demand putting a downward pressure on price
- Chevron is changing how they manage major turnarounds to optimize schedules. Moving forward, there will be five years between major turnarounds rather than four, bringing Burnaby in line with industry standards. A 5 year turnaround schedule is enabled by the millions of dollars of investment to date into process safety and maintaining refinery equipment. The next small turnaround will be June 1, 2016. It is for two weeks. There will be approximately 30-50 maintenance contractors on site. The next large turnaround is February 2018.

Comments and questions about the update:

Q1: What gives you the impression that five-year turnarounds are safe?

A1: Chevron has made significant reliability safety investments and redesigning equipment, conducting preventative maintenance, implementing best practices such as online inspection and monitoring networks for activity and corrosion. Five years is the industry norm.

Q2: Has the security contractor changed?

A2: Yes, the company has changed. The previous contract term was complete and is standard process to tender bids from several firms when starting a new contract term.

Q3: If profit is down are you going to make cuts to the budget?

A3: No cuts are being made that compromise safety. The budget is the same with process safety and maintenance fully funded. We have implemented Lean Sigma techniques to look for areas that are inefficient, and work to eliminate or limit waste to reduce our costs.

Q4: Is Lean Sigma done internally by Chevron?

A4: Yes, we train people internally.

b. Confederation Park, SEEP Update, Truck Loading – Dave Schick

- As part of our regular maintenance program, Chevron determined that some pipes that run through Confederation Park needed to be replaced. Chevron has received approval from BC Oil and Gas Commission to move ahead to move ahead on the project.

- In addition you will notice other activity in park, as we work to remove invasive species such as Japanese Knot Weed and Ivy. The access will be similar to last year. We are working on improving the processes.
- Due to the Fort McMurray forest fires there has been some instability in the market. The Western Canadian supply chain is tied between BC and Alberta through the Transmountain pipeline. Some companies have long supply chains to get fuel to the Lower Mainland so we are hosting competitors at our terminal to ensure that the fuel supply in the Lower Mainland is not disrupted. For this reason the neighbours may notice trucks lining up outside the terminal and parked outside of refinery to pick up products for competitors. Chevron will not be able to predict the needs of competitors or the implications of the wildfires to the supply chain. We will continue to work towards a better understanding of the supply chain implications and schedule trucks picking up at the loading rack at a ratable level which will reduce trucks lining up on Eton Street.
- In terms of the Foreshore Seep, Chevron continues to finalize the design for a final foreshore remedy with regulators. The existing barrier is working well and the final remedy will be implemented next summer (2017). Ongoing updates to regulators are posted on the CAP website.

Comments and questions about the update:

Q5: In terms of the invasive species in Confederation Park, did they get brought in with the fill?

A5: We are unsure of the source of the invasive species.

Q6: Where is the section of the pipeline that you are replacing?

A6: It is in the right-of-way in Confederation Park between Area 1 and Area 2 of the refinery.

Q7: Are you opening up the pipes?

A7: There will be some cutting into pipes in the Park pipeline but only abandoned, empty pipes which have been cleaned. This type of work will follow a very rigorous process.

Q8: Is there anything moving through the Transmountain pipeline? Will there be supply disruption as a result of the Fort McMurray fires?

A8: Yes there is product in the Transmountain pipeline. However, the supply will be kept at a minimum level.

Q9: So the Transmountain pipeline can deliver 300,000 barrels, with the Fort Mac fires are you still getting your 55,000 barrels?

A9: Yes.

Q10: The work you are doing on the Park pipeline in the right of way is a separate project from the erosion project?

A10: Yes, this is a maintenance project. It is based on proactive assessment not an event.

Q11: You mentioned the Ministry of Environment, City of Burnaby, BC Oil and Gas Commission and Tsleil-Waututh First Nation involved in the Park pipeline maintenance project. Is Metro Vancouver involved?

A11: No. Metro Vancouver is not required to give approval on this project.

Q12: Metro Vancouver requests further details on Chevron's planned pipeline maintenance being conducted in right-of-way between refinery and tank farm. Request for further details on work schedule and Chevron's measures to address any fugitive emissions or petroleum odours when the evacuated pipelines are opened. Want to ensure no impacts beyond the plant boundaries and/or public air quality complaints.

A12: Chevron agrees to work with Metro Vancouver to ensure they understand the maintenance program for pipeline replacement.

Q13: What are the hours that truck fueling occurs at the Chevron Terminal?

A13: It is a 24 hour operation. We always work to manage how many trucks we get per hour to minimize the impact to the surrounding community. The current issues around ratatability of the trucks entering the terminal are a function of when other agencies don't have fuel. Trucks should not be parking and not lined up.

Q14: If there was not a supply shortage issue where would the trucks that are currently coming to Chevron get this fuel?

A14: Shell and Suncor have terminals in the area. The Transmountain pipeline also supplies finished product to Suncor, which is further cleaned up. In addition, some product is also coming by rail to these facilities.

3. Presentation: Water Conservation Initiatives Burnaby Refinery – Kel Coulson, Lead Process Engineer; Mack Atkinson, Process Engineer (**See Attachment One**)

Comments and questions about the presentation:

Q15: The 21.8 gallons of water that the refinery uses to process 1 barrel of crude oil, is that net?

A15: Yes.

Q16: Do you capture rainfall?

A16: Rainwater that comes in contact with equipment is captured and treated.

Q17: What is a blow down?

A17: It is the removal of water from the system by opening a valve and adding fresh water to reduce the concentration of minerals.

Q18: Does it make sense to recover the steam that we see emitting from the refinery?

A18: Heat and vapor are being released as steam. The amount that would be recovered is minimal.

Q19: How much water is allowed in crude supplied by the pipeline?

A19: This can vary in each refinery, depending on contractual agreements with crude suppliers. For Burnaby, there could be less than a few percent of water which also includes sediment.

Q20: Where do the contaminants go?

A20: They are removed from the crude oil as a part of the processing in the refinery.

Q21: Thirty years ago would this have been done?

A21: Yes but over time refining has become much more efficient. Chevron implements best practices from its technical networks at the refinery.

Q22: In prior years have there been any restrictions from the City of Burnaby about the amount of water the refinery can use?

A22:As you heard in the presentation today (attached) the refinery demonstrates that it uses world-class technology to maximize conservation. In addition the Lower Mainland economy needs transportation fuels so we are essential service. Industry in the Lower Mainland generally has specific water conservation measures that are outlined each year by Metro Vancouver. This information can be found on the their website.

Q23: Is water usage capped?

A23: No, Chevron water usage is not capped.

C24: Metro Vancouver provided additional information on water conservation and restrictions.

Specifically, general guidance/education on water use and enforcement of water restrictions falls within the City of Burnaby mandate: <https://www.burnaby.ca/city-services/water---sewers/water-conservation/sprinkling-restrictions.html>

The Water Services Department (WSD) at Metro Vancouver provides clean, safe drinking water through its member municipalities for over 2.4 million residents in the Lower Mainland. The water comes from rain and snowmelt from the Capilano, Seymour and Coquitlam Watersheds .For detail on Water Services visit the website at:

<http://www.metrovancouver.org/services/water/Pages/default.aspx>

Metro Vancouver's Water Shortage Response Plan (WSRP) can be found on the WSD site:

<http://www.metrovancouver.org/services/water/WaterPublications/WaterShortageResponsePlanFeb2016.pdf>

There is also discussion in the consultation process underway to update the WSRP <http://www.metrovancouver.org/services/water/consultation/WSRP-review/Pages/default.aspx> which includes a contact email for comments or questions WSRP@metrovancouver.org

4. Refinery Open House – Jessica Wolford

Jessica reported that due to the refinery shutdown in June of this year, Chevron is postponing the Open House to Spring 2017. She asked CAP to continue to contribute ideas for activities.

5. CAP Q&A (See Attachment Two and Three)

The CAP Emergency Notification Sub-committee comprised of Kathy Mezei, Maziar Kazemi, and Michael Coyle provided an update. CAP has been working on this issue with Chevron for the past 15 years. Chevron has researched and offered to pay for a system. However, the City of Burnaby was reluctant to implement the system. The Sub Committee has met with the City of Burnaby Assistant Fire Chief, the MLA and City staff to move the initiative forward. The Sub-committee asked the City for report on notification process it produced. The City is waiting for outcome of NEB review, which should be announced in the next week. The Sub-committee met with Chevron and agreed that a Universal system would be more effective. See attachments for more information.

Comments and questions about the update:

Q25: Do you have an audible alarm?

A25: Yes, but it is only for the Chevron property.

C26: The North Shore has an effective emergency notification system. It is shared across three agencies and City sanctioned it. Good precedence

Q27: Does the committee feel that after the NEB hearing it is a good time to ramp up efforts?

A27: Yes, and Chevron is helping with the process. We agree that a consistency of application – North Shore and Burnaby would be most effective.

C28: Dave thanked Kathy, Maziar and Michael for keeping up work. CAP thanked Jessica for research and Dave for continued support of the initiative.

6. Metro Vancouver Update – Larry Avanthay

Reporting Period: February 2016 through April 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 maintains 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		
April	6	TBD	
Total 2016	16		

b. Odour Surveys

Date	Activity
Wednesday April 6, 2016 (1512 to 1614 Hrs)	Odour survey conducted in response to public air quality complaint registered earlier in day. Chevron environmental staff were present for part of the survey. Survey conducted in Burnaby Heights neighborhood near the Area 1 Tank Farm.

c. Site Inspections/Meetings

Date	Activity
Thursday, April 21, 2016 Site Inspection	Witnessed scheduled particulate matter stack testing by consultant. Subsequent meeting conducted with Chevron representatives to review FCC unit operating conditions and opacity readings.

	Also reviewed Waste Water Treatment Plant (WWTP) bleach injection pump operation and recent troubleshooting. A written report to follow on Chevron's recent actions to achieve a more reliable operation of the bleach injection pump.
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d. Permit Related Correspondence

Date	Issue
May 3, 2016	Letter requesting that Chevron conduct particulate matter sizing to confirm FCC Third Stage Separator (TSS) performance. The TSS was installed during 2015 refinery turnaround to replace existing cyclone particulate controls. Response to FCC (Emission source 19R) hourly opacity exceedances reported during December 2015 and January 2016.

e. Chevron Notification

	Issue
Tank Truck Loading Rack Vapour Recovery Unit (VRU) Servicing	Chevron notified Metro Vancouver regarding their plans to conduct servicing of the truck loading rack vapour recovery unit this Fall. Chevron were in the process of reviewing options and would be confirming their plans with MV once finalized.

Comments and questions about the update:

Q29: How do the complaints compare to the past?

A29: Chevron's annual review of complaints submitted on March 31st identified an overall reduction in total complaints from 61 in 2014 to 41 in 2015. The annual evaluation identified a further reduction in the number of "oily sewer" odours which had been a significant contributor to odour complaints in the past number of years.

Q30: You mentioned the bleach pump as part of your site inspection. What was done?

A30: During the site inspection a meeting was conducted with Chevron representatives which included the staff member responsible for the WWTP and bleach pump operation. The focus was to review recent reliability issues and Chevron's troubleshooting of the bleach injection pump. A follow-up report has also been requested detailing Chevron's actions to improve reliability of the pump. A number of complaints in April identified "oily sewer" odours which have tended to relate to the operation of the bleach injection system.

C31: Chevron has vapour recovery at the truck rack, and for marine loading. Crude by rail operations have not occurred for the past year

7. Review of 2016 Meeting Schedule & Topics - Catherine Rockandel

- Catherine reviewed the proposed September meeting topic as identified by CAP. It was suggested that the presentation could focus on crude supply chain, how crude gets to and from the refinery, pipeline locations and any NEB updates.
- The next meeting is: September 21st 6:30pm – 8:30pm. Location: Chevron Refinery Board Room

8. Other Business

- CAP thanked Chevron for supporting Burnaby Little League through social investment fund.

ADJOURNMENT: Meeting adjourned at 8:05 pm