

**Chemtrade Logistics-ERCO Worldwide-Univar Solutions-GFL Environmental  
North Shore Community Advisory Panel (CAP)  
MEETING SUMMARY NOTES  
Chemtrade Logistics, 100 Amherst Avenue, North Vancouver**

**Dinner 5:30pm / Meeting 6:00 pm to 8:00 pm  
Wednesday, June 28, 2023**

**Attendance**

Owen Horn, Chemtrade Logistics  
Brian Scott, ERCO Worldwide  
Steve Spence, GFL Environmental  
Meraz Sekhon, Univar Solutions  
John Miller, Lower Capilano Residents Association  
Babs Perowne, NVan Can  
Barbara Rennie, Blueridge Community Association  
Stuart Porter-Hogan, Maplewood Community Association (MACA)  
Stuart Meyer, Miles Industries  
Dave Mair, Resident

**Regrets**

Robin Lee, Univar Solutions  
Andrew Van Eden, Tsleil-Waututh Nation  
Nini Samra, Tsleil-Waututh Nation  
Alex Adams, Blueridge Community Association  
Anastasia Ovodova, Port of Vancouver  
Suzanne MacLeod, Kenneth Gordon Maplewood School  
Stella Tsiknis, Kenneth Gordon Maplewood School  
Tammy Dong, First Nation's Emergency Services

**1. Welcome and Introductions**

All CAP members present knew each other so there was no need for introductions.

**2. Review of April CAP meeting minutes**

Members reviewed the April CAP meeting minutes. No edits to the original draft sent out after the meeting were noted. The facilitator will finalize the April meeting minutes and send them to DNV to post on their CAP information webpage.

**3. ERCO Worldwide Presentation on Plant Risk Mitigation Strategies**

Plant Manager, Brian Scott, explained that the ERCO North Vancouver plant operates on a 20-acre site in an ecologically sensitive area. The plant started with graphite

technology in 1957. ERCO cell technology was installed between 1988-1991. New ERCO-designed high efficiency cells were replaced in 2005-06, and a replacement cycle is currently underway and 95% complete.

ERCO Worldwide LP celebrated its 125-year anniversary on November 3, 2022. Its nameplate capacity is 103,400 MT Sodium Chlorate. The North Vancouver plant has 40 full-time employees and high plant on-time (more than 90% capacity for the past 15 years).

ERCO has the following risk mitigation strategies in place:

- Responsible Care Verification
- Process Designed and Maintained for Safe Operations
- Process Safety Management
- Quantitative Risk Assessment
- Emergency Response Training and Preparation

ERCO Responsible Care policy is as follows:

As a member of the Chemistry Industry Association of Canada, the company fully supports the industry's responsible management of chemicals and the practice of Sustainability. The principles of Responsible Care are key to ERCO's business success, and compel them to:

- work for the improvement of people's lives and the environment, while striving to do no harm;
- be accountable and responsive to the public, especially their local communities, who have the right to understand the risks and benefits of what they do;
- take preventative action to protect health and the environment;
- innovate for safer products and processes that conserve resources and provide enhanced value;
- engage with their business partners to ensure the stewardship and security of their products, services, and raw materials throughout their life cycles;
- understand and meet expectations for social responsibility;
- work with all stakeholders for public policy and standards that enhance sustainability;

- promote awareness of Responsible Care and inspire others to commit to these principles.

The Responsible Care commitment includes:

- Striving to the ethic to “do the right thing and be seen to do the right thing,” constantly innovating and working toward safer and greener products and processes, and to continuously improve their environmental, health, and safety performance.
- All aspects of a company’s business, employees, nearby communities, and the environment, over the entire life cycle of its products.
- Requirement to implement 3 codes of practice containing 150 requirements focusing on Operations, Stewardship and Accountability.

Process Designed and Maintained:

- Process is designed using the most recent technology and high-quality materials.
- There is environmental control equipment on all emission points.
- There was a cell technology upgrade in 2006, \$10 million in capital was spent.
- New design and process changes are reviewed for potential safety and environmental risks using MOC and PSSER procedures.
- There is a 5-year rotating cycle for HAZAN analysis of all plant processes.
- The plant has a modern distribution control system monitored by continually trained operators who control the manufacturing process.
- A preventative maintenance program reduces equipment breakdown.

Process Safety Management:

Process safety is defined as “a blend of engineering and management systems focused on preventing, or protecting against, incidents which release process materials or energy, particularly explosions, fire, and toxic releases.”

It is “the application of management principles and systems to the identification, understanding, and control of process hazards to prevent process-related injuries and accidents.”

ERCO follows a combination (based on site location and materials handled) of process safety management systems from:

*Meeting Summary Notes – June 28, 2023*

3

*North Shore Community Advisory Panel (CAP)*

- Chemistry Industry Association of Canada (CIAC)
- American Chemistry Council (ACC)
- OSHA 1910.119 PSM Standard

The CIAC process safety management system is used at the North Vancouver plant, which is part of CIAC Responsible Care® commitments and compliant with Canadian Environmental Protection Act (CEPA) Environmental Emergency Planning Provisions under Section 200.

CIAC PSM is comprised of 12 elements below made up of minimum requirements for policies, practices, and procedures. Each element utilizes Plan-Do-Check-Act management cycle.

- Accountability: Objectives and Goals
- Process Knowledge and Documentation
- Process Safety Review Procedures for Capital Projects (PSSER)
- Process Risk Management (Hazard Identification, Risk Assessment and Control)
- Process Risk Management (Emergency Response Planning)
- Management of Change (MOC)
- Process and Equipment Integrity (Operating Procedures)
- Process and Equipment Integrity (Mechanical Integrity)
- Human Factors
- Training and Performance Management
- Incident Investigation (Root cause analysis)
- Company Standards, Codes, and Regulations
- Audits and Corrective Actions
- Enhancement of Process Safety Knowledge

### **Quantitative Risk Analysis (QRA) Purposes**

- To provide an objective third party and expert assessment of the facility
- To provide a basis of continuous improvement in site risk mitigation (update existing emergency response procedures and support process hazard analysis).
- To fulfill commitments to neighbours through ERCO Worldwide's membership in the Canadian Chemical Producers Association (CCPA)

## **Risk = frequency x consequence of event**

In 1997, a third party *Quantitative Risk Assessment (QRA)* was performed by JBF Associates for ERCO NV to identify the *worst imaginable* and *worst credible case scenarios*. As per CCPA guidelines the following were outside the scope of study: other accidental releases, impact of external events (earthquake, flood, sabotage, etc.) secondary release events ('domino' events).

The modeling results from this work is used to update emergency response procedures and provide support for future project improvements to mitigate risk.

This QRA was communicated to CAP in May 1998 and again in April 2006:

### **1997 Quantitative Risk Assessment – Summary Worst Credible Scenario**

- This accident is NOT expected to happen but is taken into account when developing emergency plans.
- A release of the maximum possible amount of unscrubbed cell gas containing chlorine during typical weather conditions – 30 minute duration.
- Estimate for incident is 1 in 970 years.
- This scenario is NOT expected to expose any offsite member of public in the vicinity of the plant to concentrations that would cause health effects.

### **Worst Imaginable Scenario**

- Worst incident that could conceivably occur but is NOT expected to occur.
- Failure of 32 % w/w Hydrochloric acid tank, releasing contents into containment in worst possible weather conditions.
- Estimate for incident is 1 in 4300 years for frequency of exposure.
- Potential for serious injury on inhalation up to 2500 m from facility – requirements to shelter-in-place by neighbours.

Brian clarified that the Hydrochloric acid tank holds 83.7 M3 (22,111 USG) and is made of FRP (fiber reinforced plastic).

There are two capital projects that have been completed to decrease the risk associated with the worst imaginable scenario – installation of new hydrochloric acid tank and the new underground HCl containment sump.

### **CAP member questions**

**What is your mitigation strategy for people errors?**

There is extensive training for people working onsite as well as exams required for moving to the next level of work. Hazard Analysis (HAZAN) considers the human factor. The plants are designed to account for that so there is not reliance on a person.

**What about the safety aspect of truck drivers not from ERCO?**

They are still trained and follow ERCO chemical offloading procedures. Their names and the last time they received orientation are checked, and they are reoriented if it's been too long since their last orientation.

**What about temporary staff to cover vacations, are they limited to certain positions?**

We don't have temporary staff. We only have two summer students who have limited positions. Vacations are scheduled so we always have the required personnel. We allow 2 weeks of vacation for everyone during "prime time" (June 15-September 15).

**How long does training take?**

Three to four weeks. There is one on one training with an operator on shift, the Process Engineer and/or the Production Manager. The new employee is brought in to get fully versed with start-up and shutdown of the operational equipment during maintenance outages.

**Do you rotate staff roles and what about retirement plans?**

We cover with overtime with a person trained in that position if someone calls in and can't make their scheduled shift. People are trained one position up so that there is coverage when someone is on vacation, off sick or retires.

Stuart Meyer from Miles Industries mentioned that he wanted to practice shelter in place at his workplace on the day that Chemtrade does a monthly practice run by sounding their horn month. Owen said this is usually communicated to Chemtrade's immediate neighbours, as well as the Tsleil-Waututh Nation, DNV and NSEM, and he can inform Stuart of the date.

A CAP member asked how long it would take the emergency equipment to arrive at Chemtrade or if they are self-contained?

Owen said the plant has its own response with its own equipment.

**4. NSEM Update**

A NSEM representative was unable to attend the CAP. There is no NSEM update to provide at this time.

## **5. Reports from the Companies**

### **a) Chemtrade Logistics**

Owen Horn reported that there are no new incidents to report and that the plant's current injury rate is 0.0 for 2023. They had a surprise visit from WorkSafe BC to audit the site with no findings.

There are no safety or process safety incidents.

The plant is hosting the Chlorep teams from all over North America for a training event this week.

The plant had a surprise audit of their emergency response plan from Environment Canada with no findings but received recommendations regarding training and community engagement which they were planning to address by the end of the year.

There are no new transportation issues. In June, a boiler fan failure shut down the plant for two days. Driven by demand and pricing, the plant continues to be on track for a record production and revenue year. Union negotiations have started and are ongoing.

### **b) ERCO Worldwide**

Brian Scott reported that ERCO employees and contractors continue to work safely. As of June 28, 2023, NV employees have worked 1076 days since the last Recordable safety incident (July 7/20) and 4547 days since the last Lost Time Accident (Jan. 05/11).

On May 17, an effluent sample was collected as part of the Technical Assessment requested by the BC MoE. SLR environmental consultants collected a 100 Litre sample and then delivered it to a contract lab for toxicity testing of several different organisms.

ERCO NV plant has run well since the last CAP meeting on April 18. On April 19 and May 31, the plant took two one-day outages to complete acid washes on Line 8. On May 18, a one-day plant power outage was taken to repair a hot spot on the incoming high voltage line in the substation.

Two summer students have been hired to work in the FIBC packaging department.

On June 13, a public hearing was held at the District of North Vancouver council chambers for an amendment to the bylaw to allow a Clean Hydrogen Production Facility

at 100 Forester St, North Vancouver. The second reading of the rezoning bylaw is scheduled for July 10 at the DNV council chambers.

### **c) Univar Solutions**

Meraz Sekhon reported that there have been 773 days since the last personal safety recordable, and 4559 days since the last DAWC (as of end of day June 26, 2023).

There has been one reportable EHS incident and two other incidents since the previous CAP meeting.

#### Transportation Incident

- Loss of Primary Containment on vessel during Caustic discharge
  - Discharge to Univar had stopped temporarily while vessel carried out internal tank transfers as part of normal procedures
  - The vessel had a gasket rupture resulting in product (estimated to be approximately 200L) spraying onto the ship's deck, with some spray hitting the shore
  - It is estimated that approximately 1L entered into the water
  - There was no personal injury or exposure to either ship's crew or Univar personnel
  
  - Vessel reported to terminal, and both vessel and terminal immediately reported to the Harbour Master
    - Terminal also reported to PEP (Provincial Emergency Program)
  - All product from spill clean-up was contained on board
  - The dock area of concern was isolated until Univar's ER/Univar contracted its ER/Environmental Response provider (Quantum) sent a team to ensure the area was clean and safe for work
  - Terminal takes any such incidents very seriously and is working with the vessel operator to help ensure this does not occur again; training and procedures are currently being examined
  
- Loss of Primary Containment & Personal Safety – chemical exposure



- Caustic Truck Loading
  - Operator exposed to caustic while doing the pre-transfer valve integrity check
    - Residual pressure and product were present in a line where they should not have been resulting in an operator being splashed with caustic
    - Training was such that the product was rinsed off immediately with no further safety concerns
    - Terminal working with trucking dispatch to determine how to avoid in future
- Railcar repair
  - Residual product remaining in a line thought to have been clear
  - As the mechanic investigated the repair, more work was needed than first believed
  - Additional scope should have been addressed with Operations Supervision
    - Training believed to be root cause and changes have since been made to clarify when a full work permit is required

No first aid or further treatment was required in both the cases after the product was rinsed off.

Continuing the trend from the first quarter, Univar continued its behaviour-based safety observations to align with its overall corporate Canadian EHS requirements. A total of 46 field observations were carried out in the second quarter focusing on various operations like product transfer on ship, rail and trucks, rail operations, including rail switching and sampling of products.

On June 12, 99.24 per cent of the more than 7,200 dockworkers represented by the International Longshore and Warehouse Union voted in favour of a strike, if necessary. Univar is closely monitoring the situation involving the union and BCMEA. The decision will be announced on July 1 at 8am.

The latest official release RE job action can be found [here](#).

Terminal Manager, Robin Lee, attended the Port of Vancouver's Air Quality Climate change session in June focusing on environmental protection and sustainability, which had 130 participants.

The site is operating at steady throughput, and some summer maintenance projects will be undertaken given the weather.

#### **d) GFL Environmental**

Steve Spence reported that the refinery was running at 110% capacity. They are catching up after the shutdown, the clean plant is enabling a high federate. Their semi-annual shutdown was completed May 6-18 with no major incidents and one minor contractor injury.

The Facility continues to operate within permitted approvals and has operated lost time injury free since the last CAP report. It has been 7587 days since their last lost time accident

A first aid incident occurred when a contractor was injured during shutdown. He was carrying a bale of insulation on his shoulder up the stairs to the Luwa reactor top deck, bumped a railing and strained his neck. He sought first aid and medical advice after work. There was no lasting injury and the worker returned to work the next day. The Facility is looking at alternative hoisting methods for insulations bales, such as roping them up or using the crane.

There were two incidents during the period involving liquid and gas splashed on workers due to improper isolation for maintenance activities.

- 1<sup>st</sup> case – contractor was splashed with cold condensate while starting to work on a pump. Isolation had been completed and signed off, but an ancillary steam connection was not confirmed to be isolated and drained.
- 2<sup>nd</sup> case – GFL maintenance worker was preparing to work on our main hydrogen compressor. Worker was sprayed in the neck with pressurized gas when he opened a valve. An in-depth shutdown permit / isolation record was completed for this activity.

In both cases, workers had thought isolation and depressurization had properly occurred and been documented. Analysis has shown that the Facility had inadequate procedures for both activities as well as an insufficient ‘last minute review’ before starting maintenance. Both of these activities are being addressed for maintenance activities in hazardous service areas.

The first draft of the Facility’s Emergency Response Plan (ERP) has been received; the aim is to complete it by early July. A third party has been contracted to complete the update of GFL’s Fire Plan and current regulations, this is due back in August.

## **6. CAP 2022-2023 Evaluation**

The eight CAP members present in person at the meeting completed the evaluation and the facilitator noted that an online version would be sent for people who were not present to complete.

The results will be presented at the September CAP meeting.

Presentation topics for the upcoming year will be discussed at the September meeting. Presentations will include those on risk mitigation by Univar Solutions and GFL Environmental to be held in the new CAP year.

Members discussed the following improvements to the CAP in regards to community participation:

Stuart Meyer from Miles Industries suggested doing outreach to the Health and Safety committees of local businesses. There was discussion of rewriting the CAP one pager to appeal to these committees. The facilitator will create a draft of this for the September CAP meeting for members to review and discuss further.

The idea was proposed to try and hold a meeting at an earlier time, for example 4:30pm, which may enable more people to attend. This could be tried for the November meeting.

There was also the idea to host a meeting at Kenneth Gordon Maplewood School to encourage higher community attendance.

Members felt it was important to stick to Tuesday evenings for the meetings to help facilitate maximum attendance.

Stuart Porter-Hogan from Maplewood Community Association proposed a stand-alone website for the CAP. This is an idea that was previously proposed and after the former discussion, members decided that the DNV website for the CAP was sufficient. Stuart will bring more information on the proposed website to the next CAP meeting in September for members to discuss.

Barbara Rennie from the Blueridge Community Association thanked Chemtrade for their \$2,000 donation for the community festival and said they hoped to see the other companies offer similar support in the future.

## **7. Meeting Close**

The meeting ended at 8:15pm.

The next meeting will be held in September 2023, the date will be confirmed.



## Community Advisory Panel (CAP) June 26th Briefing Notes

### Responsible Care – Safety, Security, Transportation, & Environmental

#### Safety

- No new incidents to report
- Our current injury rate is 0.0 for 2023
- We had a surprise visit from WorkSafe BC to audit the site with no findings.

Item	Rate	US BS (Inorganic Chemical Manufacturing )	WorkSafe BC (Acid, Base, Chemical, or Dye Manufacturing )
Employee OIR 2023 Average	0.00	1.2	0.97
Employee OIR 1 YR Rolling Average	0.00	1.2	0.97
Employee OIR 2 YR Rolling Average	0.50	1.2	0.97

#### Security

- No security incidents.

#### Process Safety

- No process safety incidents.
- We are hosting the Chlorep teams from all over North America for a training event this week.

## **Environmental**

- We had a surprise audit of our emergency response plan from Environment Canada with no findings but recommendations regarding training and community engagement which we were planning to address by year's end.

## **Transportation**

- No new transportation issues.

## **Plant Operations**

- We continue to be on track for a record production and revenue year.
- We had a boiler fan failure in June which shut the plant down for two days.
- We are reaching the end of our maintenance season and heading into our busiest season for production.
- Union negotiations have started and are ongoing.



## ERCO Worldwide

**ERCO Worldwide Update** - (since last CAP meeting on April 18, 2023) June 28, 2023

### Safety

- ERCO employees and contractors continue to work safely. As of June 28<sup>th</sup>, 2023, NV employees have worked 1076 days since the last Recordable safety incident (July 7/20) & 4547 days since our last Lost Time Accident (Jan. 05/11).
- We have 0 staff members currently self-isolating due to covid-19.

### Environmental

- As part of the Technical Assessment requested by the BC MoE an effluent sample was collected on May 17<sup>th</sup>. SLR environmental consultants collected a 100 Litre sample and then delivered it to a contract lab for toxicity testing of several different organisms.

### Operations

- ERCO NV plant has run well since we last met on April 18<sup>th</sup>. The plant took two one-day outages to complete acid washes on Line 8 April 19<sup>th</sup>, May 31<sup>st</sup>. A one-day plant power outage was taken on May 18<sup>th</sup> to repair a hot spot on the incoming high voltage line in the substation.
- We have hired two summer students to work in the FIBC packaging department.

### Proposed Clean Hydrogen Project

- On June 13<sup>th</sup> a public hearing was held at the District of North Vancouver council chambers for an amendment to the bylaw to allow a Clean Hydrogen Production Facility at 100 Forester St, North Vancouver. The 2<sup>nd</sup> reading of the rezoning bylaw is scheduled for July 10<sup>th</sup> at the DNV council chambers.

Brian Scott, P.Eng.

Plant Manager, North Vancouver

### **Univar Solutions report – June 28, 2023**

Meraz Sekhon reported that there have been 773 days since the last personal safety recordable, and 4559 days since the last DAWC (as of end of day June 26, 2023).

There has been one reportable EHS incident and two other incidents since the previous CAP meeting.

#### Transportation Incident

- Loss of Primary Containment on vessel during Caustic discharge
  - Discharge to Univar had stopped temporarily while vessel carried out internal tank transfers as part of normal procedures
  - The vessel had a gasket rupture resulting in product (estimated to be approximately 200L) spraying onto the ship's deck, with some spray hitting the shore
  - It is estimated that approximately 1L entered into the water
  - There was no personal injury or exposure to either ship's crew or Univar personnel
  
- Vessel reported to terminal, and both vessel and terminal immediately reported to the Harbour Master
  - Terminal also reported to PEP (Provincial Emergency Program)
  
- All product from spill clean-up was contained on board
- The dock area of concern was isolated until Univar's ER/Univar contracted its ER/Environmental Response provider (Quantum) sent a team to ensure the area was clean and safe for work
- Terminal takes any such incidents very seriously and is working with the vessel operator to help ensure this does not occur again; training and procedures are currently being examined

- Loss of Primary Containment & Personal Safety – chemical exposure
- Caustic Truck Loading
  - Operator exposed to caustic while doing the pre-transfer valve integrity check
    - Residual pressure and product were present in a line where they should not have been resulting in an operator being splashed with caustic
    - Training was such that the product was rinsed off immediately with no further safety concerns
    - Terminal working with trucking dispatch to determine how to avoid in future
- Railcar repair
  - Residual product remaining in a line thought to have been clear
  - As the mechanic investigated the repair, more work was needed than first believed
  - Additional scope should have been addressed with Operations Supervision
    - Training believed to be root cause and changes have since been made to clarify when a full work permit is required

No first aid or further treatment was required in both the cases after the product was rinsed off.

Continuing the trend from first quarter, Univar continued its behaviour-based safety observations to align with its overall corporate Canadian EHS requirements. A total of 46 field observations were carried out in the second quarter focusing on various operations like product transfer on ship, rail and trucks, rail operations, including rail switching and sampling of products.

On June 12, 99.24 per cent of the more than 7,200 dockworkers represented by the International Longshore and Warehouse Union voted in favour of a strike, if necessary. Univar is closely monitoring the situation involving the union and BCMEA.

Robin Lee, (Terminal Manager), attended the Port of Vancouver’s Air Quality Climate change session in June. There were 130 participants and it focused on environmental protection and sustainability.

Site operating at steady throughput, and some summer maintenance projects will be undertaken given the weather.

The latest official release RE job action can be found here:

[ILWU Canada issues 72-hour strike notice - Transportation | Business in Vancouver \(biv.com\)](https://www.biv.com/news/ILWU-Canada-issues-72-hour-strike-notice-Transportation-Business-in-Vancouver)





## CAP Meeting – June 28, 2023

### Current Status / Schedule

- Refinery running at 110% capacity.
  - Catching up after shutdown, clean plant enabling high feedrate
- Semi-annual shutdown being completed May 6-18
  - Completed with no major incidents, one minor contractor injury.

### Health, Safety and Environment

- Facility continues to operate within permitted approvals.
- Facility has operated lost time injury free since the last CAP report. It has been 7587 days since their last lost time accident.
- first aid incidents:
  - Contractor injured during shutdown. Carrying a bale of insulation on his shoulder up the stairs to the Luwa reactor top deck, the worker bumped a railing and strained his neck. Worker sought first aid and medical advice after work. There was no lasting injury and the worker returned to work the next day. We are looking at alternative hoisting methods for insulations bales.
- Incidents:
  - 2 incidents during the period involving liquid and gas splashed on workers due to improper isolation for maintenance activities.
    - 1<sup>st</sup> case – contractor was splashed with cold condensate while starting to work on a pump. Isolation had been completed and signed off, but an ancillary steam connection was not confirmed to be isolated and drained.
    - 2<sup>nd</sup> case – GFL maintenance worker was preparing to work on our main hydrogen compressor. Worker was sprayed in the neck with pressurized gas when he opened a valve. An in-depth shutdown permit / isolation record was completed for this activity.
  - In both cases, workers had thought isolation and depressurization had properly occurred and been documented. Analysis has shown that we had inadequate procedures for both activities as well as an insufficient 'last minute review' before starting maintenance. Both of these activities are being addressed for maintenance activities in hazardous service areas.

### Training and Audits

- No audits during this period.
- Emergency Response Plan (ERP) - first draft received, target completion early July.
- Fire Plan update to GFL and current regulations – 3<sup>rd</sup> party contracted to complete update, due back in August.