

G3 Terminal Vancouver
Metro Vancouver Air Permit Application
Frequently Asked Questions

If Air Quality was assessed as part of the Port of Vancouver permitting process, why is a second permit required from Metro Vancouver?

Both agencies have regulatory authority as follows:

Metro Vancouver regulates air emissions under the *GVRD Air Quality Management Bylaw No. 1082, 2008*. G3 is currently in the Air Permit Application process (GVA1080). Metro Vancouver website link to application <http://www.metrovancouver.org/services/Permits-regulations-enforcement/permitting-notices/air-quality-notification/>

Under the *Canada Marine Act*, the Vancouver Fraser Port Authority is responsible for the administration, management and control of land and water within its jurisdiction. To effectively manage these responsibilities, the port authority administers several permitting processes to ensure all developments and activities meet applicable standards and minimize environmental and community impacts. G3 received a project permit (PER No. 15-180) from the Port of Vancouver in May, 2016.

What is the difference in the Port evaluation process versus Metro Vancouver evaluation process?

G3 undertook a review of project air discharges and impacts as part of its Port of Vancouver permitting process, completed in 2016. While there are many similarities in the Metro Vancouver and the Port of Vancouver application process, there are some key differences. Most notable is that Metro Vancouver reviews the annual emissions from G3's facility when operating at "maximum possible" capacity (excluding emissions from transportation sources such as marine vessels, rail, trucks) – these emissions then form the permitted limit, which G3 will not be allowed to exceed at any time. On the other hand, Port of Vancouver reviews the "expected" annual emissions from within the facility boundary, which includes the facility and transportation sources (marine vessels at berth, rail and trucks on-site).

"Maximum possible" is a level that is highly unlikely to be reached as it involves continuous, long term operation at peak rates that are practically only possible for short periods. "Expected emissions" are a more accurate estimate of actual emissions from the facility when operating at its realistic annual maximum capacity, while the Metro Vancouver permit allows the facility to operate at its expected peak times.

Because of these different approaches, G3's emissions in the Metro Vancouver Air Permit Application differ from those reported in the Port of Vancouver assessment. Annual dust emissions (PM, PM10, PM2.5) are higher in the Metro Vancouver application, since they reflect upper limits. Annual emissions of combustion gases (NOx, SO2) are lower in the Metro Vancouver application, since emissions from transportation sources (marine vessels, rail, trucks) are not included.

Metro Vancouver: Emissions when operating at "maximum possible" capacity excluding emissions from transportation sources such as marine vessels, rail, trucks

Port of Vancouver: "Expected" annual emissions which includes the facility and transportation sources (marine vessels at berth, rail and trucks on-site)

What does the Metro Vancouver application process entail?

At a high level, it involves G3 providing a detailed application to Metro Vancouver (submitted January 13, 2018) and a Notice of the Application via signage at the site and an Environmental Protection Notice in North Shore News (Friday, January 26, 2018). Metro Vancouver provides Notice of Application to relevant municipalities and health authorities and other potentially interested persons or agencies. Comments received by Metro Vancouver are forwarded to G3 for response and considered by Metro Vancouver in developing a draft permit and making permit decisions. Metro Vancouver website reference <http://www.metrovancouver.org/services/Permits-regulations-enforcement/air-quality/apply-permit/Pages/default.aspx>

What types of emissions are expected from G3 Terminal Vancouver?

Once operational, emissions of many combustion pollutants at G3 Terminal Vancouver are anticipated to be reduced by up to approximately 45% compared to previous site usage, primarily due to lower emissions by ships at the site berth and limited non-road equipment. Dust emissions will increase due to grain handling activities, and will be managed using the best available technology, including state-of-the-art telescoping ship loader spouts and capture systems with fabric filter controls.

Both the Metro Vancouver and the Port of Vancouver process required a study with dispersion modelling to predict the peak pollutant concentrations in the community that will result from facility emissions. Both studies reported total concentration, which is the sum of G3's impacts and background concentrations from all other sources in the region (e.g. transportation, other industrial, residential heating, long-range transport). In both studies, total impacts (pollutant concentrations from all sources) in the community (i.e. anywhere off-property) were shown to be below (i.e. better than) Metro Vancouver's ambient air quality objectives.

What types of technology will G3 Terminal Vancouver utilize to mitigate air quality impacts?

G3 Terminal Vancouver is constructing a state-of-the-art grain handling facility. It will be the first completely new grain export terminal built in Vancouver since the early 1960s. G3 will use the best available technologies to control air emissions and dust produced by the facility in various stages of process, including:

- Railcar unloading: Point-of-generation capture at the receiving hoppers and receiving belt conveyors
- Baghouses and bin vents: All conveyors, elevators, and transfer points are closed at the points of dust generation and equipped with dust collectors with filters.
- Ship loadout system: Moveable, covered belt conveyors extend over the ships for loading, each with a spout that extends down from the end of the conveyor into holds of the ship. The configuration near the bottom of the spout creates an artificial "plug" to minimize the air in the grain column. This "dead box" also slows down the flow of grain and minimizes dust created; the relatively small amount of dust created in the spout is controlled by the filters connected to it.
- Pelleted screening loadout system: Pelleted screenings will be loaded onto trucks using a Dust Suppression Hopper (DSH) loading spout equipped with a dust collector. Spouts are suspended and kept at fixed operating level minimizing the grain free fall distance.
- Locomotive emission sources: The continuous movement rail loop and receiving system will allow grain to be received using the line-haul locomotives directly, optimizing the railcar unloading process by synchronizing car movements with the robotic rail car gate openers/closers. The system will minimize the train accelerations and

limits the use of higher throttle notches, generating fewer exhaust emissions than a more traditional shunting method with relatively frequent stop-start accelerations.

How do the anticipated air quality impacts from G3 Terminal Vancouver compare to other similar port facilities?

We can't speak for other port facilities but can say total impacts (pollutant concentrations from all sources) in the community (i.e. anywhere off-property) were shown to be below (i.e. better than) Metro Vancouver's ambient air quality objectives.

How will air quality be monitored and reported to Metro Vancouver under this permit?

Once operational, G3 will submit regular reports to Metro Vancouver using their Regulation and Enforcement Monitoring and Information Reports (REMIR) online reporting system.

Results are posted online at <http://www.metrovancouver.org/services/Permits-regulations-enforcement/air-quality/Pages/Permittee-Test-Reports.aspx>.

What are the penalties to G3 Terminal Vancouver if they are not in compliance with the permit once operational?

Firstly, G3 believes such an occurrence is unlikely. That said, if a company exceeds the terms of its air permit Metro Vancouver has several regulatory options available including education, compliance promotion and enforcement measures such as fines, notices of Bylaw violation, and prosecution.