Minutes of the Chevron Burnaby Refinery Community Advisory Panel (CAP) Wednesday, September 20, 2017 6:30pm – 8:00pm

Refinery Office (Boardroom) 355 North Willingdon Avenue

PRESENT

Al Mytkowicz, Rob MacLean, Michael Coyle, Davis Vaitkunas, Aswinee Rath

Chevron representatives:

Dave Schick, Policy, Government and Public Affairs Manager; Kel Coulson, Policy, Government and Public Affairs Rep; Chris Cavote, Refinery Manager; Jill Donnelly, Health, Environment, and Safety Manager; Peter Turner, Operations Manager

Metro Vancouver Representative:

Darrell Wakelin and Jason Mushtuk Regulatory Representatives from MetroVancouver

Facilitator:

Catherine Rockandel, Rockandel & Associates

Regrets: Helen Ward, Maziar Kazemi, Kathy Mezei, Rich Baerg, Joanne Smith, Eileen Luongo

Guests: Gord Bruce, Turnaround Team Lead, Chevron

CAP BUSINESS

1. Opening Remarks

- Welcome to CAP Catherine Rockandel
- Dave Schick provided introductions to new Refinery Manager, Chris Cavote; and Gord Bruce, Turnaround Specialist

2. Chevron Updates

- a. General Refinery Operations Chris Cavote
 - There was one minor recordable injury since the last meeting involving a contractor
 - The mini turnaround proceeded on schedule, with no incidents and operations are back up and steady.
 - The Parkland and Chevron teams are working together on the transition. The
 next step is approval by the competition bureau that would allow the
 acquisition to proceed. A transition services agreement will be put in place
 and all staff will be continuing on with the refinery. The Parkland team is keen
 to meet CAP.

b. Confederation Park Update – Dave Schick

- The park pipeline work is complete and the Oil and Gas Commission and City of Burnaby have signed off on the work
- There will also be some work on the marine vapour recovery unit, with work in November if people are walking along the shoreline and notice activity.

c. SEEP Update – Dave Schick

 There continues to be work on the SEEP with crews working longer hours over the next few weeks due to the timing of low tides

d. Parking Lot – Dave Schick

 Parking lot construction is underway. We have been working with neighbours to address concerns.

Comments and questions about the update:

Q1: I would like to receive fuller, clearer information about the 'parking lot'--why so many trees were cut, why so many parking spaces need to be created. There is concern about loss of trees and bird habitat and why this was necessary.

A1: The size of the parking lot was necessary to manage turnaround traffic. It will be primarily used for turnarounds and drills for emergency planning. The trees removed are being replaced by higher value trees than currently exist and equivalent in number. Chevron complied with City of Burnaby regulations and a third party firm was contracted to confirm that no nesting birds were on site.

Q2: Is this a permanent parking lot?

A2: Yes, specifications and standards are more complex and we needed increased capacity to ensure an effective turnaround

Q3: There is an increase in the number of cars on Penzance going north on Gamma. People are crossing the stop line, the stop sign is obscured and more lane definition is required. Could you talk to the City of Burnaby about this?

A3: Yes, the City is upgrading that area as part of parking lot project

3. Presentation: 2018 Turnaround (See Attachment One)

Gord Bruce provided an overview of the 2018 Turnaround

Comments and questions about the presentation:

Q4: During the turnaround will there be any work in Area 1?

A4: No, just some contractor parking

Q5: What is the tentative date?

A5: Given market confidentiality we cannot give an exact date, other than to say it will be in the first quarter of 2018

Q6: Is there one single firm for the bulk of 600 people required for the turnaround?

A6: No, it is not one firm, not one trade. Quite a variety of people

Q7: What is NDE?

A7: The non-destructive examiner (NDE) technicians are just one of the specialty trades on site

Q8: How long will the turnaround take?

A8: It will be completed within the first quarter

Q9: When will the cranes be on site?

A9: By the end of November you will begin to see cranes being set up on site.

Q10: When the catalyst is being serviced, what is the risk that dust can blow around?

A10: The technicians create a vacuum seal on the vessel(s) to pull dust back into the vessel(s) and into equipment and through filters so no dust is emitted

Q11: Are there independent companies monitoring and providing oversight?

A11: Chevron does monitoring on site, and reports as part of our permit. In addition BC Safety Authority comes on site to witness testing. Metro Vancouver independent air quality monitors are positioned around the refinery.

4. CAP Q&A

Other issues that CAP brought forward from the neighbourhood:

Q12: There is signage on the southwest corner of the TransCanada trail about Chevron; can this be enhanced?

A12: The TransCanada trail groups erected this signage.

Q13: There is similar type of signage in Area 2. Can you enhance signage to share facts about the facility?

A13: We will look into that.

Q14: When Parkland takes over will there be new staff?

A14: The same will be here as we have all been offered jobs. Do not anticipate any significant change.

Q15: How prepared is the refinery for an earthquake?

A15: The refinery has ongoing emergency response drills to deal with different scenarios. We work with different bodies to improve response. Continual process improvements are part of our safety culture. We will keep the community updated in terms of emergency response protocols and capabilities, including updates on our agenda.

5. Metro Vancouver Update – Darrell Wakelin and Jason Mushtuk

Date: Wednesday, September 20, 2017

Reporting Period: May 2017 through August 2017

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)
- Miscellaneous regional air quality management initiatives

a. Refinery Notifications

| Date | Leve I | Discussion |
|------------------------------------|-----------|--|
| February 5, 2017 (0000 Hrs) | 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. |
| 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 – see May summary below. |
| September 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 . |

b. Air Quality Complaints

| Month/Year | Complaints | Confirmed | Comments |
|------------------|------------|-----------|--|
| Total 2015 | 41 | | Total complaints identified in Chevron's Odour Management Plan Annual Review submitted March 31 st . |
| | | | |
| 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. |
| January 2017 | 9 | 6 | Six odour complaints on January 23 rd . MV odour survey confirmed presence of a petroleum type odour beyond plant boundary. Source believed to be related to Chevron marine vessel loading of a heavy gas/oil product. One complaint also related to visible emissions. |
| February 2017 | 5 | 5 | 1 oily sewer. |
| March 2017 | 7 | 5 | Two complaints from resident of 3400 Blk Oxford not believed to be attributable to Chevron. Natural gas odour – Fortis BC acknowledged "phantom odour" calls as well but no known source. 2 oily sewer. |
| April 2017 | 2 | 2 | Confirmed. |
| May 2017 | 1 | 1 | Interruption in power supply. Note complaint from resident (Cap Member) of rotten egg odour attributed to facility power outage/flaring. Resident identified concern with audible alarms and subsequent odour and what was happening at the facility. (#15973) |
| June 2017 | 4 | 4 | |
| July 2017 | 1 | 0 | Burning odour/fallout attributed to neighborhood fire of cedar hedge confirmed by BFD. |
| August 2017 | TBD | | To be confirmed – Chevron report end of September |
| Total to Date | 29 | 23 | |

c. Odour Surveys

| Date | Activity |
|-----------------------------|--|
| 2016 Total | Eight odour surveys documented for 2016. |
| Monday January 23, 2017 | Odour survey conducted in neighborhood adjacent to Area 1 tank farm. |
| Wednesday March 15, 2017 | Survey conducted in neighborhood adjacent to Area 1 including TCT. Low level petroleum odour identified over large area. |

| 0949 to 1031 Hrs | Possibly area vs point source. Odour similar to oil change shop. Just discernible level. |
|-----------------------------|---|
| Wednesday March 29, 2017 | Odour survey identified slight bleach odour adjacent to sanitary manholes on Penzance/Beta. Very brief Propane or butane odour was also identified adjacent to T24 North Burnaby station. Identification of a possible source not yet identified. |
| Thursday, May 4, 2017 | Odour survey conducted along Penzance adjacent to refinery and on TCT above refinery. Chevron was conducting biofuels trial. No odours. Also conducted odour survey along Penzance trails with Vick bowman of Chevron. No odours detected. |
| Tuesday, August 29, 2017 | Odour survey conducted along Area 1 perimeter and into adjacent neighborhood also along Penzance. No odours consistent with refinery operations were detected. |

d. Site Inspections/Meetings

| Date | Activity |
|--------------------------------------|--|
| Wednesday, November 30 th | Witness consultant testing of SRU stack emissions. |
| Thursday, December 1 st | Site tour of Area 1 Tank Farm including tank seal inspection. |
| Wednesday, February 15, 2017 | Witness particulate matter sizing survey on FCC. |
| Thursday, March 30, 2017 | Witness Crude Unit (ES01R) NOx annual emission survey. |
| Tuesday, April 11, 2017 | Tour of refinery (Area 2). Introduce Rob Kemp, SPE. |
| Tuesday May 30, 2017 | Area 1 inspection tour with focus on rail car propane/butane |
| | loading practices. (LA/JM/RK) |
| Wednesday, July 19, 2017 | LDAR Area 1 (JM) |
| Tuesday, August 1, 2017 | PM sizing survey of FCC witnessed by AQ staff (LS) |
| Wednesday, August 16, 2017 | SO2 meeting |
| Wednesday, August 30, 2017 | SO2 Dispersion modelling meeting |
| Wednesday, September 6, 2017 | Meeting with Chevron CEMs auditor (Area2). Witness marine VRU compliance testing (Area 1). (LA/JM) |

e. Liquid Waste Permit

| Date | Activity |
|------------|--|
| 2016-12-21 | Metro Vancouver audit sampling of wastewater. No exceedance |
| | for any of the monitored wastewater parameters. |
| 2017-03-31 | Qtr. 1 self-monitoring report identified two CN exceedances and |
| | fish toxicity. Toxicity due to combination of elevated sulphide and |
| | slightly acidic water. Violation letter to be issued. |
| | Elevated CN Study: June 15 th Amending document to authorize intermittent interruptions in sodium hypochlorite injection to conduct sampling and analysis of cyanide in effluent. |
| | The conclusion reached was that continuous bleach injection of |

| their effluent resulted in detectable cyanide formation. |
|--|
| |
| |

f. SOx Curtailment Events

| Date | Activity |
|--|--|
| 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 1 st email). |

Comments and questions about the update:

Q16: Are the new ambient regulations being initiated because of new government rules?

A16: Yes at a federal level. Metro Vancouver levels can be more stringent and likely will be, however, the Metro Vancouver ambient objective has not yet been finalized.

Q17: Are there any agencies that take Metro Vancouver standards?

A17: No, we are unique in that way. Montreal has a similar arrangement with the province to look after the airshed. The authority is granted by the province.

Q18: Are you putting in more monitoring stations?

A18: That will be part of a consultation outcome.

Q19: Does that include drones?

A19: Drones have not been considered at this time

Q20: Did the wildfire smoke cause complaints that were attributed to Chevron?

A20: The media were well informed and communicated information to the public so there was no real increase in complaints.

6. 2017 CAP Meeting Schedule

• Catherine reminded CAP of the public meeting on Wednesday, November 22, 2017 from 7pm – 9pm at Confederation Seniors Centre, 4585 Albert Street.

ADJOURNMENT: Meeting adjourned at 7:50pm