

**Minutes of the Chevron Burnaby Refinery Community Advisory Panel Meeting  
Thursday, January 26, 2012**

**7 – 9 pm at the Confederation Seniors Centre**

**PRESENT**

Eileen Luongo, Rob McLean, Al Mytkowicz, Rob Firkins, Pat Connelly, Kathy Curran and Art Quan

**Chevron representatives:**

Jill Donnelly, Health Environment & Safety Manager; Chis Boys, Environmental Specialist; Jim Gable, Refinery Manager; Ray Lord, Public & Govt. Affairs Manager

**Metro Vancouver Representatives:**

Larry Avanthay and Darrell Wakelin, Regulatory representatives for Metro Vancouver

**Facilitator:**

Catherine Rockandel, Rockandel & Associates

**REGRETS**

Kathy Mezei, Bonnie Hayward, Ian Lacoursiere, Maziar Kazemi

**CAP BUSINESS**

**1. Opening Remarks**

- Catherine Rockandel welcomed CAP members to the first meeting of the year. She provided a personal introduction and welcomed working with the members in the year ahead.

**2. Chevron Updates**

**a. General Refinery Operations - Jim Gable**

- Jim reported on the ongoing commitment to safety and with the recent cold weather there has been a focus on hand safety for maintenance crews working on equipment outside.
- He touched on the volatility in crude supply due to supply and demand and the lack of pipeline capacity.
- He updated CAP on the recent completion of the fall turnaround. Several large crane lifts were purposely delayed because of high winds and inclement weather.
- Dredging at the Area 1 wharf is now complete.
- Tank 120 is currently undergoing scheduled maintenance. Significant efforts are being made with regard to limiting noise and neighborhood impacts. Jim provided some examples including the use of sound screens and timing of potentially noisy work.

- Ray Lord presented a quick update on the security issue on Dec 23<sup>rd</sup> whereby a stolen car being pursued by the RCMP had hit the Chevron fence in Area 1. There were no injuries, the suspect was safely apprehended and fence repairs quickly completed. Refurbishing of damage to the lawn and a tree is being planned.

#### **b. Emergency Notification – Ray Lord**

- Ray reported that research into potential web-based emergency notification options has made good progress. Chevron has sourced proposals from several potential system vendors and selected a preferred supplier (Rapid Notify). The proposal would involve an offer from Chevron to the City to financially support the acquisition of such a system that could be managed and operated as part of the City of Burnaby's emergency management processes. Chevron plans to present the proposal to the City in two phases – one focusing initially on the North Burnaby area surrounding the refinery before being expanded to cover the entire city of Burnaby. Ray hopes to begin consultation with the city in the next few weeks.
- A similar system is currently deployed by the North Shore Emergency Management Office in North Vancouver. There is a voluntary opt-in subscription in place as well as uploaded residential reverse 911 telephone data.
- It should be noted that in terms of costs, the local refinery neighbourhood database sized system may cost in the order of \$8,000 to \$10,000 per year, whereas a larger city-wide system would cost approximately \$30,000 per year.
- Legal issues regarding Canadian Federal and B.C. Provincial data privacy regulations will need to be addressed.

Questions about the general refinery updates:

#### **Q1: Who owns the grass the vehicle damaged?**

A1: It is part of buffer zone property and that specific section affected is maintained by Chevron.

#### **Q2: Would fence sustain a straight-on impact?**

A1: The fence was not penetrated in this case but any chain-link fence would not be able to stop a vehicle intent on going through it. Other security measures are in place to protect the facility in addition to the perimeter fencing.

#### **c. Area 2 Seep**

- Jill Donnelly provided an overview of the absorbent clay material and mats that were installed at the beach. She explained that monitoring wells were placed in the clay and around the clay. This enables regular sampling of the area.

- Testing has shown that the mats are effectively absorbing hydrocarbon. In addition tests have confirmed that the clay still has capacity to absorb more hydrocarbons and has not yet reached saturation. However, “channeling” is starting to occur, as the groundwater finds preferred pathways. This movement is being directed towards the anchor trench. Plans are in place to address this by excavating and removing affected material in the anchor trench. More absorbent clay and mats will be installed, effectively doubling the absorbent area.
- In addition, sub-surface baffles are scheduled to be added, to spread the flow to areas of the absorbent material. Work is anticipated during March 2012.
- The DSI (Detailed Site Investigation) was posted to the CAP website prior to the CAP meeting. The objective of the DSI is to find the boundaries of any impacted zone. This is done using a sampling grid over several periods. Results are then compared to regulatory standards or known “control/reference areas”
- The DSI results identified limits of the seep and this result confirmed Chevron’s initial estimates of the extent of impacts. The standards were slightly exceeded in some areas, primarily in the trench area.
- Some compounds (i.e. metals) will need further study. Metals do occur naturally and can affect results. They don’t always correspond neatly in test results to the presence of hydrocarbon.
- Chris Boys guided CAP through the report and explained how to navigate through it. He stated the importance of reading the executive summary first as this concisely summarizes the objectives and conclusions. The DSI and an explanatory fact sheet are also available to review at the CAP website.
- Chris took the CAP through several charts showing ground water sampling; sediment testing and sea water sampling. A distinction was shown between the sampling conducted before and after the organo-clay barrier was installed.
- As part of the refinery perimeter extraction system, additional wells have been installed to the east and west of the subject area. Jill stated that it could take a few seasons to show seasonal effects of water table fluctuations and will allow enough time to determine the overall effectiveness of the extraction wells.

Questions about the seep include:

**Q1: Is there an assumption that the seep will continue?**

A1 Yes, because it moves slowly. Chevron will be monitoring and managing this for many years.

**Q2: Where did you find hydrocarbons in the anchor trench at the foreshore?**

A2: Hydrocarbon impacts in the anchor trench were observed in the central portion of the east trench at depths up to 0.8 meters.

**Q3: How deep is the clay trench?**

A3: The clay trenches are up to 1.2 m deep. The assessment found minimal impacts below that depth.

**Q4: Where are low/high tide marks and railway tracks located?**

A4: Chris and Jill explained referring to a large cross sectional map on the screen. (see attached presentation)

**Q5: Why were the mats analyzed and what were the results?**

A5: It was to measure the absorbency capacity left in the clay layer and the saturation point.

**Q6: What metals did you find?**

A6: Zinc, thallium, copper and nickel were found in varying concentrations. Chris referred the CAP to check the relevant tables in the report.

**Q7: Have you exhausted all other sources for the Seep?**

A7: The investigation indicates the north sewer as being a known contributor to the seep. That was why the sewer was taken out of service. Any hydrocarbon that has already migrated off site will require active mitigation for some time.

**Q8: When would the human health and environmental impact assessment reports be published?**

A8: The human health and ecological impact problem formulations have been submitted to the Ministry of the Environment. The assessment involves chemical analyses and examines what, how and who (human, fish, marine life) may be exposed. The results are pending but indications to date indicate that Human health has not and will unlikely be negatively impacted.

**Q9: Were any concentrations of lead and iron found?**

A9: Yes, iron is a naturally occurring metal and the concentration of lead found was very small.

**Q10: In June it was reported that 16,000 liters were recovered, what is the most recent number of liters?**

A10: We are focused on the effectiveness of the system. The system has changed over recent months so an “apples to apples” comparison would not be applicable.

**Q11: Where is the water from the wells treated?**

A11: All extracted liquids are treated in our on-site treatment facility.

#### **d. Site Remediation Summary Update**

- Chris Boys reviewed and provided an update on the regularly presented site remediation activity summary. He reviewed each of the areas that are being tracked over time and reiterated that our primary focus continues to be the Area 2 Seep.

#### **Q1: Where are the new seep related wells on the Area 2 map?**

A1: The area to the east and west of the Seep was pointed to on the area map. 44 wells have now been installed, up from 14 reported at the last briefing.

#### **Q2: Have they shown much hydrocarbon?**

A2: No

### **3. Metro Vancouver Updates – Larry Avanthay**

- Recent activities include the investigation of a reported oily-sewer odour near the Confederation Park off-leash dog park. A very slight odour was identified at one location during the neighborhood odour survey. An inspection was also conducted at the refinery to review the bleach injection system used to control the sewer odours. The system was operational and had measurable chlorine residual. (January 11, 2012)
- Site inspection was also conducted to review status of gasoline tank #120 refurbishing as well as a review of the marine vapour recovery unit. The inspection was prompted by earlier complaints and off-site identification of a finished product odour. Chevron will be supplying MV with additional information on their tank cleaning protocols including odour control measures. (January 18, 2012)
- A site inspection was also conducted in November to view the operation of the FCCU and audit testing protocols for measuring PM 2.5 & PM 10 stack emissions. (November 21, 2011)

### **4. CAP Q & A**

Catherine Rockandel provided an overview of topic areas that CAP members had brought forward for discussion in pre-CAP meeting telephone conversations. It was suggested that a new Q&A process be introduced to regular CAP meetings to support enhanced information sharing and discussion.

#### **1. Penzance Fence Line Vegetation**

- Ray addressed the functionality of refinery perimeter fencing. From a security perspective, the fence is secure. The fence line needs to be visible, in part to see if it has been compromised. Chevron does appreciate neighbors' aesthetic concerns and works hard to maintain fence line and tree care along our property.

**Q1: What can also be done about illegal dumping on Penzance?**

A1: Illegal dumping occurs on the roads edge. Chevron regularly alerts the city on reports of illegal dumping but can do little to enforce.

**Q2: Can we also give consideration to tree trimming along Madison?**

A2: Yes. Trimming or topping of trees can be a problematic and complex matter given contrasting interests and concerns of various neighbours, the City of Bby and Chevron. It is Chevron's intent to bring further information on vegetation management plans for the Area 1 tank farm perimeter area to a future CAP meeting.

**b. Odor Neutralization**

- Jill indicated that there have recently been a few Area 1 odor complaints. Some reports mention an "industrial Fabreeze" smell and the perception held by some neighbours that some form of odour control is being used by Chevron.

Jill reviewed the detailed procedures Chevron uses to gain access to and prepare a tank for cleaning. All fuel is emptied; the tank vapour is then evacuated through carbon filters. This process is repeated until no measureable hydrocarbon vapor remains in the tank. Only at this point are personnel allowed to enter the tank to begin work. By regulation, a certain volume of air must be moved through tank and fans are used to extract this air.

Tank maintenance contractors will on occasion use an odor neutralizer. The neutralizer locks onto the hydrocarbon molecules, forcing the molecule to fall to the ground to decompose safely into water and CO<sub>2</sub>.

She presented a sample Anotec for the CAP to examine. (The primary ingredient is formed from the Eucalyptus tree and is a natural product). Jill explained that the product is not an odor masking agent but a neutralizer.

- Jill conducted an impromptu survey for CAP members distributing a box of Bounce dryer sheets and a sample of Anotec. She asked members to evaluate whether the smell of Anotec differed or was similar to "Bounce." (70% said different.) Once all members had replied she shared a story regarding a recent odor complaint. Jill responded to the complaint personally, along with a refinery shift supervisor and on arrival smelled an intense "Bounce" like odor. At the time of the investigation visit, no tank cleaning or use of Anotec was occurring at the refinery. The source of smell was unknown.
- Larry commented that Metro Vancouver had received two complaints that had been described as "industrial Fabreeze".

### **c. Buffer Zone Air Quality**

Larry had reported earlier that Metro Vancouver does have air monitoring stations in the community at Eton and Madison (T024) and on Capital Hill (T023). The August 2011 review of PM10 monitoring data at T024 concluded that there weren't any exceedances of PM10 objectives or standards during the review period and those PM10 concentrations were very similar as other monitoring stations located in the Lower Fraser Valley. Periodic reviews of the PM10 data will occur. Study posted on CAP site at <http://www.chevroncap.com/files/documents/Attachment2PM10atT24Memorandum.pdf>

Several years ago, MV required Chevron to model VOC emissions from the facility and undertake a year-long VOC study with monitoring equipment located along the fence line of Area 2 and next to the lawn bowling club. The results of that work indicated that the existing monitoring station at T024 was appropriately positioned to measure maximum VOC concentrations in the community surrounding Chevron. A VOC sample is taken at the stations once every 6 days for a 24-hour sample period and sent to Ottawa for analysis. The highest concentrations were found to be at the T-24 monitoring station.

#### **Q1: Is the McGill Park area similar to the area near T-24?**

A1: Yes, it was anticipated the air quality would be similar at McGill Park based on the close proximity of T24

#### **Q2: How many homes are in buffer zone?**

A2: There are about 15 existing homes still located in the buffer zone - some of those are on McGill Street.

### **d. Pipeline Proposals – Jim Gable**

- Jim explained that the Trans Mountain (TMX) pipeline originates in Alberta and is the only pipeline to the west coast. Owned by Kinder Morgan and approx 300,000 barrels a day of mixed products flow through it. Chevron is only refinery in Lower Mainland.
- A leak near Edmonton last year resulted in a reduction in line capacity of around 20%. It will remain that way until regulators are satisfied with the pipeline's integrity.
- Discounted crude is available in Alberta and is in high demand on the west coast.
- There is a process of open bidding with bids submitted each month by the various companies and refineries that use the TMX pipeline.
- Suppliers in Alberta want to sell crude and also want to tap potential offshore markets in Asia.
- There is a proposal being considered to twin the existing pipeline which would in effect double the capacity (to between 580k & 700k bpd approx). A previous proposed expansion in 2005 failed due to lack of interest. However, current market conditions may make this more viable. Chevron is considering its options. Due to the competitive

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nature of this process and confidentiality requirements Chevron cannot discuss specific details with CAP.

- Chevron's current Burnaby refinery capacity is 55,000 a day. Chevron's has no plans to expand at this time. We cannot run above 55k a day so the new pipeline would simply ensure normal crude supply capacity is maintained.

**Q1: Is extra crude being shipped across border?**

A1: About 175,000 barrels are routed south of the border.

**Q2: How much wear/corrosion effect does the product have on the pipeline?**

A2: Like all liquids there is always going to be some incremental wear of the pipeline over time. The pipeline however is very closely monitored with a regular inspection and maintenance program in place.

**5. 2012 Agenda Topics Review & Prioritization**

Catherine reviewed the 2012 agenda topics identified at the Neighbourhood CAP meeting on November 24, 2011. These included:

- *Flaring*
- *Local traffic planning*
- *CAP Administrative review and assessment*
- *Refinery Security*
- *Perimeter vegetation plan*
- *Maintenance news turnarounds*
- *Odor management plan*

Chevron recommended CAP establish priorities from this list to ensure key areas of concern were covered in the remaining three CAP meetings for the year. It was agreed that "local traffic planning" could be eliminated as local traffic issues are managed by the City of Burnaby and are not something that Chevron has any control over. It was suggested that a more informal Q & A approach could work to exchange and share pertinent information on such a subject of general interest. The CAP concurred.

Each CAP member indicated their top three priority items, when these were ranked the priorities were as follows:

- 1) Emissions Management / Odor Management \*
- 2) Refinery Security
- 3) Flaring

Note: Although Odor Management Plan ranked fourth CAP decided to combine the issue with Emissions Management.

In terms of the other issues

- Emergency Notification – The current proposal being advanced is ongoing and an update can be provided as necessary.

**Q1: Could security be a focus for the general public meeting?**

A1: Jim Gable commented on the knowledge level of CAP as opposed to the general public and this may make the discussion about security difficult.

**Q2: Could we focus on Emissions Management and Refinery Security at the May meeting?**

A2: CAP concurred – though Jill indicated the two topics may be too large for one meeting

**Q3: Could we discuss the Neighbourhood meeting at the May meeting?**

A3: Facilitator to add to agenda

**NEXT MEETING:** Thursday, May 2, 2012

Confirmed Meeting Schedule: Wed, May 2; Thursday, Sept 13; and Wednesday, Nov 21, 2012 (Annual Neighbourhood Meeting)

**ADJOURNMENT**

- Catherine encouraged members to contact her in advance should any questions or concerns arise between meetings, otherwise she will call in April to begin planning the May meeting.
- Meeting adjourned at 9.05pm.