

**Minutes of the Chevron Burnaby Refinery
Community Advisory Panel (CAP) Meeting
Wednesday, September 16, 2015
7:00 – 9:00pm**

Refinery Office (Conference Room) 355 North Willingdon Avenue

PRESENT

Maziar Kazemi, Al Mytkowicz, Pat Connell, Rich Baerg, Helen Ward, Rob MacLean, Kathy Mezei, Michael Coyle, Eileen Luongo

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; Kate Groves, Health, Environment and Safety Manager

Metro Vancouver Representative:

Darrell Wakelin, Regulatory Representative, Metro Vancouver

Facilitator:

Catherine Rockandel, Rockandel & Associates

Guests: Aswinee Rath, Marc Coulombe

Regrets: Joanne Smith; Larry Avanthay, Regulatory Representative, Metro Vancouver

CAP BUSINESS

1. Opening Remarks

- Catherine Rockandel welcomed CAP members and guests. She provided an overview of the agenda and invited CAP members to introduce themselves.

2. Chevron Updates

a. General Refinery Operations – Steve Parker

- Steve provided a recap of refinery turnaround earlier this year. Chevron is very pleased that it was completed on time with no incidents.
- Burnaby Refinery is a leader in safety and reliability performance amongst seven Chevron refineries in system. It has had one recordable injury this year when a lab worker got a small burn opening a sample.
- The refinery reports all Loss of Containment (LOC) incidents and this year there have been none that exceeded the threshold for reporting of Loss of Containment incidents.

b. Confederation Park Update – Dave Schick

- Dave reported the assessment of pipes between Area 1 and Area 2 is finished for year.
- The second phase of the slope failure work is ongoing. The crews have been working hard to maintain access while the work continues.
- Maintenance and assessment will continue next year. The fenced area will be up over the winter to allow the vegetation in the area to reestablish.

Comments and questions about the update:

Q1: In terms of Confederation Park, has the work by the stairs been finished?

A1: No this work has not finished.

Q2: Has there been any further discussion about Chevron creating a marine park on the land at the bottom of the stairs.

A2: This land is not owned by Chevron. CP Rail owns land and parks are managed by the City of Burnaby, so they would have to work with CP.

c. Water Release Incident Update –Kate Groves

- Reported that on July 10 partially treated effluent water was released in Area 2. A hose came uncoupled as water was being transferred from one treatment pond to another.
- On Friday July 10, 2015, the Chevron Burnaby Refinery (the Refinery) released an estimated 30,000 litres of partially-treated process water (hereinafter referred to as process water) within Area 2 of the Refinery.
- Upon discovery, the pump supplying the process water was immediately shut off. Of the estimated 30,000 litres released, roughly 10,000 litres was recovered (during initial emergency response actions performed by Chevron personnel) from an onsite sump using vacuum trucks.
- The remaining estimated 20,000 litres was not recovered and went three ways: (a) into the ground on the Refinery property, (b) into the adjacent railway ditch, and (c) some went into a culvert that runs under the railroad and discharges above the high tide line on the Foreshore.
- The tide was at approximately 2 metres, near low water, at the time of the release. The spill was mostly water with partially treated dissolved hydrocarbon. It was the volume of water that triggered provincial reporting requirements.
- The water had some initial treatment but had not completed the final treatment.
- A well was drilled on the foreshore. No detectable levels of contaminants were found.
- Some water travelled through the culvert to the high water mark of foreshore. Chevron tested soil in the spill area and it was removed.
- Chris Boys of Chevron is working with the BC Ministry of Environment.

Comments and questions about the update:

Q3: Who responds to the spill?

A3: Chevron notifies the Provincial Ministry Emergency Program. They determine who to alert which in this case was the Ministry of Environment, City of Burnaby, and Metro Vancouver

Q4: How do you estimate volume?

A4: The measurements are based on the transfer rate at the time of the release.

Q5: Is that culvert that says 1921.

A5: No, the culvert is a corrugated metal pipe that is obscured by under growth and is on CN land. We first have to get approval from CN to go on tracks

Q6: How did the hose break?

A6: The mechanism that secured hose into pond did not hold as planned. It is not a high pressure hose, so it did not spray around in the air. It is a high volume hose so it leaked on the ground.

Q7: How do you know that it didn't get into inlet?

A7: The tide was at approximately 2 metres, near low water, at the time of the release.

Q8: How long does it take that amount of volume to leak?

A8: Less than thirty minutes.

Q9: What happens to the water and soil that was removed?

A9: The water pooled in the sump area. It was removed right away with vacuum truck and will be retreated in Chevron's pools. A specialized contractor removed the soil for treatment at an appropriate facility.

Q10: You mentioned a berm being put in place? Where is it?

A10: On Chevron's property

Q11: Do you ever see an oil slick on top of the ponds? Have you ever seen migrating ducks in the ponds? Are the ponds netted?

A11: There might be a slight sheen at times, but no we have never had reports of birds on the ponds. The ponds are not netted.

Q12: You mentioned reliability and safety in a couple of the reports. Is containment another measure?

A12: Yes it is another measure. In 2015 there have been no reportable incidences of loss of containment

Q13: Is it specific to hydrocarbon containments?

A13: It also includes toxic gases and chemicals.

Q14: Is there a measure for human error?

A14: Determination of an LOC is release volume based; there is not measure for the cause, including human error.

Q15: How does refinery compare against other Chevron refineries?

A15: Top two across categories in Chevron refinery properties in 2015

d. Power Failure Incident Update – Steve Parker

- Steve shared that BC Hydro had stated that the windstorm that affected the Lower Mainland in August was unprecedented. It resulted in a total loss of power at the refinery.
- The refinery is designed to go into a fail-safe position in the event of a loss of power. It took twenty-nine (29) hours to reinstate a stable source of power with no dipping. Once the power was stable the refinery was brought up over 4 days. The refinery did not experience any equipment damage and is running at full capacity now.
- Neighbours would have noticed increased flare activity as the refinery was coming back up.

Comments and questions about the update:

Q16: Did any trees come down in Area One? And, did the power come down in Area One?

A16: Yes, trees come down in area one, but no the power did not come down in Area One

Q17: Do you have a generator to run the refinery?

A17: We have emergency generator for critical systems. We cannot support total power usage for plant nor do we have own power plant or cogeneration plant.

Q18: During start up was their increase in emissions?

A18: Chevron was within Metro Vancouver guideline allowances for start up. Materials were directed to flare. It took 4 days for plant to come back up

Q19: Was there any infrastructure damage because of wind?

A19: No

e. Product Mix Incident Update – Dave Schick

- Jessica informed CAP of the incident prior to media reports. In a two-day period lower octane was delivered to service stations in the Lower Mainland. The incident occurred due to an error in blending and shipping.
- An investigation is ongoing.
- Chevron is installing a double check procedure.

Comments and questions about the update:

Q20: What do you do with the gas that you pumped out?

A20: Chevron trucks removed the fuel from the stations and it was brought back to the refinery for re-blending.

3. Presentation (See Attachment One)

The economics of the refinery, including contributions to taxes and community - Dave Schick

- Dave provided an overview of the economics of the refinery. Key highlights included:
- In the 1980s there were four refineries in the Lower Mainland, three have been subsequently decommissioned
- Chevron produces 55,000 barrels per day production facility
- Sales are approx. \$3 billion a year from refining and marketing
- 3 cars in 10 are fueled by chevron fuel in the lower mainland and 1 in 4 across the Province.
- Small refineries have big impact to local economies. Sales are similar to organizations such as Fortis, Tim Hortons, or WestJet.
- 280 employed at the refinery.
- Have made 350 million in capital investments since 2003
- \$70 million spent annually on supplies and services
- \$50 million+ annually in tax contributions corporate, income, carbon taxes, property taxes
- Chevron is one of the largest tax collectors in the province. It collects tax on 3 billion litres of fuel per year

Comments and questions about the presentation:

Q21: You mentioned that you are no longer bringing in crude by rail or truck. What has changed?

A21: The NEB ruling is determining allocations on an historic average rather than through nominations process. The result is that Chevron has been able to get the crude it requires so the rail line is not being used at this time. Trucks are empty coming into the refinery and full going out. The refinery may change the way we bring in crude to manage utilization.

Q22: Has the falling price of fuel increased demand?

A22: Not as much as you would think. The exchange rate is driving demand because people are not going across border.

4. CAP

a. CAP Membership Sub-Committee

- Catherine provided an overview of the process for identifying two new members for the membership sub-committee. The new membership sub-committee members will implement the activities as outlined in the membership sub-committee Terms of Reference. An additional item for discussion is to determine

the length of term for committee members.

- Jessica Wolford will represent Chevron on the Committee. Rob MacLean has agreed to stand for another term, while Maziar Kazemi and Helen Ward were acclaimed as new members. All in favor, no opposed.

b. CAP Q & A

Q23: This is not related to the pond incident but if untreated effluent made it into drain how would Metro Vancouver respond?

A23: We would sample, assess compliance with permit, then determine the appropriate regulatory response based on impact on sewer system, and discharge from plant. Determinants are based on health and safety first, then discharge into receiving environment. All effluent is treated by Chevron, then goes to the City of Burnaby treatment centre. It is not discharged directly into the inlet

Q24: In terms of the rail cars, Chevron reported that it is the process of updating last 25% of leased rail cars to new standards. Where are you at in this process?

A24: The process is underway but don't know where we are in process, given that we are not using rail cars at this time.

Q25: Is the seep final remediation still in progress?

A25: Yes

Q26: The Kinder Morgan expansion. Can you comment on whether it would have or not have benefits for the current refinery?

A26: The impacts of the pipeline expansion are still not clear. There is no new information that makes it possible for us to comment.

C27: This past summer we (CAP member) were on Vancouver Island and filled up at Chevron Parksville. We got to Buckley Bay and realized we had lost our wallet. We went back to the Chevron and Maggie the Manager had our wallet and it still had the \$400 cash in it. We are sharing so Chevron can recognize this person for their great service.

A27: Dave has since followed-up personally with this specific retail location to recognize Maggie's great service.

**5. Metro Vancouver Update: Darrell Wakelin
Reporting Period: May through August 2015**

a. Refinery Notifications

| Date | Level | Discussion |
|----------------------------|-------|---|
| July 23, 2015 (1700Hrs) | One | Controlled shutdown of Reformate Splitter at Burnaby refinery in order to conduct repairs due to unplanned reliability event. |

| | | |
|------------------------------|-----|---|
| August 29, 2015 (2130Hrs) | One | Refinery experience power failure, the cause being external to the refinery (i.e. BC Hydro) related to extreme weather. The refinery was reported to have been safely brought down and the situation remains stable. August 29, 2015 Email from VB detailing |
|------------------------------|-----|---|

b. Air Quality Complaints

| Month | Complaints | Confirmed | OMP Evaluation |
|-------------|------------|-----------|---|
| May 2015 | 4 | 3 | Chevron included in complaint follow-up for odour at 7000Blk Sierra Drive. Chevron not considered a contributor to this incident. |
| June 2015 | 1 | 1 | |
| July 2015 | 3 | 2 | Natural gas odour incident Boundary Triumph |
| August 2015 | 3 | 3 | # To be Confirmed – Chevron OMP report submitted end of following month (Sept). Based on MV REIA review. |

c. Odour Surveys

| Date | Activity |
|--|---|
| Thursday June 25, 2015 (1320 to 1359 Hrs) | Odour survey conducted in neighborhood adjacent to Area 1 in response to odour complaints in McGill Park. Accompanied by Vicki Bowman. No petroleum odours identified during odour survey. Complainant noted odour in park between 1030 to 1130Hrs – note wind had shifted direction since morning (T24). |
| Thursday July 23, 2015 (0906 to 0950Hrs) | Odour survey conducted in neighborhood adjacent to Area 1 (0906 to 0950HRS). Gasoline odour identified over short section of Heights/Trans Canada Trail immediately adjacent to Area 1 fence line. Vicki Bowman contacted at 0926Hrs and advised of observations. Chevron staff attended later but were not able to detect any odours. Chevron acknowledged that product transfer to a storage tank near fence line was being conducted during this period. Odours were identified at Level 2 – Moderate. Odours were not detected during earlier part of odour tour adjacent to McGill Park. |

d. Site Inspections/Meetings

| Date | Activity |
|---|--|
| Thursday May 28, 2015 Site Inspection | Site inspection to review operating conditions of FCCU during scheduled PM testing. First stack tests since major maintenance turn-around and replacement of tertiary cyclones and refurbishing of secondary cyclones |
| Thursday June 18, 2015 Site Inspection | Site inspection to review operating conditions/VRU operations during scheduled tanker truck loading (ES22T) annual testing. |
| Thursday July 16, 2015 Site Inspection | Site inspection with Chevron staff to review reported discharge of process wastewater onto neighboring rail line. No petroleum odours identified from runoff area. Soil had already been removed and transferred for treatment at time of inspection. Chevron reported to PEP, City of Burnaby and MV. |

e. Reported Air Quality Discharge Exceedance

| Date | Unit/Exceedance |
|-----------------|---|
| June 10, 2015 | SRU ES22R/ Total 1 – One Hr SO ₂ exceedances 1000 to 1100Hrs Max 5210 mg/m ³ (5,000 mg/ms SO ₂ limit) Faulty wire connection in power supply to SRU flame scanners. Report submitted June 17, 2015. |
| August 15, 2015 | SRU ES22R/ Total 1 – One Hr SO ₂ exceedances Max 6174 mg/m ³ Cause brief voltage sag – Chevron reports exceedance falls within permit language for reactor furnace start-up allowances. |

f. Emergency SRU Bypass to Flare

| Date | Unit/Exceedance |
|-----------------|---|
| June 10, 2015 | Faulty wire connection in power supply to SRU flame scanners. |
| August 15, 2015 | Refinery reports brief voltage sag and SRU trip |
| August 29, 2015 | Total power loss to refinery. |

g. SO_x Curtailment Events (SCE)

There were no SCE identified during this reporting period.

h. Reported WDP Exceedance

No exceedances reported by Chevron for the 1st or 2nd Quarter reporting periods for self-monitoring of their operations during 2015.

WDP Notifications

| Date | Discussion |
|-----------------------------------|---|
| Saturday July 11, 2015 1539Hrs | Chevron Notification Voice message from Chevron reporting process wastewater overflow from the pond area on to nearby tracks. See Site Inspection section above for July 16, 2015 visit. |
| August 4, 2015 | Chevron staff called to advise of two exceedances of their Sulfide limit (0.7 mg/m ³) during weekly grab samples -July 16 1.12 mg/m ³ -July 23 1.95 mg/m ³ Chevron had initiated investigation into possible cause (i.e. identify wastewater sources) and findings will be included with 3 rd Qrt submission (Oct 31, 2015). A July 30 th grab identified back to compliant levels (0.02 mg/m ² S) |

i. Miscellaneous

Dispersion Modelling Plan – SO₂

Chevron retained the services of Levelton Consultants Ltd. to develop a dispersion model, which will assess the permitted SO₂ emission sources from the Chevron refinery. The proposed Dispersion Modelling Plan was submitted September 3, 2015 and MV staff are in the process of evaluating the proposal and providing comment to Chevron.

Comments and questions about the Metro Vancouver's update:

Q28: How does Metro Vancouver determine if Chevron exceeds emissions?

A28: Chevron's air discharge permit stipulates monitoring and reporting requirements. Monitoring of emission quality occurs through continuous emissions monitors or stack testing conducted by third party consultants, audited by Metro Vancouver staff. Chevron's permit requires monitoring results to be submitted to Metro Vancouver. Chevron's air discharge permit and summaries of compliance monitoring reports can be viewed on Metro Vancouver's webpage.

Q29: What is a dispersion modeling plan?

A29: It is a plan that outlines how a facilities emissions will be modelled. The dispersion modelling plan is submitted for Metro Vancouver's review and approval to ensure the dispersion model will meet Metro Vancouver's requirements. Dispersion models provide a link between emissions and air

quality changes through computer simulation of emission transport, dispersion, transformations and sometimes deposition. Dispersion modelling was previously used at Chevron to evaluate VOC emissions from the refinery and tank farm. The plan currently being reviewed is for the assessment of SO₂ emissions from the refinery. The Metro Vancouver Dispersion Modelling Plan is also available on our webpage.

Q30: Why does the interim SO₂ objective review not apply to Chevron?

A30: The interim SO₂ objective applies to new facilities or those seeking a permit amendment that is determined to be a significant amendment. At this time, neither of these conditions apply at Chevron. We have met with Chevron to develop a plan to evaluate their current emission levels and prepare for the objective that will be established once the federal objective has been finalized.

6. November Public Meeting: Catherine Rockandel

- November 17th Public Meeting presentation is on Emergency Notification and Preparedness
- In preparation for the 2016 meeting schedule Catherine will conduct a doodle poll to explore alternative time schedules identified by CAP members including: 6pm – 8pm, 6:30-8:30pm, the current schedule 7pm – 9pm, and no preference. In addition CAP asked that the location preference also be polled. The options are: Refinery Office (Boardroom), Confederation Seniors Centre Meeting Room, no preference
- Chevron will develop an invitation for the Public Meeting and distribute it electronically to CAP for comments prior to distribution Note: the invitation was sent to CAP on Monday, September 21st.
- CAP discussed identifying the 2016 meeting dates earlier than January/February 2016. Once the time and location preferences are identified then the meeting date schedule can be confirmed.

ADJOURNMENT: Meeting adjourned at 8:55 pm