

**Chemtrade Logistics-ERCO Worldwide-Univar Canada-Terrapure Environmental
North Shore Community Advisory Panel (CAP)
MEETING SUMMARY NOTES
Valor Fireplaces, 190-2255 Dollarton Highway, North Vancouver
5:30 pm Dinner/Meeting 6:00 pm to 8:00 pm
Thursday, February 22, 2018**

Attendance

Robin Lee, Univar
Steve Spence, Terrapure Environmental
Rob Schultz, Chemtrade Logistics
Brian Scott, ERCO Worldwide
Maureen Clarkson, ERCO Worldwide
Fiona Dercole, NSEM
Brian Hutchinson, DNV
Mairi Welman, DNV
Anastasia Ovodova , Port of Vancouver
Kevin Bell, Wild Bird Trust
John Miller, Lower Capilano Residents
Association
Tracey Godin, Miles Industries
Calvin Tran, Miles Industries
Dave Mair, Resident
Val Hammerberg, Maplewood Area
Community Association (MACC)
Stuart Porter-Hogan, Maplewood Area
Community Association (MACC)
Sharon Porter, Resident
Lisa Richardson, Resident
Cathy Brydon, Resident
Babs Perowne, NV Can

Regrets

Tom Miller, ERCO Worldwide
Duncan Webb, Port of Vancouver

1. Introductions

CAP members introduced themselves and welcomed guests attending CAP for the first time. A thank you was given to Valor Fireplaces for hosting in their newly renovated space.

2. Discussion around October 2nd incident

Rob Schultz from Chemtrade Logistics spoke to the incident on October 2nd. He clarified the cause of the incident as during the process of preparing one of the acid plants for maintenance, the operator bypassed the wrong interlock, and took the fail safe out. After 3 minutes, it was shut down manually by the operator. There was a small chlorine release. The wind was blowing from west to east and ERCO and Terrapure were affected. The perimeter alarms went off and ERCO activated shelter in place. The community called 9-11 and the fire department arrived.

The corrective action that was taken was a tightening of the interlock protocols, which now require second level sign offs on particular equipment. If Chemtrade initiates a siren from now on, they will let Rapid Notify know. There is a recognition that maybe the plant needs to notify Rapid Notify that it is only level one, as in this case they only notified affected people.

Valor Fireplaces staff said they had smelled chlorine and called Chemtrade and ERCO and got no response, so called 9-11. The staff were waiting for Rapid Notify to see if there was a community alert. It seems they may have called Chemtrade security, who were not informed of what was going on. Rob clarified that security is supposed to contact the Plant Manager and get back to the caller with the relevant information. Chemtrade has been doing the first Tuesday of the month at 10am as part of the testing to improve communication.

A member asked if it was possible to have consistency of tone among the industry sirens. ERCO clarified that the siren was meant only for their plant, the same with Chemtrade, and that the siren is manual not automatic.

Maureen Clarkson, Safety Manager from ERCO Worldwide, added to the report on the October 2nd incident. She said there were 20 people on site that day, and they had contractors working on the line between Chemtrade and ERCO, who could smell chlorine. They contacted the ERCO Maintenance Manager, who then contacted Chemtrade. The security officer at Chemtrade told ERCO that they should shelter in place, as they had not yet resolved the issue. One ERCO contractor had not reported to the muster station, so the ERCO horn stayed on for 10 minutes until he came inside. The fire department came to ERCO and then went to Chemtrade. Maureen clarified that

now, the contractors are being made aware of the system and ERCO is collecting their phone numbers, so they can be contacted in this kind of situation.

A member asked how people outside at distances would know what was happening in an emergency. Also, the question was raised about what is the best way to tell residents and visitors to act and how? There was consensus that education and communication are needed to alleviate anxiety. A pressing question was when there is a prolonged alarm, what does the communication need to be?

Fiona Dercole from NSEM suggested that they do a test of Rapid Notify to the neighbourhood area rather than just the immediate vicinity of an affected area, in order to help residents gain trust in the system, as a few members had said they had not received Rapid Notify messages.

The DNV Fire Chief clarified that the fire department has protocol in place that includes community protocol with industry. Their employees have undergone the same training as plant employees. All personnel are trained to an operations level in hazardous materials. The City of North Vancouver is specialized in this and can be called on if needed.

Fiona said that in April 2018, digital providers in Canada will gain the capacity to send a message to everyone in an affected area through the National Public Alerting system.

There needs to be a way to communicate a message if needed, for example, Facebook. The message needs to come from a variety of places.

Action items:

As a group, writing a letter to emphasize the need for the legislation coming through in April, encourage quick action. Fiona to lead this. Reach out to Responsible Care across the country.

Social media: NSEM is an excellent avenue. They can put message on Facebook and Twitter and their website as soon as they receive the Rapid Notify from Chemtrade. Fiona also made the point that the plants need to give specific information to the NSEM operators when they call so they know who Rapid Notify should go out to.

NSEM wants to gather information from the community about the best way to communicate. Communication needs to happen with both older and new residents. This

should explain how to sign up for Rapid Notify and could include a postcard drop, website, Facebook, Twitter, posters in the community (including Stongs, the gas station, Wild Bird Trust, Superstore). Also, people should get a package of information when they move into the neighbourhood including shelter in place and information to follow on social media. Fiona mentioned that NSEM had given out magnets with this information before.

Protocol – send a message to notify public with prolonged alarms?

A challenge is that the plants here don't have communication staff as they are only at the head office. Maybe someone in the plant needs to be responsible for communication in this situation. Everything can be done by NSEM but they have to be notified and the Fire Department would want a 9-11 call as well.

NSEM can put a banner on their website and also expand the education piece on their website. NSEM will develop a strategic plan for Maplewood in particular going forward.

Steve Spence from Terrapure posed the question: What level of actionable item does the community feel they need to be informed of?

Robin Lee from Univar proposed that the plants could look at their own systems to see how they can minimize impacts on the public when internal alarms go off; for instance, by reducing the time of the alarms.

Trust and communication among all involved are key! Plants' individual protocol as well as a standard response of NSEM to the time of the alarm would help build this trust. People would then know to go to the NSEM website and if there was nothing there, they would be reassured that things were okay.

Fiona raised the issue of overloading people with Rapid Notify, and therefore the necessity of educating the public so they know what to do when they receive the notification and don't overload the emergency lines.

Rob suggested they could do a test with CAP members' numbers. Interested members were asked to send their cell phone number to the CAP facilitator.

A member asked what the community should do in the case of a major spill. The response was to stay inside with doors or windows closed, close air vents, and tune into social media.

The point was made that there needs to be clear information on shelter in place and the difference between this and an alarm. A suggestion was to create a video on shelter in place.

A resident talked about having a physical reminder to put in an important place.

Fiona clarified that NSEM would come to the next CAP meeting with a proposed communications campaign. They would bring a draft of the postcard to the next meeting for members to give feedback. She mentioned that in the past, industry had funded materials, and questioned whether this was something they would want to repeat.

There was the idea of having a special Blockwatch of CAP members as point people when there is panic in the community. This could be the start of the education of residents.

A community member asked about the commonality of the three leaks in Chemtrade since 2011. Rob replied that they were each unique in origin.

3. Reports from the Companies:

a) Chemtrade

Rob Schultz reported that the investigation of the minor chlorine release from October 2, 2017, showed the cause to be when an interlock was incorrectly bypassed during preparation of one of the acid plants for maintenance. The following changes have been implemented: the ability to bypass interlocks has been restricted to prevent recurrence of such an event; the Rapid Notify system will be utilized more effectively whenever the plant activates its shelter in place siren or if a neighbor activates their shelter in place siren as a result of an incident that occurred on our site.

Chemtrade has multiple safety systems in place. These are detailed in the attached report.

Chemtrade had no lost time Safety incidents since the last CAP meeting in November.

There have been two new Environmental incidents since the last CAP meeting in November 2017.

On December 4, 2017, a small drip was discovered on a caustic rail car from the bottom offloading valve while performing inspections on the outbound rail car shipment. The car was immediately secured and the leak stopped. The leak was reported to appropriate

regulatory agencies and an investigation followed. The leaking car had just come out of the Procor shop after completing a qualification inspection. Procor has completed their investigation and modified their procedures to include additional inspections, two employee sign offs and additional training of employees.

On January 9, 2018, during routine effluent permit sampling, the sample taken and submitted exceeded permit limits for Copper (22.7 ug/L compared to permit limit of 20 ug/L). An internal investigation is currently underway. The test result was unusual, much higher than historical levels and with no abnormal activities in progress at the time. There is a possibility that the sample was not representative.

b) ERCO Worldwide

Brian Scott reported that ERCO employees have now worked 646 days since the last Recordable safety incident (05/17/16) & had 2605 days since last Lost Time Accident (Jan. 5/11). Site & departmental meetings held to establish safety & environmental goals for 2018.

3rd Party compliance testing of dryer dust scrubbers is scheduled for next week.

ERCO is currently planning for a 2-week plant shutdown, beginning April 9th to allow for new capital installations and scheduled maintenance. During this time, an old cell line rectifier transformer (circa 1991) will be replaced and internals of the Crystallizer vessel will be repaired.

c) Univar

Robin Lee reported that Univar had a mid-term audit by Transport Canada of the site Marine Security Plan, which went well. The plant also had an Internal EHS audit – review of overall site operating discipline. There were no major issues but the report is not yet finalized. Robin will review any corrective actions next meeting.

There is a requirement to ensure neighbours are informed of a “worst case scenario without mitigation” incident. Modeling has finally been completed and there are a few businesses directly east of the site (Orwell Street) that must receive some information. Univar plans to create a tri-fold pamphlet & update the plant website with appropriate information. In addition, the site will visit the neighbours in person to distribute the information and answer any questions.

The potential effects are smelling high levels of denatured ethanol. Univar would appreciate members’ feedback on the draft information at the CAP next meeting.

Overall rail service in Western Canada has been very challenging with weather, congestion and extended turn times. Univar is looking at potentially adding some additional track to

help manage car volume fluctuations. CN derailed 3 railcars in Thornton yard (all caustic residue), one so badly it had to be scrapped – but there was still no product release.

d) Terrapure Environmental

Steve Spence reported that the Terrapure facility continues to operate injury free. He reminded CAP members that Terrapure tests its emergency evacuation horn on the first Monday of each month at 10:00am. Also, Terrapure does not have any potential risks identified that would require a Shelter in Place emergency response.

On February 8th, there was an overfilled Railcar Incident when the plant received a railcar of used oil feedstock from a 3rd party contractor. When attempting to off load the railcar, it was found to be over-filled, resulting in a spill of an estimated 50L of used oil. The railcar was on the 'spot 4' off-loading station where there is integrated spill containment. All used oil spilled was collected and pumped into our feed tank, no loss of product reported. The incident was investigated by the contractor. A recent conference call with the contractor revealed that the root causes were missed safety checks and incorrect outage assumptions. Corrective actions have been put in place since the incident to prevent future occurrences.

Terrapure is currently focused on 100% core training compliance by the end of Q1, including, Workplace Hazardous Materials Information System, Transport of Dangerous Goods, Confined Space Awareness, H2S Alive and First Aid.

4. Other Business

The facilitator reported that Maplewood Farm would not be an option for the CAP Wrap Up as it is not open evenings. She would send an email to members to provide alternative options and clarify members preference as booking needed to be made quickly.

5. Meeting Evaluation and Close

The meeting ended at 8:10pm.

The next CAP meeting is scheduled for April at Terrapure Environmental including a facility tour. However, the date will need to be changed. The new date will be confirmed with CAP members via email.



Community Advisory Panel (CAP)

Feb 22, 2018 Briefing Notes

Responsible Care – Safety, Security, & Environmental:

Safety: There have been no lost time Safety incidents since the last CAP meeting in November.

- Environmental: There has been two new Environmental incidents since the last CAP meeting in November 2017 as follows:
 - On December 4, 2017.
 - While performing inspections on the outbound rail car shipment a small drip was discovered on a caustic rail car from the bottom offloading valve.
 - The car was immediately secured and the leak stopped.
 - The leak was reported to appropriate regulatory agencies and an investigation followed.
 - The leaking car had just come out of the Procor shop after completing a qualification inspection.
 - Procor has completed their investigation and modified their procedures to include additional inspections, two employee sign offs and additional training of employees.
 - On January 9, 2018.
 - During routine effluent permit sampling the sample taken and submitted exceeded our permit limits for Copper.
 - The tested levels of Copper were reported at 22.7 ug/L compared to our permit limit of 20 ug/L.
 - An internal investigation is currently underway. This was an unusual test result, much higher than historical levels and with no abnormal activities in progress at the time. There is a possibility that the sample was not representative.
- Follow up comments based on questions raised by CAP members regarding the minor chlorine release from October 2, 2017.
 - Based on wind direction at the time of the incident (West to East) the affected neighbors were Erco and Terrapure.

- This triggered Erco Worldwide's Emergency Response Shelter in place protocol which is initiated by the activation of the Erco's emergency siren.
 - It appears the siren may have triggered a call from the neighboring public to 911.
 - First Responders (Fire Department) responded to the ERCO facility. After a briefing with the Plant Manager, the First Responders were redirected to the Chemtrade facility.
 - The Fire Department confirmed that there were no injuries at the Chemtrade site and left the facility.
- Incident investigation
- The chlorine release was caused when an interlock was incorrectly bypassed during preparation of one of the acid plants for maintenance.
 - From the investigation the following changes have been implemented.
 - The ability to bypass interlocks has been restricted to prevent recurrence of such an event.
 - We will utilize the Rapid Notify system more effectively, whenever our plant activates our shelter in place siren or if a neighbor activates their shelter in place siren as a result of an incident that occurred on our site. In an instance such as this, the Rapid Notify message would have indicated that there was an incident at site, but that it did not represent a risk to those being notified therefore reducing the anxiety and concern in the community in the vicinity of the facilities.
- Chemtrade systems.
- We have an array of ~60 highly sensitive chlorine sensors strategically located around the facility.
 - All our instrumentation is maintained by highly trained Industrial Instrumentation Mechanics who all possess a Red Seal Technical Qualification designation recognized by the province of BC.
 - We operate the plant site under several operating permits and comply with all the required regulatory testing requirements detailed within each operating permit. These include air and water permits.
 - Our operators are highly trained specialists in their field. They undergo routine procedure reviews and ongoing training to maintain their competencies.
 - We have a robust emergency response program to deal with on-site emergencies and the program is tested regularly through drills and table top exercises.
 - The plant has a plume dispersion modeling system (Safer) that uses real time wind directions and chlorine sensor readings to predict potential impacts off of our site. This can be directly linked to first responders to help evaluate and determine effective response measures to implement.

- In the event of a loss of power we are equipped with an emergency generator that will allow for a safe shutdown, isolation and evacuation of the process equipment.
- Security:
 - There have been no Security incidents since the last CAP meeting.
- Transportation:
 - There have been no Transportation incidents since the last CAP meeting.
- Responsible Care in our Community:
 - On Friday February 23 we will again be hosting a tour for local teachers as part of a Professional Development day.

Plant Operations:

- The plant experienced an unplanned outage in November resulting in the plant being down ~17 days
Despite the lengthy unscheduled outage the plant set a record production year for 2017.
- Our maintenance outage is currently planned to begin on ~April 13, 2018 for approximately 10 – 12 days.



ERCO Worldwide Update (since CAP meeting on November 21, 2017)

- **Operations**
 - Plant has operated well, near capacity, since our November CAP meeting except for scheduled maintenance shutdowns on each cell line (approx. every 8 weeks) – in which each cell line is shut down for approximately 16 hours for maintenance & cell acidwash. (Line 8: Nov. 21, Jan 17; Line 7: Dec 6, Jan 31).
 - However, in late January & again this week, rail delays in sending railcars to plant, have caused us to reduce plant load.
 - ERCO NV is again participating in BC Hydro's Load Curtailment Program (Dec 1 – Feb 28th). At a 1-hour notice from BC Hydro, ERCO will curtail 100% of capacity (64 MW) for a 4-hour period. This allows BC Hydro to provide needed extra electricity to lower mainland in periods of high usage – i.e. cold weather. We have been curtailed 4 times since December 1st, and expect a few more before the end of February.
- **Safety/Environmental**
 - ERCO employees and contractors continue to work safely. As of today, ERCO employees have worked 646 days since last Recordable safety incident (05/17/16) & 2605 days since last Lost Time Accident (Jan. 5/11).
 - Last Reportable environmental incident was May 15, 2013 due to a leaking fitting on a pneumatic transfer system for crystal sodium chlorate – less than 100 kg was spilled to ground, and 100% was recovered – but because it was out of containment it was a Reportable incident.
 - Site & departmental meetings held to establish safety & environmental goals for 2018.
 - 3rd Party compliance testing of dryer dust scrubbers scheduled for next week.
- **Miscellaneous**
 - ERCO is currently planning for a 2-week plant shutdown, to begin on April 9th to allow for new capital installations & scheduled maintenance. The two major items to occur during this shutdown are the replacement of an old cell line rectifier transformer (circa 1991) and Crystallizer internal vessel repairs. There are numerous other maintenance activities being scheduled, & the goal is to start up on morning of April 23rd.

Tom Miller, February 22, 2018



Univar Canada update – February 2018

Safety

- 681 days since last reportable
 - Mid term audit by Transport Canada of site Marine Security Plan – went well
 - Internal EHS audit – review of overall site operating discipline – no major issues but report not yet finalized – will review any corrective actions next meeting

Environmental

- Zero reportables
- E2 Plan communication – there is a requirement to ensure neighbours are informed of a “worst case scenario without mitigation” incident. Modeling finally completed and there are a few businesses directly east of our site (Orwell Street) that must receive some information. Univar plans to create a tri-fold pamphlet & update our website with appropriate information. In addition, the site will visit the neighbours in person to distribute the information and answer any questions.
 - Potential effects are smelling high levels of denatured ethanol
- Would appreciate feedback on the draft information from the CAP next meeting (given timing issues Feb 22nd)

Terminal General

- Operating with steady volumes
- Overall rail service in Western Canada has been very challenging with weather, congestion and extended turn times – across the board, many industries
 - Looking at potentially adding some additional track to help manage car volume fluctuations
- CN derailed 3 railcars in Thornton yard (all caustic residue), one so badly it had to be scrapped – but still no product release.

Current status

- Facility is currently operating at full capacity

Health, Safety and Environment

- Our facility continues to operate injury free, 5500+ days since our last lost time injury
- Reminder that Terrapure tests its emergency evacuation horn on the first Monday of each month at 10:00am
- Terrapure does not have any potential risks identified that would require a Shelter in Place emergency response
- Overfilled Railcar Incident:
 - February 8 received a railcar of used oil feedstock from a 3rd party contractor
 - When we attempted to off load the railcar, it was found to be over-filled, resulting in a spill of an estimated 50L of used oil
 - Railcar was on our 'spot 4' off-loading station where there is integrated spill containment. All used oil spilled was collected and pumped into our feed tank, no loss of product reported
 - Incident was investigated by the contractor. A recent conference call with the contractor revealed that the root causes were missed safety checks and incorrect outage assumptions. Corrective actions have been put in place since the incident to prevent future occurrences

Training and Audits

- Focus is on 100% core training compliance by the end of Q1
 - WHMIS – Workplace Hazardous Materials Information System
 - TDG – Transport of Dangerous Goods
 - Confined Space Awareness
 - H2S Alive
 - First Aid