

**DISTRICT OF NORTH VANCOUVER
PUBLIC HEARING**

**100 Amherst Avenue
Zoning Bylaw Amendments**

REPORT of the Public Hearing held on Tuesday, June 16, 2026 commencing at 7:01 p.m. in the Council Chambers of the District Hall, 355 West Queens Road, North Vancouver, British Columbia.

Present: Mayor Mike Little
Councillor Jordan Back
Councillor Betty Forbes
Councillor Jim Hanson
Councillor Herman Mah
Councillor Lisa Muri
Councillor Catherine Pope

Staff: Mike Fox, Chief Administrative Officer
Mike Danks, Fire Chief
Dan Milburn, General Manager – Planning, Properties and Permits
Gunter Kramer, Deputy Fire Chief
Genevieve Lanz, Director – Legislative Services and Corporate Officer
Yan Zeng, Manager – Development Planning
Heidi Granger, Municipal Solicitor
Cheryl Archer, Confidential Council Clerk
Afrooz Fallah, Planning Assistant – Development Planning
Amanda Day, Administration Clerk

Also in

Attendance: Raman Batra, Vice President Electrochem, Chemtrade
Dale Bossons, Vice President, Manufacturing, Chemtrade Electrochem
Ben Burford, Associate General Counsel, Chemtrade
Belinda Chiu, Senior Legal Counsel, Chemtrade
Fareed Ebrahim, Senior Technical Advisor, Chemtrade
Shaun Govender, Director, Government and Stakeholder Relations, Vancouver Fraser Port Authority
Blair Hetherington, Emergency Response System Manager – Chemtrade
Amy Jonsson, Director, Corporate Communications – Chemtrade
Claudia Leung, Manager, Real Estate, Vancouver Fraser Port Authority
Alvin Loh, Plant Director – Chemtrade
Alan Robinson, Group Vice President Commercial – Chemtrade
Dr. J. Kelly Thomas, Vice President and Blast Effects Section Manager – BakerRisk

1. OPENING BY THE MAYOR

Mayor Little welcomed everyone and advised that a Public Hearing on this matter was held and closed on February 24 and 25, 2026. Since abandoning Bylaw 8778 at First Reading on April 13th, Council has reconsidered the matter pursuant to section 131 of the *Community Charter* and subsequently gave Second Reading to the bylaw on May 25th. As such, council has opened a new opportunity for public input as part of this process. All the input received verbally and in writing for the previous Public Hearing is part of the public record. It is not necessary to repeat comments that were made at the first Public Hearing.

Mayor Little noted that the purpose of the Public Hearing was to receive input from the community on the proposed bylaw amendments as outlined in the Notice of Public Hearing.

He further noted that the Public Hearing was convened pursuant to Section 464 of the *Local Government Act*. Members of Council, staff, and the public participated in person and via Zoom and the Hearing was being streamed live over the internet and recorded in accordance with the *Freedom of Information and Protection of Privacy Act*.

Mayor Little stated that:

- Following the staff and applicant presentations, speakers would be called from the established speakers list. At the end of the speakers list, the Chair would call on speakers from the audience;
- Each speaker would have five minutes to address Council for a first time and should begin remarks to Council by stating their name;
- After everyone who wished to speak had spoken once, speakers would then be allowed one additional five-minute presentation;
- Any additional presentations would be allowed at the discretion of the Chair;
- Speakers were reminded to refrain from repeating information from their previous presentations and to ensure all comments remained focused on the bylaw under consideration;
- If a written submission was provided, speakers were asked not to read the entire submission, noting that they could provide a summary or briefly reiterate the highlights;
- All members of the audience were asked to be respectful of one another as diverse opinions are expressed, noting that the meeting was an open and impartial forum for Council to hear everyone's views;
- Council's role at Public Hearings is to listen to the public, not to debate the merits of the bylaw;
- Council may ask clarifying questions during Public Hearings;
- A binder containing documents and submissions related to the bylaw is available for review in hard copy and online;
- Speaking opportunities would be provided for everyone who wished to provide input and the meeting would be continued on a second night, if required;

- At the conclusion of the public input Council may request further information from staff, which may or may not require an extension of the meeting, or Council may close the meeting, after which Council should not receive further new information from the public.

2. INTRODUCTION OF BYLAW BY CORPORATE OFFICER

Genevieve Lanz, Corporate Officer, introduced the proposed bylaw, stating that Bylaw 8778 proposes to amend the District's Zoning Bylaw, in general terms, by adding an exception to the prohibition of the manufacture of hazardous substances in all zones for the subject site to permit the manufacturing, processing, liquefaction, handling, storage, loading and shipping of chlorine.

3. PRESENTATION BY STAFF

Yan Zeng, Manager – Development Planning, provided an overview of the proposal elaborating on the introduction by the Corporate Officer:

- Ms. Zeng reviewed the application timeline to date:
 - The application was received on October 7, 2025;
 - The bylaw was given first reading on January 12, 2026;
 - A public hearing was held on February 24 and 25, 2026;
 - Council abandoned the bylaw at first reading on April 13, 2026;
 - Following the decision, Chemtrade submitted additional information to the District on April 29, 2026, including a revised conditional approval framework;
 - Mayor Little initiated reconsideration under the *Community Charter* on May 5, 2026;
 - Council voted to proceed with reconsideration of Bylaw 8778 and referred the matter to a public hearing on May 25, 2026.
- The focus of the presentation was to review what is under consideration now and what has changed since the last public hearing;
- The property is located in the Maplewood heavy industrial area with part of the site leased from the Vancouver Fraser Port Authority (Port) and part on privately owned District lands;
- The chlorine liquefaction process has historically occurred on the leased Port lands;
- The Port has advised that production must be removed from their lands by 2030;
- Chemtrade must relocate and consolidate chlorine liquefaction entirely onto their own land under District jurisdiction;
- While the site is designated and zoned for heavy industrial use, a site-specific amendment to the Zoning Bylaw is required to allow for the proposed use;
- Ms. Zeng summarized the concerns raised at the February 24 and 25, 2026 public hearing:
 - Public safety and potential risks associated with the continued chlorine operations at this location, including to surrounding industrial and residential areas;
 - Off-site risks related to rail transportation, including the movement and storage of liquid chlorine railcars and how those risks are assessed;

- Extreme events including seismic risk, flooding, and other low-probability and high-consequence scenarios;
- Questions regarding how facility and emergency response systems would perform in an extreme event;
- Emergency preparedness, including shelter-in-place procedures, public notification, coordination with emergency responders, and the roles of Chemtrade, North Shore Emergency Management (NSEM) and District of North Vancouver Fire and Rescue Services (DNVFRS);
- Whether there are alternatives to liquid chlorine, particularly for water treatment;
- Land use concerns, including whether the proposed use is compatible with the surrounding area and whether the approval would be permanent.
- The core physical components of the proposal have not changed since original consideration;
- The proposal is to remove the existing 60 tonne bulk liquid chlorine storage tank and move to a produce-and-ship model;
- The proposal includes a new enclosed railcar loading building with emergency ventilation and air-scrubbing systems, new liquefaction and condensing infrastructure, seismic safety upgrades;
- There is no increase in chlorine production proposed;
- The new information provided by the applicant primarily relates to how the use would be regulated over time;
- The applicant has proposed a conditional and time-limited approval framework supported by a [Land Title Act] Section 219 covenant, including future Quantitative Risk Assessment (QRA) requirements and a Best Achievable Technology (BAT) review
- The applicant has provided additional clarification related to security, emergency preparedness, and public education;
- The applicant proposes that chlorine operations be time-limited and tied to the Port lease, with the proposed end date the earlier of December 31, 2046, or termination of the Port lease;
- The applicant proposes that the time limit, as well as safety, reporting, risk assessment, and review requirements are secured through the proposed covenant, registered on title and prepared to the satisfaction of the District's Municipal Solicitor;
- Ms. Zeng provided information on the proposed framework:
 - A validation QRA based on detailed plans and specifications, to be completed prior to the issuance of a building permit;
 - A baseline QRA to be completed following construction and prior to occupancy or final inspection, to be used as a reference point for future compliance reviews;
 - Additional QRA reviews approximately eight and 10 years after the baseline assessment, must show safety level is similar to baseline QRA;
 - An independent BAT review approximately 15 years after bylaw adoption;
 - A requirement to cease chlorine operations if the required 10-year QRA is not provided within the timeframe established in the covenant; and,

- A security vulnerability assessment prepared by an independent Qualified Professional (QP) provided on a confidential basis.
- Ms. Zeng reviewed the timeline proposed by the applicant:
 - 2026: Bylaw consideration and covenant registration;
 - 2030: Safety upgrades and baseline QRA;
 - 2038 and 2040: Additional QRAs;
 - 2041: BAT review; and,
 - 2044-2046: Expected end date of chlorine operations.
- Ms. Zeng provided information on staff's response to the revised application:
 - Staff rely on the quality of professionally prepared reports;
 - The applicant has provided a QRA prepared by BakerRisk and peer reviewed by Risktec;
 - The peer review assisted staff and Council in considering the methodology, assumptions, and findings of the assessment;
 - The applicant indicates that the risk profile would be reduced following the completion of the proposed upgrades;
 - Proposed additional QRA requirements with the completion of the proposed safety upgrades and related safety, reporting, review, and compliance obligations would be secured by a covenant on title;
 - The covenant could also include additional items proposed by the applicant in response to public concerns; and,
 - If the bylaw is given Third Reading following the Public Hearing, staff would begin preparing the covenant before final adoption.
- Ms. Zeng reviewed the applicant's location-specific individual contours for the plant after the proposed safety upgrades;
- The proposed upgrades to one in ten thousand risk per year contour, within or near the property line;
- The applicant has proposed additional public education and emergency preparedness measures, including an educational brochure with shelter-in-place training, information, Community Advisory Panel train-the-trainer workshops, and emergency preparedness training for Tsleil-Waututh Nation;
- The applicant also provided information that it works with local first responders, including the District of North Vancouver Fire Department (DNVFRS) and North Shore Emergency Management (NSEM), and that it supports the Chlorine Institute's (Chlorine Emergency Plan (CHLOREP) emergency response program;
- Mike Danks, Fire Chief, provided details on the DNVFRS framework on response to any significant incident and how it would apply specifically to response to an incident at the Chemtrade facility:
 - The framework recognizes the chlorine risk profile and the need for significant pre-incident planning;
 - DNVFRS has an important local response coordination role in any incident involving Chemtrade;
 - DNVFRS is responsible for life safety, initial incident assessment, scene control, evacuation or shelter-in-place support and public safety coordination and integration

with NSEM, North Vancouver City Fire Department (NVCFD), RCMP, BC Emergency Health Services (EHS), Canadian Transport Emergency Centre (CANUTEC), Chlorine Emergency Plan (CHLOREP), and other specialized agencies;

- Chemtrade remains responsible for facility operations, internal emergency response plan, technical product information, containment actions, employee safety, and specialized resources such as plume modelling;
- DNVFRS no longer maintains a technician or operations-level hazardous material (hazmat) response capability;
- DNVFRS's role is now defensive and awareness-based, including hazard recognition, isolation, exposure protection, water cooling where appropriate; and,
- Leak control, product transfer, plugging, patching, or entry into contaminated areas requires specialized responders such as NUCOR Environmental Solutions or NSCFD.
- Risks associated with a chlorine release near surrounding industrial and residential areas makes ongoing coordination and preparedness a priority;
- A major chlorine release is rare, but its consequences could be significant and will quickly exceed fire department and municipal resources;
- Chief Danks provided information on key actions in emergency preparedness and in case of a release:
 - Early activation of the Emergency Operations Centre (EOC), coordinated public notification, and engagement of external specialized resources;
 - Preparedness must extend beyond operational response to public awareness, education, and clear pre-incident communication with residents, businesses, and neighbouring industry;
 - Keep emergency plans current;
 - Confirm public notification and shelter-in-place procedures
 - Continued joint training and exercises
 - Consider neighbouring industrial operations and cascading risks
 - Identify any staffing or funding support required to sustain this work
- Gunter Kramer, Deputy Fire Chief provided information on DNVFRS touchpoints with Chemtrade since 2021:
 - 2026 – Chemtrade's Emergency Response Team (ERT) attended Self-Contained Breathing Apparatus (SCBA) and extraction training at the Maplewood Fire Facility with DNVFRS instructors four times, with additional training and site visits with DNVFRS crew and trucks planned this year;
 - 2025 – DNVFRS Training Captains and Technical Rescue lead instructors made multiple visits and on-site rescue assessments;
 - 2024 – Larger familiarization with the site with most of the DNVFRS crews including 40 firefighters and met with CHLOREP representatives; and,
 - The District conducts inspections at least once per year, with 11 since 2021 to date, two conducted so far in 2026 and another planned.
- Deputy Fire Chief Kramer provided a list of incidents at the facility from 2021 to 2025, noting there were no incidents involving chlorine releases and most of the 26 incidents over that time were alarm activations and medical aid calls with two minor fire calls;

- Chief Danks provided information on NSEM emergency response procedures for Chemtrade:
 - He is part of the steering committee that provides strategic oversight to NSEM, and includes two executive members from each municipality to provide guidance and direction under a joint municipal lens;
 - NSEM and Chemtrade have established emergency response procedures to support a coordinated public safety response to a chlorine-related incident and other emergencies at the facility;
 - Under these procedures, Chemtrade's designated technical representative confirms the incident level and provides the technical information required to support response decisions and public messaging;
 - NSEM uses that information to coordinate notifications including Alertable, where appropriate, and to engage DNVFRS, Communications staff, Tsleil-Waututh Nation, the City of North Vancouver, and their emergency partners as required;
 - If protective measures are required, public messaging would include shelter-in-place instructions and other direction based on the nature of the incident, prevailing conditions, and technical advice;
 - NSEM can scale its support through established Emergency Operations Centre (EOC) and incident command system structures, including coordination of public information, multiple agencies, emergency notifications, and evacuation or shelter-in-place support;
 - NSEM and Chemtrade have maintained an ongoing preparedness relationship including work on public alerting, notification processes, messaging templates, incident roles, annual audible alarm communications, and participation in the Community Advisory Panel;
 - Due to staff turnover and the changing operating environment, NSEM has identified the need to reconnect with Chemtrade to reconfirm contacts, decision-making authorities, communication pathways, roles and responsibilities, notification processes, and opportunities for joint training exercises and facility familiarization;
 - NSEM understands from District-reviewed materials that the proposed configuration is intended to reduce overall risk, including reducing the amount of chlorine stored on site;
 - NSEM has not independently validated the technical materials;
 - NSEM has not identified any emergency management concerns related to preparedness, notification, coordination, or response; and,
 - Regardless of the outcome of the application, NSEM will continue to coordinate with Chemtrade and other North Shore industrial partners to maintain readiness, communication, and a coordinated emergency response capability for incidents that may affect public safety.
- Ms. Zeng advised that a full record of the public hearing is available for Council and the public, including key reports, technical studies, QRA and peer review materials, referral comments, public input, and questions and answers

4. PRESENTATION BY APPLICANT

4.1. Alan Robinson, Group Vice President Commercial – Chemtrade:

- Stated that there have been no changes proposed to the safety upgrades;
- Noted that the proposed changes are to perpetuity, oversight, training and technology, and BAT requirements;
- Stated that the facility has operated safely for almost 70 years;
- Stated that two expert companies have evaluated the proposed safety upgrades as significant improvement to safety at the facility;
- Stated that rail is the safest way to transport materials;
- Advised that Chemtrade supplies 70 percent of the chlorine used for water treatment in western Canada, noting that the chlorine is used to produce the bleach used for disinfection;
- Highlighted the company's contribution to the local economy, including providing employment and paying taxes;
- Stated that there was confusion and misrepresentation at the previous public hearing, with some mixing words and using chemical names in an attempt to confuse people;
- Stated that it is a simple matter that chlorine is used to make bleach and that bleach is used by municipalities to treat water;
- Compared the relationship between chlorine and bleach to that of oil to gasoline, noting that oil is not directly used to fuel vehicles, but is required to make fuel;
- Stated that it was said that Chemtrade had changed their story regarding the use of chlorine for water treatment and referred to a news clip from the 2024 rail strike in which he stated that chlorine is shipped to bleach suppliers to produce bleach for water treatment;
- Emphasized that they have not misled anyone regarding water treatment and that bleach production for municipal water treatment requires chlorine;
- Noted that there are large municipalities in the United States (US) that buy liquid chlorine directly;
- Commented on statements that Metro Vancouver does not use bleach to treat water or does not buy anything directly from Chemtrade;
- Stated that Metro Vancouver does buy bleach and that Chemtrade has never said they buy chlorine directly from Chemtrade;
- Noted that records show that Metro Vancouver buys bleach from a company that has Chemtrade as the sole supplier its liquid chlorine;
- Commented on Metro Vancouver materials that show information on chlorination;
- Noted that chlorine and derivatives are used to kill bacteria in water and residual treatment in the distribution system;
- Noted that the materials from Metro Vancouver show that the new facility uses UV and ozone and then use bleach in the distribution system and that this shows that UV and ozone cannot be used in residual treatment;

- Advised that Chemtrade produces liquid chlorine, caustic soda, and hydrochloric acid (HCL) and that 70 percent of their products remain in Canada;
- Noted that 10 percent of the liquid chlorine produced at the plant remains in Canada;
- Advised that more is shipped to the US because of the larger population, noting that where water is consumed is where it is treated;
- Reviewed a map of the next available source of liquid chlorine for western Canada, noting it would either be sourced from the US or thousands of kilometres away in Canada;
- Asserted that there was an American competitor interfering in the public hearing process to try to ensure Chemtrade does not continue to produce liquid chlorine due to the amount of business that is at stake;
- Opined that there is value in having a local producer of liquid chlorine;
- Advised that they were not permitted to ship liquid chlorine starting 11 days prior to the start of the rail strike in Canada in 2024 and that two emergency railcars were required to break the embargo to deliver liquid chlorine to a bleach plant to ensure there was enough product to treat water and avoid a boil water advisory;
- Questioned how the issue could have been resolved if they were not there;
- Advised that 90 percent of the caustic soda produced at the facility remains in Canada, primarily for the pulp and paper industry, and that the majority of the hydrochloric acid they produce stays in Canada and is used by water treatment, mining, oil and gas;
- Compared the bank analysis that they could operate without liquid chlorine with a zero-to-225-million-dollar financial impact to a weather forecast between zero and thirty degrees;
- Opined that most of the public input on the proposal has not been from the public; and;
- Referred to a North Shore News online poll showing more than 60 percent support for the continued operation of the facility.

4.2. Dr. J. Kelly Thomas, Vice President and Blast Effects Section Manager, BakerRisk:

- Advised that BakerRisk produced the Chemtrade QRA;
- Noted that both likelihood and severity need to be considered in analyzing risk;
- Noted that the Chemtrade site is highly regulated and they have proposed upgrades;
- Advised that the intersection of Spicer Road and Amherst Avenue was assessed as having a 0.0001 percent chance of fatality in a chlorine release if a person were at that location, having not evacuated or sheltered-in-place;
- Noted that the chance of a fatality in a vehicle collision is 40 times higher, food poisoning six times higher, and an aircraft accident about equal;
- Stated that he is not aware of any fatalities involving a rail shipment of liquid chlorine in Canada, including an incident in Mississauga in 1974;

- Stated that BakerRisk has performed thousands of QRAs, authored books for the Centre for Chemical Process Safety, and participated on the American Petroleum Institute siting guidelines;
- Noted they considered releases due to a range of causes using industry standard data including railcar releases during loading and in the railyard;
- Stated that the facility is proposed to be built to BC Building Code (BCBC) standards to protect against a one in 2,500 year seismic event;
- Noted that the standard release data used accounts for natural hazards and that loaded railcars were included in the assessment;
- Advised that the frequency of release from railcars standing in a yard is very low and while normally not included Chemtrade had specifically directed that it be included in the QRA; and,
- Noted that they did not include rail transport outside the facility as that is under the authority of Transport Canada.

4.3. Blair Hetherington, Emergency Response System Manager – Chemtrade:

- Provided information on Chemtrade's emergency preparation and response planning;
- Advised that Chemtrade works with local emergency responders;
- Advised that they conduct full-scale exercises as well as many tabletop exercises every year and their emergency planning is shared with NSEM;
- Advised that Chemtrade would immediately notify NSEM and local emergency responders if there was an incident;
- Noted that they would with both DNVFRS, NVCFD, and the Tsleil-Waututh Nation Safety Officer to understand existing safety training programs and how Chemtrade can support them;
- Advised that they offer and supply training and plan to develop videos to be available on municipal and agency websites and written information for local residents to be mailed out and made available at events such as the DNVFRS Annual Pumpkin Drop;
- Reviewed the emergency response to an incident in Kent, Ohio on June 3, 2026 caused by the accidental unloading of alum into a bleach tank at a water treatment facility that caused chlorine gas to be released, injuring two operators and the driver who were sent to hospital and released the same night;
- Noted that there was a shelter-in-place order for half a mile around the facility and an evacuation order within a quarter mile;
- Advised that he was on call and responded to the call from the fire department and provided support and information;
- Noted he is part of the CHLOREP team of eight in North Vancouver, and they provided the fire department with information on the safety processes and exposure management; and,
- Advised they called in their emergency response contractor to coordinate cleanup.

5. REPRESENTATIONS FROM THE PUBLIC

5.1. George McKay:

- Spoke in opposition to the proposal;
- Advised that he is a long-time resident and that he and his family live approximately two kilometres from the site at the same elevation;
- Commented on a petition and work with Council for the facility to shut down;
- Stated that it is past the date when the plant was to close;
- Stated he had been surprised to hear there was a Public Hearing to consider extending the term further;
- Opined that the use is not compatible with the area;
- Expressed disappointment that the vote to abandon the bylaw was reconsidered and a second Public Hearing held;
- Opined that the community does not want the plant;
- Questioned why the plant is in its current location;
- Opined that the federal government does not want the plant on its land;
- Opined that the land could be used to create another Lonsdale Quay or for office or hotel use;
- Noted that 90 percent of the liquid chlorine produced at Chemtrade is shipped to the US and stated that this was not made public until the question was raised at the previous Public Hearing on the matter;
- Questioned why liquid chlorine is more important than bleach and who the end users of liquid chlorine are;
- Expressed disappointment that railcars were considered out of scope;
- Opined that the City of Burnaby is more opposed to continuing the use at the site than the District;
- Opined that the federal government wants the District to accommodate the use on its land and questioned if the federal government would provide compensation; and,
- Opined that the plant is not needed in the community.

5.2. Lee Coonfer:

- Spoke in support of the proposal;
- Advised that he is the Chief Executive Officer of the BC Water and Waste Association;
- Advised that the association represents everyone who works in the water sector including utility managers, cross-connection control, technicians, backflow testers, and construction and consulting engineers, and that their purpose is to ensure safe and healthy drinking water for BC and Yukon;
- Stated that he does not have a vested interest in Chemtrade;
- Stated he is not asking Council to not exercise their fiduciary duty;
- Stated that they did not participate in the first Public Hearing as they did not feel it was their place to speak on the matter;

- Stated that the Board of the association includes water professionals from municipalities across BC involved in the process from start to finish and that they have a vested interest in their ability to provide safe drinking water;
- Noted that a question had been posed regarding who relies on chlorine for safe drinking water and stated that it is everyone in the province and their members help provide it;
- Shared a platform that provides education for all aspects of the water sector including handling chlorine;
- Stated that he expects Council to do their job and for the proponent to do their job to make the investments and fulfill their commitments to the community;
- Commented on the development of the residential area around the plant;
- Stated that the plant is not easily moved or replaced;
- Stated that there are few options to replace the capacity from Chemtrade, located in the prairies and the US;
- Opined that these are not good options as they would carry additional risk with longer rail transport or risk from geopolitical conditions that would not guarantee stable and cost-effective replacement of supply;
- Stated that chlorine is necessary at this time for safe and healthy drinking water;
- Stated that the idea that there is a replacement that is commercially viable is inaccurate according to the professionals in the association; and,
- Requested that Council consider the concerns of the water sector.

5.3. Peter Teevan:

- Spoke in opposition to the proposal;
- Stated that no one had arranged for him to speak at the hearing;
- Stated that he has been actively involved in the matter for many years;
- Questioned how corporate profits can be balanced with community safety;
- Opined that the applicant has been manipulating Council;
- Opined that the applicant's intent is to maximize their profits while maximizing the risks and costs to the community;
- Opined that the applicant's claims regarding their product being essential to drinking water in Canada, their QRA represents a worst-case scenario of the risks of producing, storing , and shipping chlorine, that they are substantially reducing on-site storage of liquid chlorine, that the Port is not worried about liquid chlorine and simply wants it removed from their land, that railcars do not need to be considered when assessing risk, and that voting against the application is voting against jobs, are false;
- Accused Chemtrade of changing their information regarding the use of bleach or chlorine for water treatment;
- Stated that he had asked at the previous Public Hearing about railcars and the hydrogen plant on the adjacent property, major seismic events, and increased residential population and these were not included in the QRA;

- Stated he the claim of reducing the amount of liquid chlorine stored on site was not accurate as it did not take into account 32 railcars containing 2,560 tonnes of liquid chlorine;
- Questioned how, if the Port says lands will still be used for production but liquid chlorine must be removed from leave their property, is this a good choice for the District;
- Opined that the choice is not between allowing Chemtrade to continue or losing jobs;
- Opined that the company would still be profitable without liquid chlorine and it would only result in a minor reduction to their profits;
- Opined that Council's role is not to maximize profits and that they have a duty to its residents; and,
- Accused Chemtrade of using all or nothing tactics to pressure or intimidate Council into making a decision in their favour.

5.4. Alex Jamieson:

- Spoke in opposition to the proposal;
- Advised that he is a retired planner;
- Stated that industry has changed over the time he was a planner to today;
- Noted population changes since the facility was constructed in 1957;
- Commented on the calculation of a reasonable separation between the plant to residential areas, noting it is complicated;
- Summarized the letter and background information he had provided in writing to the public hearing, noting that accounting for worst-case scenarios would require separation measured in kilometres;
- Opined that the use has been legal non-conforming since 1986 and that they need the rezoning in order to make upgrades;
- Stated that his opinion as a planner and a resident is that the plant should not be located where it is;
- Noted the proximity of Maplewood Village;
- Stated that he does not want to see people die or environmental damage from chlorine;
- Acknowledged the likelihood of an incident is low;
- Opined that the provincial government does not have the right to tell the District what to do; and,
- Urged Council to vote against the rezoning.

5.5. Sam Amin:

- Spoke in support of the proposal;
- Advised that he lives in the Blueridge neighbourhood;
- Advised that he is the founder of Integrus Engineering and that the firm deals with and helps Chemtrade with their mechanical assets;
- Stated that he is involved in their day-to-day operations;

- Stated that he has listened to the concerns raised at the hearing and that people have their views;
- Stated that as an engineer he deals with risk on a daily basis and it is part of every decision;
- Advised that he is comfortable with Chemtrade's engineering, operations, and maintenance teams' proactive approach to equipment reliability and safety;
- Stated that his experience with Chemtrade staff regarding mechanical and structural integrity and preventative maintenance on the many tanks, pressure vessels, and pressure piping is that they are always concerned with safety first;
- Advised that his firm supports Chemtrade in their interactions with Technical Safety BC, which is the regulatory body that ensures testing and maintenance work is conducted;
- Stated that he is comfortable living in the area and is not concerned about a catastrophic event, noting that while it is possible, it is unlikely and that the facility has been in operation for many years with no fatalities; and,
- Noted that none of the incidents at the facility have involved a significant safety issue.

5.6. Colin Armstrong:

- Spoke in opposition to the proposal;
- Advised that he is the Senior Principal Engineer for Acutech Consulting;
- Noted that he had shared Acutech's QRA at the previous Public Hearing;
- Noted that the calculation of risk is both severity and likelihood and that both are important;
- Stated that Council needs to understand the risk to make good decisions;
- Noted Chemtrade's intent is to move the risk contours to at or near their property line;
- Stated that the contours represent a zone of risk and do not indicate the extent of potential consequences;
- Stated that they need to understand the impact on emergency response;
- Noted that the BakerRisk QRA listed the onsite railcar release scenario as the highest far-field risk drivers;
- Provided his assessment of the zone in which there would be potential fatality, noting this is different than looking just at concentration;
- Opined that the impact of a two-inch leak in a railcar would be worse than a full railcar release and that the area of lethality would extend far into the community;
- Stated that consequence extends further than risk;
- Stated that smaller hole size extends impacts farther into the community than a full railcar release;
- Stated that the lethal impact zone extends two kilometres from the railcar in this scenario;
- Stated that it is not uncommon for this to be the case with toxic substances, noting length of exposure is important;

- Opined that shelter-in-place does not protect against exposure as buildings have air leaks and are not built to prevent exposure;
- Stated that the railcar risk in the QRA refers to 20-year-old QRA;
- Stated that it did not consider different types of releases;
- Stated that the modelling in the QRA did not consider jetting and flashing; and,
- Stated that the QRA indicated that the main risk is from pool evaporation and that a chlorine release would form a cloud as 40 percent or more would immediately vapourize.

5.7. Laurie Parkinson:

- Spoke in opposition to the proposal;
- Advised that she is a biologist and that she lives near Park and Tilford;
- Stated that an accident involving chlorine could affect her;
- Stated that chlorine is dangerous and was used in World War I;
- Noted that chlorine is an inhalation hazard that can be fatal and stated that it combines with moisture in the lungs and forms strong acids that burn and destroy tissue;
- Commented on the ban on hazardous materials in the District, including Chemtrade's property;
- Noted one of the goals in the (Official Community Plan) OCP is a safe community for all;
- Noted the proximity of the Maplewood Village Centre to the site;
- Stated that the National Institute of Health says that mild wind could move chlorine gas approximately five kilometres;
- Noted that Chemtrade has been aware of the requirement to remove the use for nearly 20 years;
- Opined that the removal is required due to the level of danger chlorine presents;
- Stated that Chemtrade has six years to move the operation to a less populated area;
- Suggested moving the use to Prince George as Chemtrade has another plant in operation there;
- Opined that Chemtrade is pressuring Council instead of moving operations;
- Noted the QRA does not cover shipping and that railcars travel through multiple municipalities;
- Opined that a railcar release could kill at least 2,000 people in the City of Burnaby;
- Opined that most municipalities use means other than chlorine for primary water treatment as they are safer, including Metro Vancouver, Capital Regional District, Nanaimo, Kelowna, and Kamloops;
- Opined that water treatment uses a small amount of bleach;
- Noted that liquid chlorine is available from a plant in Saskatchewan;
- Noted the proximity of Maplewood Village Centre and Park and Tilford to the facility; and,
- Stated that the location of the facility is an accident of history and that a planner would not propose that it be located there.

5.8. Jeff Powell:

- Spoke in opposition to the proposal;
- Advised that he is a resident of the Blueridge neighbourhood;
- Stated that he was speaking on his own behalf;
- Stated that Chemtrade has been “told no” on multiple occasions;
- Stated that Chemtrade has said they were going to stop producing chlorine;
- Opined that the use is not permitted by the OCP, the Port does not want it on their lands, and noted that Council voted against the Bylaw in April 2026;
- Provided a quote from the US National Institute of Health regarding the intentional use of chlorine as a weapon;
- Expressed concern that the risks from drone or other terrorist attack was not included in the QRA;
- Opined that rezoning to allow a new plant producing chlorine or explosive materials to be built would not be permitted at the site;
- Opined that hazardous materials should not be in residential areas; and,
- Opined that the plant should be shut down.

5.9. Michelle Sheardown:

- Spoke in opposition to the proposal;
- Advised that she is a District resident;
- Stated that she is surprised to be speaking at a second Public Hearing on the matter;
- Opined that the issue is simply safety;
- Opined that Chemtrade’s production of liquid chlorine is not safe and should not be located near people;
- Opined that the hazard outweighs any benefit;
- Stated that safety first means putting wellbeing and risk reduction at the forefront of any activity;
- Noted that community safety is a goal in the OCP and the word safe or safety appears in the plan more than 70 times;
- Quoted the Local Government Act description of an OCP, noting it is used to guide decision-making, all bylaws must be consistent with the OCP, and opined that the proposal is not consistent;
- Noted that chlorine is listed as a hazardous substance in the Zoning Bylaw;
- Stated that chlorine railcars were relocated to Washington State during the 2010 Olympic Games in Vancouver due to the risk of terrorism;
- Commented on evacuations in California and deaths in Washington State related to chemical plants;
- Opined that hazardous substances should not be located anywhere near people;
- Expressed concern regarding potential human error, mechanical failure, seismic events and terrorism as any is possible;
- Opined that non-conforming land use and exceptions should not be allowed;
- Questioned if explosives would be permitted to be produced near residential areas;

- Opined that the claim that the use is required to ensure safe drinking water is not legitimate and that the use of chlorine is decreasing as other methods are used;
- Stated that there are other suppliers of chlorine;
- Opined that the company would survive shutting down the use at the North Vancouver plant as they have multiple locations; and,
- Opined that workers at the plant would have four years to find other employment and that there will be openings for skilled trades.

5.10. Trey Bell:

- Spoke in opposition to the proposal;
- Advised that he is the president of the Lower Lynn Community Association, but was not speaking on their behalf;
- Advised that he had spoken with residents in neighbouring communities;
- Noted that most, but not all, the residents he spoke with are opposed to the proposal and that some raised considerations including employment and that industry has been a long-standing part of the community;
- Stated that Council can put community safety first while preserving local industry and jobs;
- Opined that Council should reaffirm their previous decision to abandon the bylaw unless significant changes are made;
- Commented on Chemtrade's contribution to the local community and stated that Council's primary responsibility is the safety of residents;
- Stated that liquid chlorine vapourizes quickly into a toxic gas that can travel a significant distance on the wind;
- Stated that a worst-case scenario, particularly in the event of an earthquake, a significant release could pose risks to the surrounding communities including Lower Lynn, Seylynn, and Lynnmour;
- Stated that serious injury and death can occur in a short time, noting this would make evacuation challenging;
- Stated that while the risk of an incident is low, the potential consequences would be severe and cannot be ignored;
- Opined that risks involved with rail travel have not been received enough attention and must be considered;
- Commented on long-term planning and redevelopment in surrounding neighbourhoods;
- Stated that the residents in these neighbourhoods moved in with the expectation that liquid chlorine production would cease at the site by 2030;
- Opined that Chemtrade can continue to produce other materials while transitioning from chlorine production;
- Opined that if Chemtrade wants to continue to operate at the site, they should cease chlorine production; and,
- Stated that the decision is complex and that Council will give it careful consideration.

5.11. Shawn Dehkhodaei:

- Commented on a matter not related to the bylaw under consideration.

5.12. Travis McLean:

- Spoke in support of the proposal;
- Advised that he is the Business Segment Manager for Refining and Petrochemicals for Quadra Chemicals and that Chemtrade is a long-time supplier of caustic soda to their plants;
- Noted the company is Canadian and operates facilities in many locations in Canada, including a caustic soda terminal in Edmonton;
- Stated that Chemtrade has been a supply partner for decades and that he supports continued operations;
- Stated that they supply caustic soda to the mining, water treatment, and energy sectors;
- Expressed concern that the closure of the Chemtrade facility would weaken supply chains, reduce competition, and raise prices;
- Stated that there is only one other producer in western Canada and that they are in a sold out position;
- Noted that if they could not acquire product from Chemtrade, their alternative sources would be in Asia and the US Gulf Coast;
- Stated that production in Southeast Asia uses coal power, resulting in environmental impacts;
- Stated that Chemtrade is a Canadian company and that more production in Canada is needed;
- Stated that they work with the largest energy companies in Canada and opined that they want local supply chains;
- Commented on events that can negatively impact supply chains, including extreme weather, labour disruptions, and tariffs;
- Noted that a benefit of having Chemtrade as a local source is that if other transportation is interrupted, trucks can be loaded at the site to maintain supply;
- Commented on an Indigenous partnership between Quadra Chemicals and Oosita with revenue sharing and benefits to the local community, using Chemtrade caustic soda;
- Stated that his experience with Chemtrade is that they are safe and reliable;
- Stated that Quadra's terminal is audited on a regular basis and safety is a core value; and,
- Stated that their internal system to identify customer and supplier deficiencies found that Chemtrade had a better record with higher volumes than other suppliers and that none of the issues identified were safety related.

5.13. Marcia Stephenson:

- Spoke in opposition to the proposal;
- Advised that she is a District resident;

- Noted other speakers have expressed points in opposition;
- Stated that the Port is shutting down hazardous chemicals on their lands by 2030;
- Questioned why the District would continue the use when they have the opportunity to remove it;
- Opined that the plant is left over from the forestry and pulp and paper industries at a time when the area was sparsely populated and the Ironworkers Memorial Bridge (IWMB) had not been built;
- Opined that vehicles on the IWMB would be at risk;
- Commented on proposed new equipment and safety measures, noting that zero percent risk is not possible to achieve;
- Commented on deaths from a chlorine incident in Jordan and recent evacuations in Orange County, US due to an incident at a chemical plant;
- Stated that Orange County was sparsely populated at the time the plant was constructed and that residential areas expanded to near its location;
- Commented on an explosion at a chemical in Washington State in May 2026;
- Noted the incident at the Cleveland Dam was determined to have been caused by human error;
- Stated that some have claimed that chlorine is essential to water treatment;
- Opined that water treatment does need a lot of chlorine;
- Stated that 4,000 people are located where they would be required to shelter-in-place if an incident occurred;
- Expressed doubt that the capacity for emergency response is adequate; and,
- Opined chlorine should be manufactured away from residential areas.

5.14. Dan Thompson:

- Spoke in support of the proposal;
- Advised he has been a mechanical engineer for many years, has worked with chlor-alkali facilities for 40 years, and storage, transportation, and emergency response for 28 years;
- Advised that he is a member of the Chlorine Institute, trains elite chlorine response teams that make up CHLOREP's response program, and reviews pamphlets for guidance for different engineering standards that are considered best practices;
- Commented on improvements in equipment and practices in the industry, including storage and transportation, and chlorine tank storage design and maintenance practices;
- Stated that, due to these improvements, tank performance issues are extremely rare;
- Advised that chlorine tanks have higher standards for design, testing, and maintenance than for other hazardous chemicals;
- Noted that chlorine is not corrosive and stated that he has inspected the interior of storage tanks that are 60 years old and look nearly new;
- Stated that chlorine tank care design, testing, and maintenance requirements are virtually the same as for storage tanks;

- Stated that chlorine railcars are overdesigned and can withstand a minimum of 500 pounds per square inch gauge (PSIG) of pressure and have release valves set to relieve the lading when pressure reaches 375 PSIG;
- Noted that newer railcars are rated for 600 PSIG to help resist puncture in case of derailment and are still protected at 375 PSIG;
- Commented on improvements to chlorine storage tanks and railcar valves and release devices due to improved materials and designs;
- Noted that valves were initially removed and rebuilt on every trip and this is no longer necessary due to design improvements;
- Advised that valve mechanical issues are extremely rare and that there are capping devices available to secure the device in case of an issue;
- Stated that he had never seen a significant release from low-speed railcars such as those in a railyard and that the chances of release are significantly reduced due to the energy required to puncture a railcar;
- Noted that none of the derailments during the 20 years he supervised shipments involved a release;
- Advised that he has been involved in emergency response training at the facility, including training of emergency response contractors and emergency responders; and,
- Opined that continued operation should be considered a positive due to Chemtrade's commitment to the guiding principles of the Chlorine Institute and active participation in the safety of the chlorine industry.

5.15. Kris Petterson:

- Spoke in support of the proposal;
- Advised that he is the Operations Manager for Chemtrade and is a Professional Engineer and Mechanical Engineer;
- Advised that he is responsible for safety at the facility;
- Advised that he has grown up around heavy industry and finds the work interesting and rewarding;
- Stated that he enjoys the community and having the opportunity to apply experience in the field at a facility in an ideal location;
- Stated that he was speaking on behalf of the workers at the facility, including unionized workers;
- Noted that there are many full-time and many seconded engineers and contractors;
- Stated that many of the workers at the facility live in the community;
- Stated that workers at the plant care deeply about safety, are the first people affected by it, and understand the risks in ways others do not; and,
- Opined that the proposal is for a safety project and an investment intended to reduce risk.

5.16. Phoebe Yap:

- Spoke in support of the proposal;
- Advised that she is a registered occupational safety specialist with Chemtrade, noting that her job is to ensure safety;
- Stated that she lived in Ontario and worked in the oil and gas and Petrochem industry prior to moving to BC to work for Chemtrade;
- Stated that her purpose is to help people be safe and to have a voice;
- Commented on Chemtrade's occupational health and safety (OHS) record;
- Stated that Chemtrade provides access to clean drinking water;
- Stated that everything has risk and that nothing is zero risk;
- Opined that the facility is worth keeping despite risk and that they are always improving safety;
- Commented on the risks associated with driving and controls to reduce the potential for injury including road design, seatbelts, air bags, and consideration for a variety of different drivers;
- Commented on global instability;
- Stated that she hopes to continue to live in North Vancouver; and,
- Recommended letting Chemtrade continue to operate.

5.17. Heather Drugge:

- Spoke in opposition to the proposal;
- Stated that she is a District resident and worked in corporate communications for 30 years;
- Opined that Chemtrade is framing the message that they are essential for drinking water and that if the plant does not continue to operate, there will be no water;
- Opined that that is not complete information;
- Stated that production of caustic soda is inseparable from production of liquid chlorine;
- Opined that caustic soda is more profitable, with prices rising and the price of chlorine dropping;
- Opined that Chemtrade tells the public about drinking water and their investors about caustic soda;
- Commented on the facility's location on leased Port lands and owned lands in the District;
- Noted the Port lease requires removal of the use from their lands by 2030;
- Noted that Chemtrade has requested a rezoning to move the use onto District lands;
- Opined that the Port does not want the use on their land and that the District is being asked to take on the risk;
- Opined that Chemtrade could make bleach and other products;
- Opined that this would not be as profitable and stated that Chemtrade wants to maximize their profits;
- Commented on the additional QRAs being proposed;

- Stated that Major Industrial Accidents Council of Canada (MIACC) provides land use modelling regarding how far a facility should be located from residential development and does not certify facility safety;
- Opined that the safety zone should extend two kilometres downwind of the site and five kilometres in a worst-case scenario, noting that Maplewood Village and Lynn Creek Town Centre are within this area where there is a new recreation centre, library, and childcare facilities;
- Opined that most people are not able to navigate a QRA or covenant or evaluate the independence of a risk management firm;
- Opined that information asymmetry is not an accident and is the environment that Chemtrade has created; and,
- Stated that Council's decision on April 13, 2026 was correct.

5.18. Robyn Kinsley:

- Spoke in support of the proposal;
- Advised that she is the vice-president of transportation, emergency preparedness, and regulatory affairs at the Chlorine Institute and is a chemical engineer and the staff lead for transportation and emergency preparedness issues;
- Advised that her presentation is on the industry's preparedness and response to chlorine emergencies;
- Stated that the Chlorine Institute is a non-profit trade association founded in 1924 and they have more than 200 members representing in a wide range of the chlorine supply chain;
- Noted their focus is on safe, secure, environmentally compatible and sustainable production and distribution and use of their mission chemicals, with chlorine as the core chemical;
- Noted that the Chlorine Institute is widely recognized as the technical and safety voice of the chlor-alkali industry;
- Advised that the Chlorine Institute is involved in emergency preparedness, prevention, mitigation, and response through its CHLOREP program, which is an emergency response mutual aid network for chlorine in transport and at facilities;
- Stated that there are 86 CHLOREP teams from 25 member companies involved in the handling and shipping of chlorine and the network is supported by 15 hazmat emergency response contractor companies;
- Noted that the Chlorine Institute supports CHLOREP by providing 40 hours of annual training as well as more advanced training and two-day training events in eastern and western Canada that are primarily targeted for CHLOREP contractors, however, other interested CHLOREP industry stakeholders and first responders may participate;
- Commented on the structure of CHLOREP, noting it is organized by sector throughout North America with one designated primary team per sector and multiple secondary teams;
- Noted that CHLOREP responds to both shippers and receivers;

- Advised that CHLOREP has emergency response call centres that activate response;
- Advised that CHLOREP contractors supplement response needs and are called on when an incident is in a remote location or is complex requiring advanced abilities;
- Noted that the Chlorine Institute conducts regular verification of its contractors;
- Noted that there are different levels of contractors, with level two able to address minor leaks and level 3 able to respond to severely damaged chlorine containers and larger leaks;
- Noted there are several contractors in the sector where Chemtrade is located; and,
- Advised that the Chlorine Institute supports preparedness and response by providing training for first responders.

5.19. Chris Poskitt:

- Spoke in support of the proposal;
- Advised that he is the president of Unifor Local 697 and is speaking on behalf of the unionized workers at Chemtrade;
- Advised that he works at the site as an operator;
- Stated that the proposal matters to union members and their families;
- Stated that workers at Chemtrade are not separate from the community and commented on their community involvement;
- Stated that Chemtrade support workers' families and those of contractors located throughout the region;
- Advised that some workers at the plant are the third generation of their family to work there;
- Stated that employees at Chemtrade are skilled workers who take pride in their work and take safety seriously;
- Commented on uses of chlorine and caustic soda in everyday life, including drinking water and industry;
- Stated that safety is important to workers at the site, noting that operators train for years before becoming fully qualified and other companies actively try to recruit their members due to the level of experience;
- Commented on the CHLOREP program and training provided in hazardous materials and rail safety;
- Noted that the workers are continuously training and looking for ways to improve; and,
- Opined that the community and workers want the same things.

5.20. Farshad Foroughi:

- Spoke in support of the proposal;
- Advised that he has been an operator at Chemtrade for 14 years and one of the CHLOREP team leads;
- Noted that he is a second-generation employee and that he and his family live near the facility;
- Stated that he is not speaking from a policy or a script;

- Stated that safety is at the core of everything they do at the facility and that every task is planned and cross-checked, paying constant attention and following procedures;
- Noted that the facility has operated since 1957 without a significant incident;
- Commented on investments in modernization over the last ten years;
- Stated that safety requires workers to continuously analyze data and actively manage systems to tightly control risks;
- Stated that automated systems are complex and require a high level of expertise;
- Noted that they work to retain their trained and experienced professionals, and that they provide critical human oversight;
- Stated that the facility operates at the highest standard, particularly railcar loading;
- Noted they are subject to rigid inspections and checks and multiple layers of verification before a railcar leaves the site;
- Stated that they train beyond the facility's perimeter through CHLOREP and they work closely with fire crews, emergency management teams, RCMP, and other industry responders;
- Stated that if there were ever an issue, the response would be coordinated, informed, and disciplined;
- Noted the proposal would reduce liquid chlorine storage and improve containment during loading at the site, including an enclosed railcar facility and scrubber system, and added seismic protection;
- Stated that the proposed upgrades makes sense to him as an operator, a CHLOREP lead, and as a person raising a family in the community; and,
- Requested that Council support the application.

The Public Hearing recessed at 9:26 p.m. and resumed at 9:35 p.m. with Questions from Council.

5.21. Henry Ward:

- Spoke in support of the proposal;
- Advised that he is retired with 41 years of chemical industry experience, including as the Global Director for Supply Chain Safety, Security and Sustainability for the Dow chemical company;
- Advised that he led the next generation railcar project for the Dow chemical company, a joint project between Dow, Union Tank Car Company, and Union Pacific Railroad and involved coordination with Transport Canada, Department of Transportation, Homeland Security, and Department of Defense as well as chemical, railroad, rail equipment suppliers, and first responders;
- Advised that the drivers for the project were safety and security in response to the incident in Graniteville, South Carolina and awareness that terrorist groups were trying to find ways to use chlorine as a weapon;
- Stated that the project provided the foundation for the new chlorine railcar design, improved operating and maintenance practices still in use, and improved emergency preparedness measures;

- Advised that they reviewed potential safety and security threat scenarios that could result in a chlorine release from a railcar and options to mitigate the potential for release, including analysis of different materials and field testing and modelling of the most serious scenarios;
- Stated that various designs were evaluated for their ability to survive puncture and rollover incidents;
- Noted that Homeland Security was involved and that expertise and facilities were supplied by the US Army and Navy;
- Advised that the designs were evaluated for their ability to withstand attack from improvised explosive devices (IED), vehicle-borne IEDs, track sabotage, and a variety of high-powered rifles;
- Advised that the final two design options from the evaluation process included a tank within a tank, similar to the design of ocean tanker ships, and the DOT105J600W railcar with a stronger, thicker, normalized steel tank with full head shields and stronger top valve and fitting protection;
- Noted that both options were built, tested, and evaluated;
- Further work resulted in the required adoption of the enhanced DOT105J600W design as the railcar of the future;
- Stated that there were no better design features or materials identified during the 11 years of study;
- Opined that rail transportation of chlorine is safe and secure, supported by years of industry experience; and,
- Noted that experience and past accidents have contributed to improved design and procedures.

5.22. Susie Chant:

- Spoke in support of the proposal;
- Advised that she is the Member of the Legislative Assembly for the North Vancouver-Seymour riding, which includes the Chemtrade facility, and that she lives in Lynn Valley;
- Stated that the proposal is not an ordinary land use decision;
- Stated that the facility affects the security of drinking water, the stability of Canadian industry, and the workers at the facility;
- Stated that approximately 31 million Canadians, including those in North Vancouver, are dependent on chlorine to safely treat drinking water;
- Opined that Chemtrade's facility is a backbone of that system, producing more than 40 percent of all available liquid chlorine in Canada and more than 70 percent of the liquid chlorine in BC and Alberta;
- Stated that those communities that do not use liquid chlorine for water treatment use bleach and that liquid chlorine is required to produce bleach;
- Opined that if the facility shut down, communities in western Canada would face immediate and serious challenges;

- Noted that there was a great deal of discussion during the rail strike regarding how to transport chlorine;
- Stated that liquid chlorine imported from the US would be required if the proposal is denied and that this would create logistical complications;
- Commented on the importance of chlorine to public health, noting that she is a nurse;
- Stated that caustic soda and HCL are essential to industries including energy, oil and gas, pulp and paper, mining, manufacturing, and automotive;
- Commented on the facility's safety record;
- Noted that more than 500 million dollars has been invested in the facility since 2010 and that Chemtrade is prepared to make additional investments to improve safety and reduce risk;
- Stated that the proposed improvements will significantly reduce risk on the site and almost eliminate risk outside of the site;
- Compared the risks associated with other activities such as driving, outpatient surgery, and dental work;
- Commented on Chemtrade's contribution as an employer providing high-skilled, well paid jobs in engineering, maintenance, and safety and technical trades as well as training, and that many employees stay there for their entire careers;
- Noted that there are 77 unionized workers at the site and stated that they care about their families and their community; and,
- Encouraged Council to support the application.

5.23. Ben Wahl:

- Spoke in support of the proposal;
- Advised that he is a hydrotechnical engineer and was part of the flood study for the site;
- Noted the site is between the Seymour River and Burrard Inlet;
- Advised that they evaluated both coastal hazards including tsunami, wind, and waves, and the river flow hazard.
- Noted they followed the standard guidelines for the assessment, including the Flood Hazard Area Land Use Management Guidelines, Climate Change Adaptation Guidelines, and District requirements;
- Noted the conditions of the site determined the factors considered;
- Commented on the process of the study, including site assessments and site visits, hydraulic modelling, and assessment of geomorphological features;
- Noted the site is subject to a Creek Hazard Development Permit Area (DPA) in the OCP;
- Stated that they determine the flood construction level (FCL) to a one-in-200 year flood risk in accordance with legislation, taking climate change into consideration;
- Noted the final FCL is calculated using the maximum of both coastal and river hazards;
- Stated that the facility is built to withstand flooding from river and ocean; and,

- Commented on Chemtrade's emergency response procedures and material containment.

5.24. William Schoonover:

- Spoke in support of the proposal;
- Advised that he had recently retired from a public service career with the US Department of Transportation, serving with the US Coast Guard, Federal Railroad Administration, and the Pipeline and Hazardous Material Safety Administration;
- Advised that he was the Associate Administrator for Hazardous Material Safety and oversaw the safe transportation of dangerous goods;
- Advised that he would review the regulatory actions the government has taken to improve the railcars used to transport toxic inhalation hazards (TIH), including chlorine;
- Noted that the US Department of Transportation has coordinated with Transport Canada to take actions to improve rail transportation safety for dangerous goods by adopting railcar design enhancements, improving operational controls, and implementing other improvements to reduce the likelihood of accidents;
- Advised that Transport Canada and the US Department of Transportation began addressing TIH materials in the mid-1980s following the tragedy in Bhopal, India;
- Advised that refinements were made to the package requirements for TIH materials, including for tank cars;
- Stated that railcars have been designed and considered using modelling and real incidents following years of research and full-scale impact testing;
- Advised that government, in collaboration with industry, made efforts to improve the safety and security of the transportation of TIH materials starting after September 11, 2001, with increased urgency following several rail accidents in 2005;
- Commented on the proposed expansion of requirements in 2008, including speed restrictions, which lower impact speeds, and standards for head and shell puncture resistance, which were well beyond what the existing cars could withstand at the time and beyond standards the industry could meet;
- Advised that they created an interim design standard 2009 with input from the industry that required all TIH tank cars built after March 2009 to be constructed from better steels that provided additional impact resistance, thicker tank shells and heads, and top fitting protection that increased rollover survivability, and implemented a 50 miles per hour maximum speed for all loaded TIH trains;
- Advised that he worked with Transport Canada to ensure they had all the data and were consulted as they implemented a similar approach to tank car design in Canada;
- Advised that after the final rule was published and the interim specification was adopted, research demonstrated that the interim specification provided significant safety improvements and that there was no other feasible option; and,
- Advised that the interim rail tank car specification was made permanent in 2020 for the transport of TIH materials and the use of non-normalized steel was prohibited.

MOVED by Councillor MURI

SECONDED by Councillor MAH

THAT the June 16, 2026 Public Hearing regarding Bylaw 8778 is authorized to continue beyond 10:30 pm.

CARRIED
(10:23 p.m.)

5.25. Payam Farahbakhsh:

- Spoke in support of the proposal;
- Advised that he has worked in mechanical, plant, and industrial engineering for 30 years, the past five years with Chemtrade;
- Advised that he manages maintenance at the facility;
- Stated that he had not been asked to speak at the Public Hearing by Chemtrade and no one had written his speech for him;
- Opined that the plant is in jeopardy due to misconceptions;
- Stated that he had felt insulted and upset by some of the comments made by previous speakers;
- Advised that he had worked in five different heavy industry plants and stated that he is a good judge of organizations and industrial operations;
- Noted that he lives a few blocks from the site and that he shops in the area and pays taxes in the District;
- Opined that Chemtrade employs intelligent, highly educated and skilled people, noting some had spoken at the Public Hearing;
- Stated that he sees the day-to-day operations and that he feels safe for himself, his family, his neighbours, and the community;
- Stated that he would not continue to work at the site if they did not operate in a safe manner;
- Opined that people feel scared about things they do not understand;
- Invited the attendees and other members of the public to visit and learn about the plant, the workers, and their processes, including risk evaluation and mitigation;
- Noted that he would likely be retired by 2030 and would not benefit personally from Chemtrade continuing to operate beyond 2030; and,
- Commented on the impacts of geopolitical instability.

5.26. James Rader:

- Spoke in support of the proposal;
- Advised that he has worked in the railway industry for more than 50 years, including roles with two Class 1 railways in mechanical inspection, the Association of American Railroads, the Federal Railroad Administration, and railcar manufacturer;
- Advised that he has been responsible for the safe transportation of dangerous goods since 1983 in a variety of roles;
- Noted that he had worked in rulemaking, tank car safety research, field inspections, enforcement, and accident response and investigations;

- Commented on the redesign, inspection and maintenance improvements to improve railcar safety;
- Advised that he led efforts for United States federal tank car inspection, testing, and maintenance;
- Advised that he served on several United States and Canadian committees related to tank cars;
- Advised that he has made hundreds of presentations on the topic and is a recognized historian and resource in the field;
- Commented on legislation and governing bodies that oversee freight movement across the general railway system;
- Commented on the process and systems of rail car inspections; and,
- Commented on safety statistics related to shipment of dangerous goods.

5.27. Tracy Clark:

- Spoke in support of the proposal;
- Advised that he is a hazmat response contractor in Fort Worth, Texas and that he has been in business for 45 years;
- Advised that he is a member of the Chlorine Institute;
- Advised that he has Level 3 status for chlorine response and is able to respond to breaches or leaking valves, noting there are only two others at that level;
- Advised that he is part of a cadre of trainers who work with all the chlorine-related companies, including those that produce, repackage, and transport chlorine;
- Stated that his experience of those in the chlor-alkali business are some of the most dedicated;
- Commended the care those in the chlorine industry take regarding safety, including maintenance;
- Noted that members participate in mutual aid, sometimes including for competitors;
- Stated that he has conducted training at the facility;
- Opined that Chemtrade workers are committed, helpful, and dedicated to production and their neighbours;
- Commented on the maintenance and upkeep of the facility;
- Commented on the durability of railcars, noting that railcars involved in derailments have not leaked despite extensive physical damage;
- Commented on the technology involved in chlorine transportation safety;
- Questioned how shutting down the facility would impact the community; and,
- Stated that if Chemtrade were to stop producing liquid chlorine in favour of bleach, there would be much more rail traffic from the site as a small amount of chlorine is used to create a significant amount of bleach.

5.28. Griff Marshall:

- Spoke in support of the proposal;
- Advised that he is a resident in the area;

- Advised that he is not affiliated with Chemtrade and his former employer would have been a competitor;
- Noted that he was not directly involved in chlor-alkali production in that position and that chlorine was an upstream product;
- Commented on the security of the supply of chlorine and the importance of chlorine, noting Chemtrade produces liquid chlorine used in water treatment for 40 percent of Canada and 70 percent in western Canada;
- Noted that three companies produce liquid chlorine in Canada, Chemtrade and companies in Saskatchewan and Quebec, with Chemtrade representing 40 percent of the production capacity;
- Expressed concerns regarding Canada's ability to be self-sufficient in chlorine production;
- Stated that approximately one third of all US chlorine production capacity will be phased out due to the use of asbestos in production;
- Noted that Chemtrade uses more current membrane technology that does not use asbestos;
- Noted that chlorine is used to make bleach for water treatment and advised that bleach at industrial concentration degrades exponentially faster than at concentrations for household use, starting within the first week;
- Commented on the degradation of chlorine during transportation; and,
- Advised that the City of Vancouver uses bleach produced by one of Chemtrade's customers.

5.29. Henry Geant:

- Spoke in support of the proposal;
- Advised that he is a longtime resident and lives in the area;
- Advised that he is a member of the Association of Professional Engineers and Geoscientists of BC;
- Advised that he worked at the facility from 1974 to 2005 in several engineering roles;
- Advised that he participated in modernization, expansion, and seismic improvement projects at the site;
- Stated that he knows plant operations including unloading and storage and is not aware of any major incidents with chlorine that were not contained within the facility property or that impacted the community during his employment;
- Commented on safety equipment, including sensors, signals, and emergency signals;
- Noted that he was called back after retiring to assist with a maintenance shutdown including hiring consultants and contractors for the project;
- Stated that he supports the modernization of the facility;
- Stated that he does not have a conflict of interest as he is not an employee, consultant, or contractor for Chemtrade; and,

- Commented on the benefit for Chemtrade employees as well as other companies and contractors.

5.30. Colin Metcalfe:

- Spoke in opposition to the proposal;
- Advised that he lives in the area;
- Commented on his expectation of local elected officials;
- Opined that the proposal requires the shipment of chlorine through densely populated areas;
- Commented on Chemtrade's record financial performances in 2025 as a result of diverse product lines;
- Questioned whether residents should bear the risks associated with the manufacture, storage, and transportation of chlorine.
- Stated that 90 percent of Chemtrade's chlorine production is exported.
- Opined local emergency response resources and capacity does not meet the needs to respond to a significant release of liquid chlorine; and,
- Urged Council to reject the proposal.

6. QUESTIONS FROM COUNCIL

Question

Does Metro Vancouver use any of Chemtrade's liquid chlorine to purify our drinking water? Please differentiate between chlorine and derivatives.

In response to a question from Council, the applicant advised that they sell liquid chlorine to bleach producer Brenntag and their bleach is used by Metro Vancouver bleach which is provided to Metro.

Councillor MURI returned to the Hearing at 9:37 p.m. following the recess.

Question

Is there a 7/24 Chemtrade staff member onsite who fulfills the role of "designated technical representative"? If not, what is Chemtrade's emergency call-out protocol and expected time for such staff to be onsite in the event of emergency (ie. leak)?

In response to a question from Council, the applicant advised that the plant operates 24 hours a day, seven days a week, and that the Operations Supervisor takes the lead role both day and night.

Question

In terms of safety improvements mentioned in Chemtrade's presentation, can Dr. Thomas quantify "significantly improve the safety of the community and reduce potential risk"? Please provide a "scale" of that improvement.

In response to a question from Council, staff advised that, at a high level, the scale of the improvement can be seen in reduced risk contours, which determine what can be located in those areas. The proposed upgrade is expected to reduce the one in 10,000 risk contour to at or near the property line and it was previously just south of Old Dollarton Highway.

The applicant confirmed that the 10^{-6} contour in 2006 was beyond Dollarton and the proposed improvements would move that contour to the property's border at Spicer Road.

Clarifying Question

A member of Council requested clarification of the applicant's answer to quantify the proposed safety improvements as a percentage.

In response to the question, the applicant advised that the improvement would be of an order of magnitude of a factor of 10 on the curve. The applicant clarified that the difference between 10^{-6} and 10^{-5} is comparable to the difference between the risk involved in air travel and having a car accident in the course of a year or having food poisoning.

Question

Do the workers in BC that Mr. Coonfer represents use bleach or chlorine in their drinking water?

In response to a question from Council, staff advised that water professionals use bleach or chlorine in treating drinking water and that Metro Vancouver uses ozone, ultraviolet light (UV), and chlorine.

Question

A point was raised that 90% of liquid chlorine produced by Chemtrade is exported to US; the implication is that there is limited value to Canadians. For comparison, can staff look into what percentage of Canada's crude oil exports are shipped to US?

In response to a question from Council, staff advised that approximately 95 percent of Canadian crude oil is exported to the US.

Question

Do we have any safety analysis of rail transport, of the safety of moving the product from the plant to other locations by rail?

In response to a question from Council, staff advised that extensive safety analyses and statistics are available regarding product shipping. Staff noted the freight rail is considered one of the safest shipping methods with more than 99 percent of shipments arriving safely at their destinations.

Question

Is there any information available on the impacts of a major earthquake on the risks? How would an earthquake create the risk of a chlorine leak at the plant or in the transport of the chlorine? Put another way, is the plant and the rail transport system designed to withstand an earthquake risk?

In response to a question from Council, the applicant's consultant advised that all construction must be designed to BCBC standards, including seismic requirements. The consultant highlighted measures including shutdown valves and pipes within pipes. It was noted that onsite risks were evaluated and rail transportation risks were not.

Question

Has there ever been a fatal chlorine leak in Canada as a result of chlorine manufacture or rail transport?

In response to a question from Council, staff provided information on a derailment in 1979 that resulted in evacuations and no fatalities and a leak from a railcar in 1962 that resulted in hospitalizations and no fatalities. The applicant advised that they are not aware of any fatalities.

Question

Would employees at Chemtrade lose their jobs if Chemtrade ceased production of chlorine gas ONLY, but continued producing its other products? Would Chemtrade shut down if not able to produce chlorine gas for US markets?

In response to a question from Council, the applicant advised that chlorine production is required to produce caustic soda and is used in the production of HCL, so they cannot stop making chlorine and continue to make the other products.

Mayor Little commented on the process, noting that venting excess chlorine gas is not possible if they are not permitted to liquify chlorine.

The applicant advised that K2 Pure Solutions produces bleach from chlorine gas and HCL, noting that Chemtrade is not located in as large a municipality. The applicant advised that they need to produce all three of the products, including liquid chlorine to keep the plant open. The applicant estimated that three to five times as much would need to be shipped if they produced a derivative of chlorine.

Clarifying Question

A member of Council requested clarification on the impact if Chemtrade stopped shipping chlorine outside of Canada.

The applicant clarified that their business is dependent on producing coproducts including chlorine.

Question

In the case of a major accident what would likely be the average number of emergency personnel needed to respond?

In response to a question from Council, staff advised that given the scale and technical complexity, the number of emergency personnel required is difficult to predict. Staff noted that they would have support from outside agencies.

Question

What is the total complement of firefighters on the north shore? Do they have hazmat training and the required safety equipment?

In response to a question from Council, staff advised that total complement of firefighters is 55 and three Duty Chiefs, noting that the District of North Vancouver and District of West Vancouver are hazmat aware trained and that the City of North Vancouver has 11 trained hazmat crew members.

Question

Follow up question: If Chemtrade sells chlorine to Brenntag, does Brenntag then turn it into bleach and then sell to Metro Van for use in purifying water? In other words, Metro Vancouver does not buy any chlorine from Chemtrade.

In response to a question from Council, staff advised that Metro Vancouver does not purchase liquid chlorine directly from Chemtrade; Metro Vancouver purchases bleach from Brenntag for use in drinking water treatment.

Question

Follow up: does Metro Vancouver use chlorine or bleach or another derivative of chlorine to purify water?

In response to a question from Council, staff advised that Metro Vancouver has stated that they use chlorine for water.

A member of Council noted that the Metro Vancouver website lists sodium hypochlorite (bleach) and noted that chlorine is in brackets.

Staff noted that Metro Vancouver's website describes its drinking-water treatment as a two-stage process: primary treatment at its two water treatment facilities, followed by additional secondary treatment as water travels through the regional distribution system. The website refers to chlorine/chlorination as part of the treatment process, including secondary disinfection to preserve water quality in the distribution system.

Councillor Muri stated that she requested information directly from Metro Vancouver and their response is that they use bleach at their two treatment plants and secondary disinfection stations and that some municipalities use bleach in their local rechlorination systems as well as for disinfection of treated liquid waste prior to discharge.

Question**What would it cost for hazmat equipment**

In response to a question from Council, staff advised that the costs would be beyond equipment as staff training costs would need to be considered. Staff noted that many fire departments are moving to hazmat awareness and hiring external contractors. Staff further noted that information could be requested from the City of North Vancouver.

7. COUNCIL RESOLUTION

MOVED by Mayor LITTLE

SECONDED by Councillor MAH

THAT the June 16, 2026 Public Hearing regarding Bylaw 8778 is adjourned and will reconvene on Wednesday, June 17, 2026 at 5:00 p.m. at Council Chambers, at 355 West Queens Road.

CARRIED

(10:59 p.m.)

The Public Hearing reconvened in the Council Chambers of the Municipal Hall, 355 West Queens Road, North Vancouver, B.C. on Wednesday, June 17, 2026 at 5:02 p.m.

Present: Mayor Mike Little
Councillor Jordan Back
Councillor Betty Forbes
Councillor Jim Hanson
Councillor Herman Mah
Councillor Lisa Muri
Councillor Catherine Pope

Staff: Mike Fox, Chief Administrative Officer
Mike Danks, Fire Chief
Dan Milburn, General Manager – Planning, Properties and Permits
Genevieve Lanz, Director – Legislative Services and Corporate Officer
Yan Zeng, Manager – Development Planning
Heidi Granger, Municipal Solicitor
Cheryl Archer, Confidential Council Clerk
Afrooz Fallah, Planning Assistant – Development Planning
Amanda Day, Administration Clerk

Also in

Attendance: Raman Batra, Vice President Electrochem, Chemtrade
Ben Burford, Associate General Counsel, Chemtrade
Belinda Chiu, Senior Legal Counsel, Chemtrade
Fareed Ebrahim, Senior Technical Advisor, Chemtrade
Shaun Govender, Director, Government and Stakeholder Relations, Vancouver Fraser Port Authority
Blair Hetherington, Emergency Response System Manager – Chemtrade
Amy Jonsson, Director, Corporate Communications – Chemtrade
Claudia Leung, Manager, Real Estate, Vancouver Fraser Port Authority
Alvin Loh, Plant Director – Chemtrade
Alan Robinson, Group Vice President Commercial – Chemtrade
Dr. J. Kelly Thomas, Vice President and Blast Effects Section Manager – BakerRisk

Mayor Little advised that the purpose of the reconvened Public Hearing was to receive further input from the community on Bylaw 8778 and reviewed the established rules of the meeting.

Mayor Little restated that the Public Hearing was convened pursuant to Section 464 of the *Local Government Act*. Members of Council, staff, and the public participated in person and via Zoom and the Hearing was being streamed live over the internet and recorded in accordance with the *Freedom of Information and Protection of Privacy Act*.

Mayor Little stated that:

- The opportunity to be heard or provide written submissions was accommodated by speakers having signed up in advance, the details of the Zoom meeting having been provided on the District's website and in the notice of public hearing, and the acceptance of written submissions up until the hearing was closed;
- Speakers would be called from the established speakers list, including those who had signed up to speak since the hearing was adjourned. At the end of the speakers list, the Chair would call on speakers from the audience;
- Each speaker would have five minutes to address Council for a first time and should begin remarks to Council by stating their name;
- After everyone who wished to speak had spoken once, speakers would then be allowed one additional five-minute presentation;
- Any additional presentations would be allowed at the discretion of the Chair;
- Speakers were reminded to refrain from repeating information from their previous presentations and to ensure all comments remained focused on the bylaw under consideration;
- If a written submission was provided, speakers were asked not to read the entire submission, noting that they could provide a summary or briefly reiterate the highlights;
- All members of the audience were asked to be respectful of one another as diverse opinions are expressed, noting that the meeting was an open and impartial forum for Council to hear everyone's views;
- Council's role at Public Hearings is to listen to the public, not to debate the merits of the bylaw;
- Council may ask clarifying questions during Public Hearings;
- A binder containing documents and submissions related to the bylaw is available for review in hard copy and online;
- Speaking opportunities would be provided for everyone who wished to provide input and the meeting would be continued on a third night, if required;
- At the conclusion of the public input Council may request further information from staff, which may or may not require an extension of the meeting, or Council may close the meeting, after which Council should not receive further new information from the public; and;
- The purpose of a second public hearing to hear if new information has affected opinion of those who deem themselves affected by the proposal

5. REPRESENTATIONS FROM THE PUBLIC (continued)

5.32. Andrea Brown:

- Spoke in opposition to the proposal;
- Advised that she lives within one kilometre of the site;
- Disagreed with the applicant's claim that there is strong community support for their continued operation;

- Noted that there were speakers in support of the application who were employees or from partners of Chemtrade on the first night of the Public Hearing;
- Opined that the applicant has unfairly positioned their proposal as all or nothing and that Council either approves the application or there is a risk of losing access to chlorine entirely;
- Opined that this position applies pressure to Council and the community;
- Stated that she understands the importance of industry;
- Opined that safety must come first, particularly near a residential area;
- Stated that she is not confident that safety concerns have been addressed;
- Questioned how people would be notified to shelter-in-place, and how if they are not at home or have children outside;
- Commented on congestion on the IWMB and questioned how additional supports would reach the area;
- Stated that she is not confident that the covenant would not be removed in the future;
- Commented on DNVFERS capacity, noting that climate-related emergencies are increasing and questioned how emergency responders could respond to multiple incidents;
- Commented on residential densification and opined that approval of the proposal would be an unnecessary risk at a time when the community is growing;
- Acknowledged that people take risks, commented on mitigation of risks, and questioned why they would accept endangering thousands of people;
- Questioned why additional safety measures were not included in the original proposal;
- Opined that the standard of justification has not been met; and,
- Urged Council to reject the proposal.

5.33. Dave Sadler:

- Spoke in opposition to the proposal;
- Stated that he lives four kilometres from the Chemtrade facility;
- Stated that he compiled a list of chlorine plants near urban areas using artificial intelligence and found of the six listed, only Chemtrade is located in a residential area;
- Noted that Chemtrade staff have spoken regarding safety protocols;
- Commented on a chlorine accident in Texas that involved emergency lockdowns in several communities and the associated social and economic costs;;
- Expressed concern regarding the impact of congested roads and the IWMB;
- Opined that all chlorine plants are placed away from residential areas;
- Stated the probability of occurrence of an earthquake between seven and nine magnitude in the next 20 to 50 years and opined that this must be a consideration;
- Questioned how railcars would tolerate shaking and impacts from an earthquake;
- Opined that full destruction would result as well as liquefaction and other impacts; and,

- Stated that the plant would be 89 years old if the extension to allow the use for an additional 20 years is approved.

5.34. Rob Inman:

- Advised that he owns multiple residential and commercial properties and represented others working near the Chemtrade facility;
- Stated that he had met with 12 people who operate, own, or lease businesses on Riverside West, Spicer Road, and at Allied Shipyards;
- Advised that they are not promoting or opposing the application;
- Noted that he has operated in the area since 1978 and Allied Shipyards since 1948;
- Advised that none of the people he spoke with have ever had a problem with Chemtrade operating;
- Noted that railcars pass through the area on a regular basis and have not caused concern;
- Expressed concern regarding what neighbours do in the event of a spill;
- Noted that testing of the siren at the site can only be heard at Allied Shipyards and that the volume has been turned down;
- Expressed concern that workers in the area would not hear the siren;
- Commented on shelter-in-place procedures and stated he would go to the roof;
- Expressed appreciation for information provided by Chief Danks the first night of the Public Hearing as well as the training that DNVFRS members have; and,
- Requested written instructions from Chemtrade.

5.35. Mike Forrest:

- Spoke in support of the proposal;
- Stated that he has been a mechanical engineer and involved in engineering projects since 1980, primarily with paper products;
- Advised that he has lived in the City and District of North Vancouver and opined that the facility was a fact of life for residents;
- Advised that he has worked at Chemtrade as a project and construction manager;
- Stated that he was impressed by the workers, maintenance, and management;
- Stated that worker and contractor safety was a priority and referenced safety reviews, studies, inspection schedules and maintenance;
- Opined that it is safer to walk into the facility than to drive;
- Opined that Chemtrade has been a pillar of the community;
- Commented on their economic impact on the community; and,
- Noted that the Sunshine Coast Regional District uses bleach for water treatment and that bleach is less stable and deteriorates more quickly than liquid chlorine.

5.36. Michael Graveson:

- Spoke in opposition to the proposal;
- Stated that some call him a subject matter expert;

- Stated that the themes of the applicant's presentation were securing drinking water and reducing risk to the community;
- Stated that Chemtrade made contradictory statements that chlorine was used to treat drinking water and then that bleach is used, that bleach does not work and then stated that it does, that most of the chlorine they produced is used in Canada and then stated that 90 percent is exported;
- Referenced the total amount of 170,000 tonnes of chlorine produced by Chemtrade in 2025 and that only 8,000 tonnes were used in Western Canada; Opined that there is an excess of chlorine production in Canada;
- Opined that chlorine is a small part of drinking water safety;
- Commented on hazardous materials, noting that inhalation of chlorine is fatal and referenced an incident that occurred in the United States;
- Commented on chlorine cloud size from a leak and impacts;
- Opined that the proposed rail loading building is an improvement and noted that storage is proposed to be substantially removed;
- Opined that 32 full railcars on site would not be a reduction in the amount of chlorine over current storage capacity;
- Opined that there would be no reduction in risk to the community; and,
- Referred to comments on the askchemtrade.ca website as propaganda and misleading.

5.37. Chis Bowcock:

- Spoke in opposition to the proposal;
- Commented on the risk of a liquid chlorine release;
- Opined that risk is primarily due to railcars;
- Opined that a worst-case scenario release would have high fatalities and rapid impacts to five kilometres from the site;
- Opined that where chlorine accumulates there would be high fatalities;
- Opined that release event would exceed the response capabilities of the DNVFRS or other fire departments in the area;
- Referenced 33 railcars in incidents that did not result in a leak and opined that this should be taken as a warning rather than evidence of safety;
- Stated that 2000 fatalities would be comparable to the industrial accident in Bhopal, India;
- Stated that there has been one major derailment per month in BC;
- Opined that maximum allowable train speeds exceed top-fitting rollover protection and side puncture resistance protection;
- Opined that an outcome of chlorine release would be harsh and uncontrollable;
- Referenced the DNVFRS Fire Chief's comments relating to response strategy;
- Referenced Chemtrade's chlorine impact zone of 5.6 kilometres and impact to citizens;
- Opined that shelter-in-place is ineffective, noting individuals would be responsible for themselves;

- Opined that DNVFRS is highly skilled in base services and special operations related to wildfire and technical mountain rescue but does not have the ability to respond to a chlorine release incident;
- Opined that if first responders are exposed to chlorine, they would experience inhalation hazards, cardiac stress, and physical stress and their ability to respond to local incidents would be negatively impacted; and,
- Opined that increasing the DNVFRS total firefighters would be costly and minimally increase survivability.

5.38. Corrie Kost:

- Spoke in opposition to the proposal;
- Expressed agreement with points raised by previous speakers in opposition to the proposal;
- Stated that he will be 104 years old in 2046;
- Expressed disbelief that the issue was not settle decades ago;
- Noted that previous Councils have said the use should discontinue and that the current Council has authority to act in this regard;
- Stated that there have never been problems with the plant and this would be the case until a major incident occurred;
- Commented on impacts of a large magnitude earthquake;
- Opined that emergency responders have not expressed clear support for the proposal;
- Opined that emergency responders could not enter an area with chlorine gas with their current equipment and would be risking their lives;
- Questioned how emergency responders would rescue thousands of people;
- Opined that windows would be broken and that shelter-in-place would be unsafe on lower floors;
- Opined that the plant would sink in a major earthquake and that the sewage treatment plant has the same problems;
- Opined that all waterfront industry should be concerned;
- Requested that Council ask for information on Chemtrade's insurance policy.

5.39. Cathy Brydon:

- Spoke in opposition to the proposal;
- Advised that she is a longtime area resident;
- Noted that she had taken part in meetings for the OCP and meetings for the facility under its current and previous owners;
- Opined that Chemtrade and its predecessor were good corporate citizens;
- Stated that she understood that phasing out liquid chlorine at the facility was decided a long time ago;
- Noted the matter has been brought back for consideration with the onus on the District to rezone the site to allow the use; and,
- Opined that it would not be the correct decision.

5.40. Peter Teevan SPEAKING FOR A SECOND TIME:

- Commented on railcars and shipping;
- Referenced a news article about a slow-moving train collision in North Vancouver in 2024 and expressed concerns about potential of another incident;
- Quoted a letter sent by District Council in 2007 that they were not supportive of continuing operation or extension to the Port lease at the time;
- Opined that the risks involved with railcars must have been considered at the time;
- Opined that Council is being discouraged or restricted from considering these risks;
- Opined that the argument that off-site matters cannot be considered does not make sense as shadow studies and traffic impact assessments for off-site impacts are considered for development applications; and,
- Quoted the legal opinion from real estate and municipal lawyer Bruce Hallsor.

5.41. James Rader SPEAKING FOR A SECOND TIME:

- Provided information regarding rail routing and security, noting that rail routing is subject to Transport Canada requirements;
- Advised that these requirements include gathering local safety and security information from municipalities and First Nations and that 28 factors are considered including populations, vehicle volume, and geohazards;
- Advised that the safest routing and alternatives are identified through this process;
- Commented on security measures including security audits, car track inspections, and yard surveillance, and speed restrictions;
- Commented on additional measures for high threat urban areas and shared responsibility during physical custody transfer of materials;
- Security plans. What kind of measures.
- Commented on Transport Canada's requirements for railroad and shipping community to develop security plans prior to movement of materials as well as emergency response assistance plans;
- Stated that there is not a lack of security requirements for railroads;
- Noted that he is was government employee in the US; and,
- Stated that he understands the importance of public input in the decision-making process.

5.42. Robyn Kinsley SPEAKING FOR A SECOND TIME:

- Chlorine Institute members are required to have CHLOREP response teams;
- Advised that CHLOREP is a combined response, mutual aid network with primary and secondary teams;
- Provided details of the response process, noting that contact information is updated on a regular basis and response centres contact the primary team in the region where the incident occurred... more on response
- Shared statistics on frequency of CHLOREP activation calls and that two percent of all calls between 2020 and 2025 resulted in a team being dispatched;

- Stated that there were 18,000 railcar shipments of chlorine across North America in 2024 and 99.9944 percent reached their destination without a release.
- Commented on available standardized chlorine emergency response equipment including chlorine liquid transfer pumps; and,
- Commented that the Chlorine Institute is committed to chlorine safety stewardship and timely response to a chlorine incident.

5.43. Heather Drugge, SPEAKING FOR A SECOND TIME:

- Opined that Chemtrade is lobbying the provincial government to educate about what they do;
- Stated that lobbying records for the Provincial and Federal governments are available and show that the firm representing Chemtrade has spoken with government representatives 14 times since 2023, including Health Canada, Ministry of Public Safety and Solicitor General and the Ministry of Water, Land, and Resource Stewardship;
- Noted that Health Canada, Transport Canada, and the Ministry of Public Safety and Solicitor General have not provided input on the proposal and opined that this means the application is not important to them;
- Commented on the timeline of the proposal, including Chemtrade's meeting with Premier Eby and letter to the District;
- Stated that Chemtrade spoke with the Premier's office and the Major Investments Office most often;
- Noted that caustic soda and HCL are used by the liquid natural gas, aluminum production and mineral extraction industries;
- Opined that this is the real reason the Province supports the application and that there is a massive financial incentive to maintain this supply;
- Opined that Council's role is to protect citizens and not to manage the finances of the Province or private companies; and,
- Urged Council to reject the proposal.

5.44. Michael Graveson SPEAKING FOR A SECOND TIME:

- Referred to a question from Council from the first night of the Public Hearing regarding quantifying the reduction of risk with the proposed upgrades and opined that there would be no reduction in risk with this proposal;
- Stated that there are bleach producers in Port Coquitlam and Langley, one of which acquires liquid chlorine from ERCO and the other, Brenntag, acquires some of their supply from Chemtrade;
- Stated that he had spoken with ClearTech and they had indicated they could supply all of Brenntag's liquid chlorine if necessary;
- Compared the status quo versus closure and the impacts on jobs, tax revenue, industrial activity, local chlorine product, water treatment, and risks associated with liquid chlorine;

- Opined a safer alternative is for Chemtrade to continue producing all product lines while ending the production, storage, and shipment of liquid chlorine;
- Stated that the Port does not have an issue with continuing manufacturing on their land, that it predates regulatory framework prohibiting manufacturing hazardous substances, and opined that they are restricting liquid chlorine because it is the most dangerous;
- Stated that several Chemtrade competitors do not produce liquid chlorine and have diverse product lines;
- Stated that Canadian banks and investment firms have evaluated the financial impact of Chemtrade ceasing the production of liquid chlorine and concluded that the company would remain viable;
- Opined that jobs and tax revenue are not at risk; and,
- Stated that liquid chlorine shipments have continually declined since 2004 due to water treatments shifting to safer alternatives, safety and risk concerns, and chlorine being consumed on site.

5.45. Corrie Kost SPEAKING FOR A SECOND TIME:

- Stated that releases of less than five kilograms of chlorine are not required to be reported;
- Opined that these amounts could be fatal;
- Stated that bulk chlorine rates have tripled;
- Opined that this has changed business ethics and priorities;
- Commented on the physical safety of residents;
- Opined that the fact that 90 percent of the product is exported changes the view of the application;
- Stated that the plant's profile was that it was an essential public utility and it is now a commercial export operation involving hazardous substances;
- Opined that if the plant directly secured the community's needs, it could be justified and that the risk of living near a potentially fatal release changes that assessment;
- Urged Council to vote for a permanent shutdown of liquid chlorine production; and,
- Commented on BC Hydro electricity rates for industrial facilities being much lower than residential rates.

5.46. Laurie Parkinson SPEAKING FOR A SECOND TIME

- Commented on shelter-in-place procedures, noting that houses are not airtight, particular older homes;
- Opined that no one should feel safe sheltering in place in an old home;
- Commented on recent improvements to the BC Energy Step Code;
- Opined that many accidents are due to human error;
- Stated that the incidents including the industrial accident in Bhopal, India and the space shuttle explosion were due to human error;

- Noted that people are always involved in operations in facilities and stated that human error is always a possibility; and,
- Stated the Council's first priority is to keep residents safe.

5.47. Dave Sadler SPEAKING FOR A SECOND TIME:

- Stated that Chemtrade acquired the plant in 2017 after they purchased Canexus and was aware that chlorine production was to cease in 2030;
- Noted that Chemtrade operates 60 chemical plants in North America and had two billion dollars in total revenue in 2025;
- Estimated that the revenue from the North Vancouver plant is approximately 500,000 dollars with 90 percent of liquid chlorine product exported to the United States;
- Stated that the Chemtrade CEO earned over seven million dollars in 2025 and four other executives each earn one million dollars per year;
- Questioned why Chemtrade waited years to implement new safety protocols;
- Opined that Chemtrade is using safety upgrades as a last-minute tactic to have their lease extended;
- Stated he is embarrassed to be a Chemtrade shareholder; and,
- Opined that a clear decision on the matter is required.

5.48. Colin Armstrong SPEAKING FOR A SECOND TIME:

- Noted that Chemtrade's QRA lists onsite railcar storage as the primary risk;
- Stated that data for stored railcar breach was provided to BakerRisk by Chemtrade and was not publicly available;
- Stated that smaller hole sizes were not modelled and opined that these were completely ignored;
- Stated that some chlorine would pool and a large percentage would flash immediately;
- Stated that he had asked an engineer to compare pool vaporization and flashing models and that they had determined flashing would have impacts at a greater distance;
- Opined that a smaller leak with a longer duration would be more lethal;
- Stated that the 2006 QRA study has not been provided for review;
- Opined that the QRA did not account for vaporization;
- Opined that the risk contour to the fence line is incorrect;
- Stated that when a railcar leaves the site, it creates more exposure to residential areas;
- Opined that the further contours would spread far into the community;
- Opined that evaluating actual traffic data, including accidents, speed, and higher accident risks, the risk contour goes further into the community
- Opined that while only 6 in 1,000 derailments would puncture and have any release, derailments do occur;

- Opined this increases the risks to surrounding schools, hospitals, care homes and high-density housing in high-risk areas.

5.49. Kelly Thomas, BakerRisk:

- Advised that they evaluated a ten-minute release in accordance with Environmental Protection Agency requirements;
- Advised that he evaluated smaller releases including a two-inch hole and a small basket release and the risk did not increase outside the site; and,
- Noted that the risk increased within the railyard.

5.50. Ben Wahl SPEAKING FOR A SECOND TIME:

- Advised he is with Northwest Hydraulic Consultants and reiterated that they performed the flood hazard assessment for the site;
- Reviewed the results of the flood hazard assessment across the site;
- Advised that 0.3 and 0.5 metre depths does not mean that operations would be impacted and that anything built below that level is required to be built to withstand flood risk;
- Noted that the assessment incorporated anticipated sea level rise to 2100, including the impacts of waves;
- Reiterated that the FCL is based on both river and coastal flood risks;
- Stated that evaluation of a potential tsunami determined that by the time a wave reached the inlet, it would be below the level of the site;
- Noted that a 4.3 to 4.7 metre FCL is 0.3 to 0.5 metres above ground level; and,
- Noted that material containment would be included in the Emergency Response Plan.

5.51. Jason Feenstra:

- Spoke in support of the proposal;
- Advised that he has been a Chemtrade employee for ten years and that he had not been asked to speak at the Public Hearing;
- Opined that Chemtrade has the right people, processes, and results;
- Commented on the electrical controls professionals at the plant, noting that they are Red Seal certified and have industry-specific training;
- Commended workers for coming to work early and staying late when necessary;
- Stated that the site has strict engineering designs and operations reviews as a daily activity;
- Opined that the plant has been safe and responsible for the last 70 years;
- Stated that they produce supplies for safe water and important economic stimulus to the community;
- Opined that if Council votes against the proposal, they will lose production to another country, lose jobs, and weaken the Canadian economy;
- Stated Canadian engineering has a number of success stories;

- Opined that sourcing critical chemicals from another country creates risk and transportation challenges;
- Questioned if the US is a more reliable source of chlorine;
- Asked Council to trust Canadians who have been safely producing chemicals and allow them to continue to do their jobs.

5.52. Chris Bowcock SPEAKING FOR A SECOND TIME:

- Discussed the DOT-105 chlorine rail cars release incidents;
- Noted that he had presented to City of Burnaby Council;
- Stated that liquid chlorine is a significant risk to firefighters;
- Noted that firefighters already face long-term industrial illness;
- Stated that Chemtrade had claimed there had never been a release from a next generation railcar during transport;
- Stated that there was a rupture and release from a full railcar in New Martinsville, West Virginia (Marshall County) in 2016 when it had been pushed into a storage yard to be serviced and inspected, resulting in the release of more than 80.9 tons of chlorine over two and a half hours;
- Noted that the railcar was subject to robust inspections;
- Stated that the air was hazardous within the facility and there was exposure in the community within two minutes of the release;
- Noted chlorine did not pool in the release;
- Noted that there was a short period of time to respond;
- Stated that there were impacts in a five-mile (eight kilometre) radius;
- Noted that Lions Gate Hospital is 4.3 kilometres from the Chemtrade facility and within the evacuation radius of a chlorine release;
- Stated that the population of Marshall County is low compared to North Vancouver;
- Stated that he would like to see an evacuation plan for 400,000 residents;
- Opined the evacuation plan is aspirational and stated that he would be interested in the vetting of the plan;
- Commented that the claim that there has never been a release from a next generation railcar omitted this incident as it was not considered in transit;
- Stated that there was a weakness in the railcar that was designed to not have a release and that the incident occurred after it was inspected;
- Commented on engineering and safety of workers;
- Stated that he has seen worst case scenarios on many occasions;
- Stated that he does not want to see any worst-case scenarios happen in the District or in the City of Burnaby or New Westminster;
- Noted that there is a rail line adjacent to Royal Columbian Hospital; and,
- Commented on evacuation of Royal Columbian Hospital and the challenges associated.

5.53. Henry Ward SPEAKING FOR A SECOND TIME:

- Opined that incorrect information had been provided at the Public Hearing regarding railcars;
- Advised that the railcar involved in the incident in Martinsville (Marshall County) was a DOT105J500W and not a next generation DOT105H600W railcar;
- Noted the specifications of the two railcars are significantly different;
- Advised that the railcar involved in the incident was an older tank car constructed of non-normalized steel that was subject to brittle fracture and that this model is no longer permitted to be used;
- Noted that next generation railcars are manufactured using normalized steel and they are not subject to brittle fracture; and,
- Advised that the 500 and 600 in the model numbers refer to the PSI rating and that the 600 PSI-rated railcar is significantly thicker and not subject to the same type of failure.

The Public Hearing recessed at 7:36 p.m. and resumed at 7:48 p.m.

5.54. Michael Graveson SPEAKING FOR A THIRD TIME:

- Commented on the option he presented earlier for Chemtrade to produce other materials;
- Noted that this is the practice for other companies;
- Reiterated that analysts have stated the company would still be viable;
- Stated that in the US 12,000 tons of liquid chlorine were shipped per day in 2004 and 4,000 per day in 2021 and opined that in 2026 it would be half that amount;
- Opined that Canadian producers ship liquid chlorine to enable production of caustic soda, which is more profitable;
- Stated that Chemtrade added significant HCL capacity when they were notified of the 2030 end date for liquid chlorine production;
- Stated that they have double the capacity then they are currently using;
- Reiterated that some chlorine producers make up to 20 products;
- Stated that the BAT Chemtrade will use in 2041 is to produce chlorine;
- Stated that Chemtrade switched from diaphragm to membrane for chlorine production in 2010;
- Stated that he had a legal opinion that ending liquid chlorine production could be included in the proposed covenant;
- Stated that Brenntag has had problems producing bleach for the past six months and bleach from Quebec has been shipped to BC to supplement supply;
- Opined that there is no problem with fulfilling the needed supply of bleach;
- Opined that no one noticed an issue;
- Opined that there will be issues with the new railcars in ten years as they become the old model; and,
- Opined that Chemtrade does not respect sunset dates and does not believe the new information is valid for reconsideration.

5.55. Peter Teevan SPEAKING FOR A THIRD TIME:

- Stated that the new information from Chemtrade for the application made him more certain in his opposition;
- Opined that it is time to cease production of liquid chlorine in North Vancouver;
- Opined that there is such high demand for caustic soda and HCL that Chemtrade will not bother to produce liquid chlorine;
- Opined that it is not the job of council to dictate the business model of an applicant, but to approve or reject the presented proposal;
- Expressed concern regarding late and missing information from the Public Hearing materials;
- Advised that he had contacted the customer service department of a Brenntag competitor to ask about bleach manufacturers not supplied by Chemtrade;
- Advised that he had a conversation with a senior manager of the company he had contacted and learned a great deal about the chlor-alkali industry;
- Noted that the person he spoke with did not wish to go on record or become involved in the Public Hearing;
- Stated that he asked what the impact would be to this company if Chemtrade ceased liquid chlorine production by 2030 and that he was told that they would not be impacted because they are not supplied by Chemtrade; and,
- Opined that the matter is really about caustic soda and not liquid chlorine.

5.56. Robyn Kinsley SPEAKING FOR A THIRD TIME:

- Stated that she was not familiar with the particular chart showing the number of shipments, it likely would have been from Pamphlet 10 which is a North American chlorine production capacity;
- Stated this information was collected annually from chlorine production members but this ceased in 2020 due to market consolidation
- Stated that chlorine railcar shipment numbers are available from Association of American Railroads in an annual hazardous materials rail report; and,
- Clarified that the shipment numbers come from the aforementioned report.

6. QUESTIONS FROM COUNCIL

Staff provided clarification on questions from Council from the first night of the Public Hearing:

- The estimated cost for hazmat equipment is approximately 500,000 dollars per unit;
- The applicant advised that the updated QRA reflects risk reduction by a factor of ten compared to 2006, equivalent to a 90 percent reduction at Spicer Road and Amherst Avenue;
- The BC Water & Waste Association advised that drinking water systems generally use either chlorine gas or bleach as the active disinfectant, and that systems are typically

designed for one method or the other. Converting between the two is not a simple substitution and could require significant capital investment.

Chemtrade is 500 metres from homes in Maplewood. Are any other chlorine gas plants in Canada that close to so many homes?

In response to a question from Council, staff advised that a third-party consultant has reviewed publicly available information and reported that the distance between chemical plants and residential areas varies. Two facilities were identified as within 500 metres to residential areas: ERCO Valleyfield, Quebec and ERCO Gatineau, Quebec.

A member of Council requested rechecking the information as they had found that similar plants were not as close to residential areas as Chemtrade.

The applicant confirmed that the two plants referenced do not produce liquid chlorine.

Question

Does Chemtrade use the DOT105H600W tanker cars as referenced by speaker Henry Ward?

In response to a question from Council, staff advised that the applicant had confirmed that they lease more than 200 railcars that are compliant with current regulations and that next generation railcars are required by the end of 2027. The applicant noted that 83 percent of their railcars are next generation and they intend to have 100 percent by early 2027.

Question

BakerRisk what were limitations or parameters within which you were tasked with conducting your QRA – what was included and not included?

In response to a question from Council, staff advised that the applicant had tasked BakerRisk with evaluating the facility and the railyard, noting that evaluation of the railyard is outside of standard practice. It was further noted that outside transportation is not within their jurisdiction and was out of scope.

Question

Would Metro Vancouver's drinking water be at risk if Chemtrade closed in 2030?

In response to a question from Council, staff advised that Metro Vancouver stated that they provide drinking water to more than three million people with first stage treatment at a facility and secondary (additional) treatment as it travels throughout the region. Metro Vancouver stated that chlorine is a component of bleach and they contract with Brenntag as their supplier and not directly with Chemtrade. Metro Vancouver stated that risk is mitigated by a strong supply chain and that Brenntag has other suppliers, although this part of the question would best be answered by Brenntag.

The applicant noted that the question answered by Metro Vancouver was hypothetical and that all municipalities would be calling for additional supply, not just one. The applicant noted that their liquid chlorine capacity is 228,000 tonnes and stated that their competitors at the Public Hearing have limited capacity to expand. The applicant commented on the supply of caustic soda, noting that production requires co-production of liquid chlorine and that freight from eastern Canada is double the cost of the product.

A member of Council stated an objection to the applicant answering the question. Mayor Little stated that staff may refer questions to the applicant if appropriate.

Question

Was it common knowledge among all employees of CHEMTRADE, especially those that have been recently hired in the last few years, that the future of the plant was uncertain? Or was it something that they learned about based on this rezoning application?

In response to a question from Council, staff advised the applicant advised that they have spoken openly with staff for a long time about the need for rezoning and the current process has heightened their awareness.

Question

Please clarify the claim that Chemtrade is responsible for 40% of production capacity in Canada. What does that mean exactly? How much chlorine (not derivatives) is used to treat water in BC and Canada? How much comes from Chemtrade?

In response to a question from Council, staff advised that the applicant provides 40 percent of the available capacity in Canada and is one of four companies that produce and supply liquid chlorine. Staff noted that Chemtrade does not sell directly to water treatment facilities, their chlorine is used to produce derivatives, and that 70 percent of the bleach in western Canada is produced using liquid chlorine from Chemtrade.

Question

Can we get a response on the alarm testing every Thursday and how this works and if it's changed at all?

In response to a question from Council, the applicant advised that testing at full volume would be a sound nuisance and that they would increase the volume to full in an emergency. It was noted that they are willing to increase the volume for testing if asked to do so and that testing is conducted every third Thursday.

Question

Will the Rail storage be limited to 32 railcars total, or is it an average of 32 loaded rail cars? What recourse does the community have if Chemtrade are found to be storing more than 32 partial or fully loaded railcars?

In response to a question from Council, staff advised that the existing covenant on title restricts on-site storage capacity to 32 loaded chlorine railcars and should Council proceed with further bylaw readings, the proposed new covenant would continue to restrict storage capacity on site. The applicant confirmed that they are limited to 32 railcars on site and that, while they stay within the limit, the District could sue them if they were to go over.

Question

What information do we have on the issue of whether modern railcars are capable of safely derailling at speeds such as 80 kph? Are there speed limits for railcars carrying chlorine?

In response to a question from Council, William Schoonover advised that the applicant conducted both US and Canadian research and found that closing speed is roughly half the speed of derailment due to friction loss. It was noted that the 50 miles per hour speed limit in the US and 35 miles per hour speed limit in Canada is designed to allow railcars to survive derailment and this limit is not exclusive to railcars containing chlorine. Mr. Schoonover referenced Mr. Rader's earlier comments and further noted that specific speed limits for trains in urban areas containing TIH shipments were put in place at the same time as high hazard speed limits.

Question

What is the industry standard insurance policy amount?

In response to a question from Council, staff advised that Chemtrade has a significant liability insurance policy totaling more than \$500 million through FM Global.

Can you provide the electricity rates that were charged to Chemtrade since 2010?

In response to a question from Council, the applicant advised that they did not have this information.

Question

Why would we not seek clarification from those that are using products, and how they have mitigated shortage concerns, versus those that are supplying the products? How many tons for treatment does 40 % represent? A member of Council suggested it would not be appropriate for the applicant to answer this question.

In response to a question from Council, staff advised that staff review applications as they are required to do and that they rely on information from applicants to be true but sometimes reach out to outside sources to verify information.

In response to a question from Council, the applicant advised that 10,000 tonnes of liquid chlorine are used for water treatment and that they export approximately 90,000 tonnes. The applicant noted that many industries in Canada rely on export, including oil, grain, and seafood industries.

Question

What is the rate Chemtrade pays per kilowatt hour for electricity, how many kilowatt hours (kWh) do they consume per year, and how does that compare with what BC residents pay per kWh for our own homes? To what extent are residents subsidizing Chemtrade's cost of electricity?

In response to a question from Council, staff advised that the applicant provided the information at Chemtrade is one of BC Hydro's largest customers at approximately 25 million dollars per year and that actual usage was not provided. It was noted that Chemtrade also operates diesel generators.

Staff advised that large industrial customers have a different rate and that the residential rates are 11.87 cents per kWh for tier one, 14.08 cents per kWh for tier two, or a flat rate of 12.70 cents per kWh. Staff stated that the question regarding the level of subsidization is beyond their capacity to answer and they would require the information from BC Hydro.

Question

Where is the mitigation plan, municipal, regional, provincial, federal, for the safety of water treatment, given the pending completion of Chemtrades lease?

In response to a question from Council, staff advised that although there is a shared responsibility for safe drinking water supply other levels of government have different roles such as policy making, guideline making, testing, and public education. The primary government agency responsible for overseeing the treatment of safe drinking water supply for our region is Metro Vancouver. Metro Vancouver has stated that they are prepared to mitigate supply chain risk by working with their suppliers and will work on this prior to the end of the Chemtrade lease.

Question

Does the Port have an option to purchase the land Chemtrade sits on? Given the Port's position on trade, not manufacturing, why would they option the property if the security and treatment of water is such an issue, and manufacturing is contrary to their mandate?

In response to a question from Council, staff advised that the Port stated there is an option to purchase but it is a commercial arrangement with one of the primary reasons to ensure access to Port lands in the future if current circumstances change. The Port has an agreement with Chemtrade that this proposal does not trigger VFPA to exercise their option to purchase. Staff further stated that under the Port Authority's enabling legislation, manufacturing activities are generally not intended for the federal lands they manage within the Burrard Inlet area. However, manufacturing activities that predate this legislation may continue indefinitely.

Question

With respect to presentation by Robyn Kinsley, the total number of loaded “rail shipments” between 2020 to 2025 in North America was 18,005. At 99.9944% chlorine rail shipments delivered without a leak, that means that there was only 1 “rail shipment” that resulted in a leak. Are my numbers correct? Please define “rail shipment.”

In response to a question from Council, the speaker provided a written response confirming the calculation is correct and defined rail shipment as one railcar movement from origin to destination.

Question

Would staff be able to determine when the accident occurred in the video shown by Colin Armstrong and in which country it occurred?

In response to a question from Council, staff advised that the incident in Jordan was in 2022 and that the leak was caused by a storage tank that was dropped.

Question

In the presentation by Mr. Alan Robinson, I believe it was indicated that 83% of Chemtrade's tanker cars are of the model DOT105H600W and, it is expected that by end of 2027, all tanker cars will be of that standard. Could a term of the Sec 219 covenant require Chemtrade to only use DOT105H600W tanker cars? And as part of BAT, could Chemtrade be required to use even newer tanker cars should the standard be increased during the 20-year term as stated in the Sec 219 covenant?

In response to a question from Council, staff advised that as of the end of 2027, the government regulation will ensure that shipment cannot take place in old railcars and they must meet the standard. Staff noted that this can be written into the section 219 covenant but lead times must be factored in when procuring railcars, which could be up to two years.

Question

What PSI is liquid chlorine stored at in a 600 PSI tank car?

In response to a question from Council, staff advised that chlorine is a cryogenic liquid and the pressure depends on the temperature of the stored material; the reason it is stored in a 600 PSI railcar is so that the pressure never meets this capacity regardless of the temperature. Storage can be as high as between 175 and 200 PSI, approximately a third of what the car is rated for under extreme conditions.

Question

Can Council amend the covenant to include ending liquid chlorine in 2030?

In response to a question from Council, staff advised that Council could give direction to staff, noting that this is not what was proposed by the applicant and that they have indicated that the 2030 end date is not viable due to the significant investment required. Staff noted that the applicant must be willing to enter into a covenant, it is not imposed on them and that the covenant would be drafted by staff following Third Reading of the bylaw.

7. COUNCIL RESOLUTION

MOVED by Councillor HANSON

SECONDED by Councillor BACK

THAT the June 16, 2026 Public Hearing regarding Bylaw 8778 is closed;

AND THAT "District of North Vancouver Rezoning Bylaw 1462 (Bylaw 8778)" is returned to Council for further consideration.

CARRIED

(8:26 p.m.)

CERTIFIED CORRECT:

Confidential Council Clerk