

Fraser Surrey Docks LP

Consideration to Amend Permit No. 2012 – 072
Direct Transfer Coal Facility

Consultation Summary Report

Public Comment Period May 4 – May 19, 2015

June 2015

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Kirk&Co.

About Kirk & Co. Consulting Ltd.
Kirk & Co. is a recognized industry leader in designing and implementing comprehensive public and stakeholder consultation and engagement programs. Utilizing best practices, consultation and engagement programs are designed to maximize opportunities for input. Kirk & Co. independently analyzes and reports on public and stakeholder input.

The views represented in this report reflect the priorities and concerns of respondents. They may not be representative of the views of the public and other stakeholders as a whole because respondents self-selected into the public comment period, and therefore do not reflect a random sample.

Table of Contents

1. Introduction 4

1.1. Consideration to Amend Permit No. 2012 – 072 Direct Transfer Coal Facility 4

2. Public Comment Period – May 4 – 19, 2015 4

2.1 Purpose – Public Comment Period 4

2.2 Notification 4

2.3 Participation 6

2.4 Methods 6

2.4.1 Discussion Guide and Feedback Form 6

2.4.2 Agency Meeting 7

3. Results 8

3.1 Key Themes – Feedback Form, Written Submissions and Local Government Submissions 8

3.2 Key Themes – Agency Meeting 24

1. Introduction

1.1. Consideration to Amend Permit No. 2012 – 072 Direct Transfer Coal Facility

On August 21, 2014, Fraser Surrey Docks LP was granted a permit by Port Metro Vancouver that gives it conditional approval to build and operate a Direct Transfer Coal Facility within its existing lease area.

Fraser Surrey Docks (FSD) is considering applying to amend its existing permit. The proposed amendment would allow FSD to load coal directly from the facility to ocean-going vessels (OGVs). Using OGVs would allow FSD to eliminate or reduce the number of barges required. The proposed amendment to the existing permit would have no impact on the volume of coal permitted to be shipped through FSD, which is 4 million metric tonnes per year.

More information about FSD's consideration to amend Permit No. 2012 – 072 can be found at www.fsd.bc.ca/amendment.

2. Public Comment Period – May 4 – 19, 2015

2.1 Purpose – Public Comment Period

The purpose of the public comment period, held May 4 to May 19, 2015, was to provide an opportunity for the public and stakeholders to review the proposed changes to the existing permit, and specifically for FSD to seek comments on the proposed scope of the studies associated with the amendment under consideration.

These studies included the Human Health Risk Assessment (HHRA), Environmental Impact Assessment (EIA), Air Quality Assessment (AQA), Marine Risk Assessment, Environmental Management Plan (EMP), Water Management Plan, Fire Safety Plan, and Spill Response Plan.

The input received during the public comment period has been summarized in this report and will be considered by FSD, along with information provided by technical experts, as part of the consideration to apply for an amendment to the existing permit.

Should FSD submit an application to amend the existing permit, a second round of public consultation will be undertaken. Round 2 Public Consultation would focus on the proposed project design associated with the submitted amendment application for Permit No. 2012 – 072 and the results of the studies.

2.2 Notification

Notification of opportunities to participate in the public comment period included the following:

- **Notification Emails:** 115 emails were sent to stakeholders (local governments, environmental organizations, health authorities, MLAs and others) on May 4, 2015, with information about the public comment period.

- **Phone Calls:** Phone calls were made to stakeholders (local governments, environmental organizations, health authorities, MLAs and others) to inform them of the public comment period, as follow-up to the email notification.

- **Newspaper Advertising:** Advertisements ran in the following community newspapers between May 6 and May 14, 2015:

Publications	Dates
• *Surrey Leader* • *New Westminster NewsLeader* • *Burnaby Now* • *New Westminster Record* • *Delta Optimist*	Wednesday, May 6 and Wednesday, May 13
• *Surrey Now* • *Richmond News* • *Peace Arch News*	Thursday, May 7 and Thursday, May 14

Publications	Circulation per insertion
Burnaby Now	45,526
New Westminster Record	15,735
Delta Optimist	17,050
New Westminster NewsLeader	61,261
Richmond News	46,728
Surrey Now	117,720
Surrey Leader	82, 530
Peace Arch News	37,510

- **Online Advertising:** Online notification advertisements ran from May 4 to May 19, 2015, on the following sites, with the following results:
    - *Surrey Leader*: 9,904 ad impressions
    - *New Westminster Record*: 6,446 ad impressions

- **Postcard Mailer:** 9,077 households in Surrey and New Westminster received a postcard that informed recipients of ways to participate in the public comment period. The postcards were sent during the week of May 4, 2015, to households near FSD.
Maps illustrating where the postcards were delivered can be found in Appendix A.

- **Website:** Notification of the public comment period and a button linked to the Discussion Guide and online Feedback Form were displayed on Fraser Surrey Docks' home page (www.fsd.bc.ca) from May 4 – 19, 2015; a link to a page with information about the amendment (www.fsd.bc.ca/amendment) was also displayed on the home page.

- **Social Media:** Notification was sent from FSD's Twitter account (@FSDocks) beginning May 4, 2015, and at relevant times throughout the public comment period to remind the public and stakeholders of the opportunity to submit feedback.

- **Information Bulletin:** On May 4, 2015, an information bulletin was sent to regional and provincial media to advise them of the public comment period.

2.3 Participation

A total of **51 submissions** were received during the public comment period. A summary of the input received can be found starting on page 8.

- Online Feedback Form: 23 received
- Written Submissions: 22 received
- Local Government Submissions: 5 received
- Agency Meeting: 1 meeting

2.4 Methods

Materials, including the Discussion Guide and Feedback Form, and the scope and rationale documents specific to each study, were made available online at www.fsd.bc.ca/amendment beginning on May 4, 2015. Feedback was collected through the following methods:

2.4.1 Discussion Guide and Feedback Form

A Discussion Guide provided an overview of the proposed changes to the existing permit. The Discussion Guide and Feedback Form invited comment from the public and stakeholders regarding the proposed scope of eight key studies relevant to the amendment:

- Human Health Risk Assessment
- Environmental Impact Assessment
- Air Quality Assessment
- Marine Risk Assessment
- Environmental Management Plan
- Water Management Plan
- Fire Safety Plan
- Spill Response Plan

The Discussion Guide was available for download, and an online version of the Feedback Form was available at www.fsd.bc.ca/index.php/amendment during the public comment period.

A copy of the Discussion Guide and Feedback Form can be found in Appendix B.

2.4.2 Agency Meeting

A meeting was requested by the Fraser Health Authority and was held on May 15, 2015.

Representatives of FSD attended the meeting, along with a meeting recorder from Kirk & Co. Prior to and during the meeting, agency representatives were provided with the Discussion Guide and the scope and rationale documents for each study, and were encouraged to submit input during the public comment period. Representatives of FSD provided information about their consideration to apply for an amendment, focusing on the proposed scope of studies relevant to the amendment. Agency representatives were invited to ask questions and provide feedback during the meeting. Key themes from this meeting are summarized in Section 3.2 on page 24.

3. Results

The following provides a summary of the key themes from submissions received from online feedback forms, written submissions (emails and letters), and the agency meeting during the public comment period from May 4 to 19, 2015. As much as possible, the language expressed by respondents has been retained in the key themes.

3.1 Key Themes – Feedback Form, Written Submissions and Local Government Submissions

The results received through the online Feedback Form, written submissions and local government submissions are categorized according to Feedback Form questions shown below. This summary of key themes reflects the comments provided by respondents. The accuracy of the information in the comments below has not been confirmed. FSD will respond to the comments provided by respondents through a consideration memo, which will be posted prior to or concurrent with an amendment application, if FSD chooses to proceed.

The number of respondents commenting on a key theme is noted in brackets. The number of comments may exceed the total number of respondents commenting, as respondents may have commented on more than one topic.

1. Human Health Risk Assessment (HHRA), which will be completed by SNC-Lavalin Inc. (Environment & Water)

An overview of the proposed scope of this study can be found on page 7 of the Discussion Guide, and the original study can be found at www.fsd.bc.ca/amendment.

Please provide comments on the proposed scope of the Human Health Risk Assessment associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

Respondents provided the following comments related to the proposed scope of the Human Health Risk Assessment:

- The HHRA is too narrow; all potential adverse impacts included in this study must be addressed for the entire transport route and FSD's site, including: (9)
    - The route of ocean-going vessels (OGVs), at least out to the open ocean
    - The entire route that coal trains would travel from the U.S. border to FSD
    - Project-related emissions from equipment on-site
    - The cumulative impacts of industry in the area, including newly approved and pending projects that will impact the South Arm of the Fraser River

- There are concerns about air pollution and poor air quality from airborne pollution and coal dust, and its impacts on human health, including: (7)
    - Concern regarding allergies, asthma, and cancer
    - Potential impacts on the environment, plants, animals and homes

- Economic, health and quality of life impacts from noise or traffic associated with increased rail transport and increased activity at the terminals should be considered (4)

Respondents also stated the following related to the proposed scope of the Human Health Risk Assessment:

- That there has not been a Human Health Risk Assessment that has reviewed the cumulative health risks of industry in the area (1)
- Support for the proposed scope of the study (1)
- That the review of the study by multiple experts is good (1)
- That Golder Associates identified a number of minor errors throughout the HHRA document; these errors should be corrected in the updated HHRA (1)
- That it would be appropriate to re-evaluate conservative assumptions about the hazard quotient and recalculate risks, or to identify these elevated predictions as an item that should be addressed in the AQA (1)
- That the air quality and noise impact areas for the HHRA require amendment to include Richmond residential areas and a redefinition of air quality parameters specific to marine vessel operations in the South Arm of the Fraser River (1)
- That the updated HHRA should include input from the health authorities (1)

Respondents also provided the following comments, not directly related to the scope of the Human Health Risk Assessment, for the amendment under consideration:

- There are known health risks associated with the loading and shipping of coal (2)
- This proposal will increase open-car coal train traffic through residential communities, which raises concerns about the health impacts of coal dust, diesel exhaust, and nighttime noise from train whistles, as well as the potential impacts of vibration from heavy coal trains to homes closest to rail lines (2)
- Concerns about the impacts on public health (1)
- The supporting documents for the original project permit regarding operational noise and vibration were dismissed (1)

2. Environmental Impact Assessment (EIA), which will be completed by SNC-Lavalin Inc. (Environment & Water)

An overview of the proposed scope of this study can be found on page 8 of the Discussion Guide, and the original study can be found at www.fsd.bc.ca/amendment.

Please provide comments on the proposed scope of the Environmental Impact Assessment (EIA) associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

Respondents provided the following comments related to the proposed scope of the Environmental Impact Assessment:

- The environmental impacts associated with the shipment of coal from FSD need to be re-evaluated with broader scope, including impacts on areas outside of the immediate environment, including: (9)
    - Fish habitat
    - Wetlands
    - Forests
    - Threatened or endangered species
    - The shoreline
    - The greater cumulative carbon impacts of burning coal

- There are concerns about a potential increase in operational and construction noise related to the proposed amendment, and respondents stated that noise impacts from trains and ships should be considered in the updated studies and in mitigation commitments (7)

- Risks associated with the cumulative increase in shipping traffic in the region should be considered, including: (5)
    - Risks of accidents and oil and/or coal spills, threatening listed endangered species, fishing, tourism and recreation industries, Friday Harbor Marine Biological Laboratories and property values
    - Impacts to recreational boaters
    - Threats to endangered salmon and orca (including noise impacts)
    - Impacts to recreational and commercial shellfish fisheries
    - Invasive species introduced through increased ballast water discharges
    - Damage to wetlands and waterways from construction and development
    - Ocean acidification

Respondents also stated the following related to the proposed scope of the Environmental Impact Assessment:

- Support for the proposed scope of the study (1)
- Impacts from contaminant spills of the coal product may include: (1)
    - Smothering
    - Toxicity from polycyclic aromatic hydrocarbons (PAHs)
    - Substrate change
    - Accumulation
    - Water quality degradation
- The EIA should be made available to the public and should be written in lay terms (1)
- There should be an analysis of the following activities related to the proposed amendment: (1)
    - Anchoring for queuing and/or bunkering
    - Vessel traffic related to tug assists and any bunkering-related vessel traffic
- Concerns that FSD has stated that no reassessment is required, and concerns that, without a closer look at the impacts on these areas and others, there is no confidence in FSD's conclusions (1)
- The current areas of impact for the EIA require amendment to include Richmond's foreshores and the provincially designated wetlands that constitute the South Arm Islands Wildlife Management Area (1)
- The air quality parameters for the EIA must be redefined specific to increased marine vessel operations in the South Arm of the Fraser River (1)
- The EIA must take into account cumulative impacts of newly approved and pending projects that will impact the South Arm of the Fraser River; further accessory effects of increased dredging (if required) to accommodate the large OGVs must also be included (1)
- A clear definition of types of coal and sources must be included in the EIA and PMV certificate, and should clearly outline the Proponent responsibilities and tasks to amend the commodity type or source (1)

Respondents also provided the following comments, not directly related to the scope of the Environmental Impact Assessment, for the amendment under consideration:

- Concerns that, although FSD has stated that "the project is not likely to cause significant adverse environmental effects, the words "not likely" and "significant" are cause for concern. This respondent stated that any degree of impact is unacceptable (1)
- Any coal in FSD's facility will impact the environment (1)

3. Air Quality Assessment (AQA), which will be completed by Levelton Consultants Ltd.

An overview of the proposed scope of this study can be found on page 9 of the Discussion Guide, and the original study can be found at www.fsd.bc.ca/amendment.

Please provide comments on the proposed scope of the Air Quality Assessment (AQA) associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

Respondents provided the following comments related to the proposed scope of the Air Quality Assessment:

- There are concerns about the impacts of poor air quality on human health, such as allergies and asthma, from airborne pollution and coal dust, and from impacts on the environment, including climate change and pollution (6)

- Air quality impacts associated with releases of coal dust from trains transferring and transporting coal in the region, from terminals, or from OGVs should be considered in the scope of the study (4)

- The proposed scope of the Air Quality Assessment should: (3)
    - Include information on how many cars form each train
    - Include information on where coal will be stored if not loaded immediately onto a ship; this is an air quality concern
    - Link to the Environmental Impact Assessment
    - Consider upstream and downstream impacts

Respondents also stated the following related to the proposed scope of the Air Quality Assessment:

- The AQA should include data from Westshore Terminals, which loads directly to ships (1)
- There needs to be more attention paid to the air quality and the coal dust created when railcars offload (1)
- Support for the proposed scope of the study (1)
- Performance-based measures and ongoing monitoring must be included in the dust control measures on-site and in adjacent areas. Particulate, NO_x, VOC, CO and CO_2 analysis related to OGV power sources (while in transit and while docked) must be included in the analysis, and put into context of regional cumulative impacts of other approved and proposed projects in the lower Fraser River (1)

Respondents also provided the following comments, not directly related to the scope of the Air Quality Assessment, for the amendment under consideration:

- FSD should handle commodities that they have experience with, especially because thermal coal can spontaneously combust if stockpiled, which could release toxic smoke that can cause serious and immediate health impacts (2)
- There are concerns about air quality impacts from: (2)
    - Coal dust
    - The consumption of coal abroad
- As the volume of coal shipped through FSD will stay the same, there is no change to the issue of coal dust (1)
- Loading coal directly to ships instead of barges will reduce problems with coal dust (1)
- Results from ongoing dust monitoring conducted by terminals and municipalities are encouraging and demonstrate that the industry's continuing efforts at dust mitigation are working (1)
- FSD should consider the health and safety of residents of Annieville and Royal Heights (1)
- Agricultural goods loaded/unloaded in the same port are liable to be contaminated with coal dust (1)

4. Marine Risk Assessment, which will be completed by DNV (Det Norske Veritas)

An overview of the proposed scope of this study can be found on page 10 of the Discussion Guide, and the original study can be found at www.fsd.bc.ca/amendment.

Please provide comments on the proposed scope of the Marine Risk Assessment associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

Respondents provided the following comments related to the proposed scope of the Marine Risk Assessment:

- The proposed scope of the Marine Risk Assessment is inadequate and flawed, because of the inability to mitigate constant cumulative industrial impacts on the marine environment, including: (2)
    - Increased ballast water discharges and associated risk of introducing invasive species
    - Oil spills
    - Vessel noise (especially as it affects the southern resident killer whales)
    - Anchoring for queuing and/or bunkering
    - Vessel traffic related to tug assists and any bunkering-related vessel traffic

- The permit should include a rigorous review of the risk and consequences of all accidents and spills of any kind along the route and potential adverse impacts, including a discussion of: (2)
    - The owners, operators and crews of project vessels
    - An assessment of the risk of all types of project-related vessel accidents
    - The types and volumes of propulsion fuel that would be carried by project-related OGVs
    - The safety-communication systems and equipment that would be on board each project-related vessel and how it would be maintained
    - Rescue protocols and maritime accident response infrastructure along the route to open ocean
    - Operational discharges of oil from project-related vessels
    - Who would pay costs for all impacts resulting from a project-related accident
    - Increases in the number of vessels transiting through the Salish Sea
    - The introduction of additional bunker-fuelled Panamax vessels to the Fraser River

Respondents also stated the following related to the proposed scope of the Marine Risk Assessment:

- Support for the proposed scope of the study (1)
- Questions about the impacts of deep water vessels anchoring, including: (1)
    - Impacts on shellfish, crab and nursery fish throughout the whole project area
    - The diameter of impact on and damage to the sea floor
    - The current anchorage patterns are for all oil tankers, tar sands bitumen ships, and proposed coal ships
    - Impacts on fisheries throughout the anchoring area if the sea floor is often displaced
- New marine risk models must include cumulative impacts of newly approved and pending projects that will impact the South Arm of the Fraser River, including the recently certified VAFFC Jet Fuel Terminal project, the George Massey Tunnel Replacement project, and LNG terminal expansion at Tilbury (1)
- Any dredging of the Fraser River or other seaway modifications must be identified in the Marine Risk Assessment, and in turn be referred to in the EIA (1)
- Request for more information regarding the ultimate limits on OGV size that can be accommodated at FSD, including questions about: (1)
    - The factors (draught, basin size, river dynamics, etc.) that limit the ability to accommodate ships larger than Panamax (i.e., 12 m draught, 32 m beam, 290 m length)
    - Any further modifications of the Fraser River required, particularly at the George Massey Tunnel location, to accommodate Panamax vessels, or larger vessels being contemplated
    - Current or future plans to dredge the Fraser River to a depth of 18 metres
- The study needs to completely re-evaluate impacts (1)

Respondents also provided the following comments, not directly related to the scope of the Marine Risk Assessment, for the amendment under consideration:

- The use of OGVs rather than barges is safer because it will decrease vessel movements and therefore decrease risk of an accident, and because OGVs will require pilots, which will add a level of marine safety (6)
- The destruction of our food chain and of the marine environment would have a huge global impact; investments should instead be made into clean energy projects (2)
- The safety record of deep sea marine traffic on the Fraser River is exemplary (1)

5. **Environmental Management Plan (EMP), which will be completed by Soleil Environmental Consultants Ltd.**

An overview of the proposed scope of this study can be found on page 11 of the Discussion Guide, and the original study can be found at www.fsd.bc.ca/amendment.

Please provide comments on the proposed scope of the Environmental Management Plan (EMP) associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

Respondents provided the following comments related to the proposed scope of the Environmental Management Plan:

- The scope of the Environmental Management Plan should be broader to include: (2)
    - Analysis beyond the proposed loader to see if there is something that would better reduce coal dust
    - The cumulative impacts of newly approved and pending projects that will impact the South Arm of the Fraser River, as they relate to the new type of Panamax vessel being proposed

- There should be containment and catch basins on the dock face (1)

- Support for the proposed scope of the study (1)

Respondents also provided the following comments, not directly related to scope of the Environmental Management Plan, for the amendment under consideration:

- The Environmental Management Plan is flawed because: (2)
    - Mitigation statements to manage risk are unable to mitigate global environmental impacts
    - The proposed project would ensure that public dollars are used to construct a flawed project
- The project is close to environmentally sensitive areas like Burns Bog (1)
- There is a lack of confidence in Environmental Management Plans and the ability to adequately manage emergencies, given the oil spill in English Bay in 2015 (1)
- There are concerns about the impacts on the environment (1)
- There are concerns about the potential effects on marine life and wildlife (1)

6. Water Management Plan, which will be completed by Omni Engineering Inc.

An overview of the proposed scope of this study can be found on page 11 of the Discussion Guide, and the original study can be found at www.fsd.bc.ca/amendment.

Please provide comments on the proposed scope of the Water Management Plan (WMP) associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

Respondents provided the following comments related to the proposed scope of the Water Management Plan:

- Support for the proposed scope of the study (2)

- The scope of the Water Management Plan should be widened, because: (2)
    - It neglects to deal with FSD's contribution to the destruction of the environment, including damage to air, the river system and human health
    - It should include a review of submissions received during Metro Vancouver's public comment period related to FSD's waste discharge permit application

Respondents provided the following comments, not directly related to the scope of the Water Management Plan, for the amendment under consideration:

- The study needs to completely re-evaluate impacts (1)

- A request for further information regarding the feasibility for treatment of FSD's site wastewater through Metro Vancouver's Annacis Island Wastewater Treatment Plant (1)

7. Fire Life Safety Plan, which will be completed by Hatch Mott MacDonald

An overview of the proposed scope of this study can be found on page 12 of the Discussion Guide, and the original study can be found at www.fsd.bc.ca/amendment.

Please provide comments on the proposed scope of the Fire Life Safety Plan associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

Respondents provided the following comments related to the proposed scope of the Fire Life Safety Plan:

- Support for the proposed scope of the study (2)

- The Fire Life Safety Plan is flawed because we are unable to mitigate such risks to the environment, and because the plan will not be effective in stopping fires and preserving life/safety (1)

- The revision of the Fire Life Safety Plan is good; however, there are outstanding questions, including: (1)
    - Whether Delta and Surrey Fire Departments will assist in fire response
    - Whether a more accessible route will be provided for emergency access to FSD

Respondents also provided the following comments, not directly related to the scope of the Fire Life Safety Plan, for the amendment under consideration:

- FSD should not stockpile thermal coal, due to problems with spontaneous combustion (1)
- Concerns about potential impacts to the environment from a fire, including pollution (1)

8. Spill Response Plan, which will be completed by Fraser Surrey Docks LP

An overview of the proposed scope of this study can be found on page 12 of the Discussion Guide, and the original study can be found at www.fsd.bc.ca/amendment.

Please provide comments on the proposed scope of the Spill Response Plan associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

Respondents provided the following comments related to the proposed scope of the Spill Response Plan:

- There is a lack of confidence in the Spill Response Plan because: (2)
    - It is unable to mitigate spills
    - The containment of the oil spill in English Bay in 2015 was inadequate

- Impartial experts, especially those who have experience with larger port management, should assist with the review (1)

- The plan must now account for the handling of bunker fuels typically used by Panamax vessels, any accessory activities (such as bunkering of docked ships), and impacts over the entire length of the South Arm of the Fraser River (1)

- The plan must account for an increase in vessel movements of up to 80 return-trip vessel movements and the greater consequence of a potential marine accident involving OGVs, rather than tug and barge (1)

- The risk and response evaluations must be put into context of other newly approved and pending projects in the South Arm of the Fraser River that will result in a significant increase in OGV transits (1)

Respondents also provided the following comments, not directly related to the scope of the Spill Response Plan, for the amendment under consideration:

- Increased shipping and its accompanying risk of a major rail or marine spill could adversely impact the environment, economy and quality of life of the Salish Sea (3)
- There is a lack of confidence in this kind of plan's effectiveness (1)
- All OGVs are required to have an agreement with WMRCC who will respond to any incident involving a release of fuel oil; there have been no fuel oil releases that the Pilotage Authority is aware of while under the conduct of a Fraser River Pilot (1)
- If there were no use of coal, there would be no spill (1)

9. Additional Comments

Please provide any additional comments on the proposed application to amend Permit No. 2012 – 072:

Respondents provided the following comments:

- Opposition to the project (23)
    - General opposition to the project
    - Concerns that the facility would be built in a densely populated area
    - Opposition to export of coal in several U.S. states
    - Concerns that the facility will only benefit producers and customers of coal, not the local community
    - Local municipalities and Metro Vancouver are opposed to the export of coal in the Fraser River area

- Concern regarding the coal industry's impacts on the environment, including carbon emissions, climate change and pollution, and the fact that it is an industry that is already in decline (11)

- Concern with the process, including the approval process, and a lack of meaningful public consultation, including: (7)
    - Concerns about the short notice for the public comment period (which included a major holiday weekend)
    - Concerns that the notification postcard was not received by many residents of the area
    - Requests for a longer consultation period on the permit amendment application in order to review material
    - A need for FSD to properly consult the Mayor and Councillors of New Westminster
    - Concerns that the solicitation of public comments occurred before all of the studies' updates have been completed
    - General concerns about the permit process
    - A request that an independent Medical Health Officer be involved in the final decision
    - Concerns about the lack of public input and the lack of a public health assessment of American thermal coal
    - Concerns that, once the studies are complete, Port Metro Vancouver and FSD should conduct a public information meeting on the amendment application to ensure the public has the opportunity to fully understand the implications of the proposal

- Opposition to the proposed amendment (6)
    - General opposition to the proposed amendment
    - Concerns that the final project will be monstrous compared to the original considerations (e.g., larger volumes of coal and greater impacts on the surrounding environment) despite supporting the original application

- Support for the proposed permit amendment (3)

- Reiterated original support for the project, due to: (3)
    - The substantive and comprehensive research and professional reviews of the project plans
    - The changes related to the amendment that will reduce marine traffic, reduce dust impacts, improve the industrial footprint and reduce water runoff from the operation

- Concern whether FSD will listen to concerns raised in this comment period (3)

- The monetary benefits of FSD's Direct Transfer Coal Facility do not offset the cost to the environment or communities (2)

- Concerns about having more coal and ships near the Fraser River and on FSD's site (2)

Respondents also provided the following comments expressing concern about the environmental impacts of the project:

- If George Massey Tunnel is replaced with a bridge, FSD will begin exporting larger volumes of coal on bigger vessels, which will mean increased adverse impacts from more coal trains through communities, more noise, diesel exhaust and coal dust, and more ship traffic in the Salish Sea (1)
- Tourism is a very valuable industry in San Juan County, and there are concerns about impacts on the Salish Sea's human residents and thousands of different species (1)
- People should use clean energy like solar or wave power (1)
- Concern regarding tailings ponds; also, having a transfer facility on the Fraser River should not be allowed (1)

Respondents also provided the following comments related to health concerns:

- The project will have significant physical and mental health risks from light and noise pollution (1)
- Concerns about the health risks of coal dust (1)
- The project seems to be a short-term decision that rests on the illusion of economic benefit, while diminishing health and well-being of the community and increasing costs for the health care system (1)

Respondents also provided the following comments related to coal dust:

- From the perspective of a resident of New Westminster, the project should not proceed, and coal dust travelling from FSD across the Fraser River and into the home is undesirable (1)
- The efficacy of techniques for minimizing coal dust is questionable, especially given the inability to contain dust from other export goods and there are concerns that such techniques are very costly and unlikely to be implemented (1)
- The increased risk of fire from the amount of coal dust is too great (1)
- FSD should pick whichever method minimizes coal dust (1)
- There are concerns about air quality from airborne pollution and coal dust, and potential impacts of poor air quality on human health, such as allergies and asthma (1)

Respondents also provided the following comments related to the project and the proposed amendment:

- Supportive of FSD's ongoing commitment to further air, water and human health studies and expressed confidence in FSD's ability to meet or exceed Port Metro Vancouver's criteria (1)
- Proposals to ship coal from ports along the U.S. west coast have met resistance, and it is questionable that this project would be permitted in B.C. (1)
- Concerns about the potential impacts on property values (1)
- Concerns about long-term impacts on residents, including quality of life concerns (1)
- Coal is important because it is a major economic driver in British Columbia, and it powers homes, businesses and communities in 40% of the world (1)
- Rail is the most fuel-efficient means of transporting goods and commodities; coal trains are treated to ensure that coal dust is contained as trains pass (1)
- Any proposed changes to the existing permit must clearly identify the number and size of OGVs, since it is unclear whether the Discussion Guide identifies the project as having the potential for 80 OGVs (160 vessel movements/transits) or 40 OGVs (80 vessel movements/transits) (1)
- A full and complete study should be required that covers the environmental impacts and health concerns related to the project in consideration of the amendment (1)
- The risks to public health, the environment, and water quality are not in the public interest (1)
- Concern about railcar topping agent in FSD's wastewater that will be discharged to the sewer system (1)
- If there is an accident at FSD, other ports will suffer (1)
- Cutting down marine traffic from 8 barges to 1 OGV is misleading (1)
- This seems like a bait-and-switch technique (1)
- B.C. businesses face opposition based primarily on aversion to carbon-based products, but these groups do not heed the fact that coal is a legal, legitimate product that has been safely shipped through B.C. ports for decades (1)
- The direct transfer from train to OGVs presents an increased logistical risk related to the timing of coal arrival and ship availability; this respondent stated opposition to the stockpiling of coal at this facility (1)
- If coal must be transported, the United States should transport their own product (1)

- Request for access to the same details provided to the various contractors (like SNC-Lavalin) about the specifics of the amendment, as more information would be helpful to the public in giving more feedback on the scope of the studies (1)
- Opposition to the original application for proposed expansion of coal exports at FSD until: (1)
    - An independent third-party Health Impact Assessment has been completed
    - Port Metro Vancouver holds formal public hearings regarding the proposed project at FSD
- A report (as an appendix to the respondent's submission) outlines concerns with FSD's original proposal, including the scope of the environmental impact assessment, stormwater management, dust control, noise control, erosion and sediment control, flood risk, health impact assessment and consultation with staff (1)
- The Port Authority lacked the authority to issue the Permit to FSD or to make a determination under s.67(a) of the *Canadian Environmental Assessment Act* (1)
- With or without an amendment to the permit, a key outstanding requirement is the development of a final Air Quality Management Plan and the submission of a final Metro Vancouver Air Quality Permit application (1)
- Request to Metro Vancouver for the involvement of the Independent Interagency Review Committee in this process (1)

3.2 Key Themes – Agency Meeting

The following are key themes from FSD's meeting with the Fraser Health Authority on May 15, 2015. As much as possible, the language expressed by participants was retained in the key themes.

Meeting	Key Themes
Fraser Health Authority May 15, 2015 9:15 a.m. to 10:15 a.m. ATTENDEES • Chief Medical Health Officer, Fraser Health Authority (FHA) • Medical Health Officer, Fraser Health Authority • President and CEO, Fraser Surrey Docks LP (FSD) • Senior Project Specialist, SNC-Lavalin Environment (SNC) NOTE TAKER • Kirk & Co. (Meeting Recorder)	Agency representatives noted the following: • That the concerns expressed by the Fraser Health Authority are not specifically related to the proposed amendment, but rather to the overall scope of the studies that have been undertaken • That the original Human Health Risk Assessment (HHRA) was satisfactory, and that the scope of study being undertaken for the HHRA in consideration of the proposed amendment is acceptable, but that a full Health Impact Assessment is recommended • That a Health Impact Assessment would be mutually beneficial, in terms of looking at all factors, identifying potential future risks and mitigation, and providing a balanced approach for moving forward • That a project such as this could have impacts beyond the scope of the footprint, and without that data available, it is difficult to reassure community concerns • That Fraser Surrey Docks is studying what is within the scope set out by Port Metro Vancouver • That the Fraser Health Authority was interested in reviewing the assessment of ocean-going vessels as part of the consideration to apply for an amendment, in terms of both marine risk and emissions • That the Fraser Health Authority would consult with Metro Vancouver for their opinion on the adequacy of the air quality monitoring undertaken

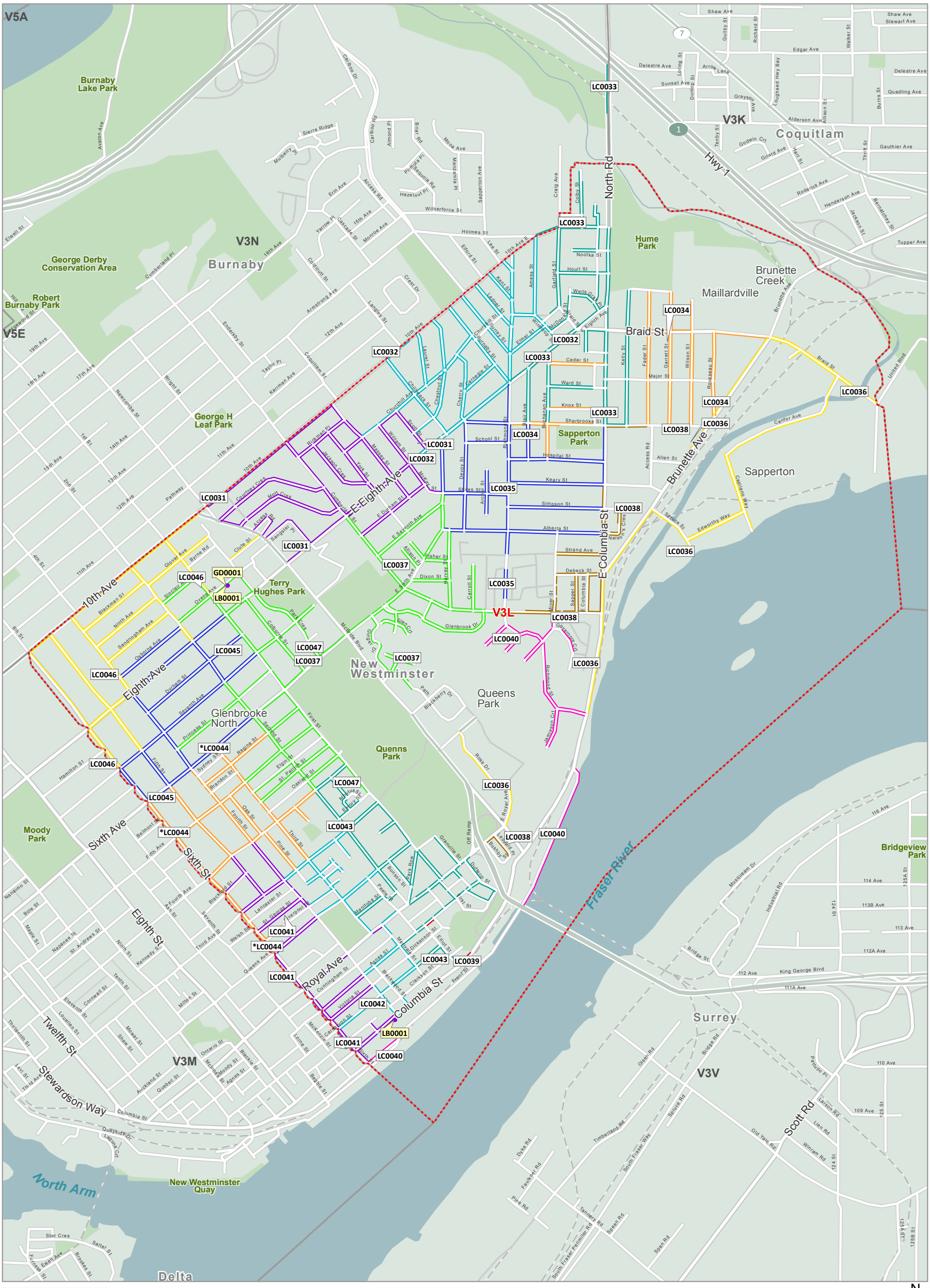


Consultation Summary Report
Appendix A

June 2015

FSA / RTA: V3L BC

The Delivery Mode names that have an asterisk (*) indicate Modes that are split between more than one (1) FSA.
Les noms des modes de livraison avec un astérisque (*) indiquent des modes partagés entre plusieurs RTA.



FSA Map
Carte de RTA

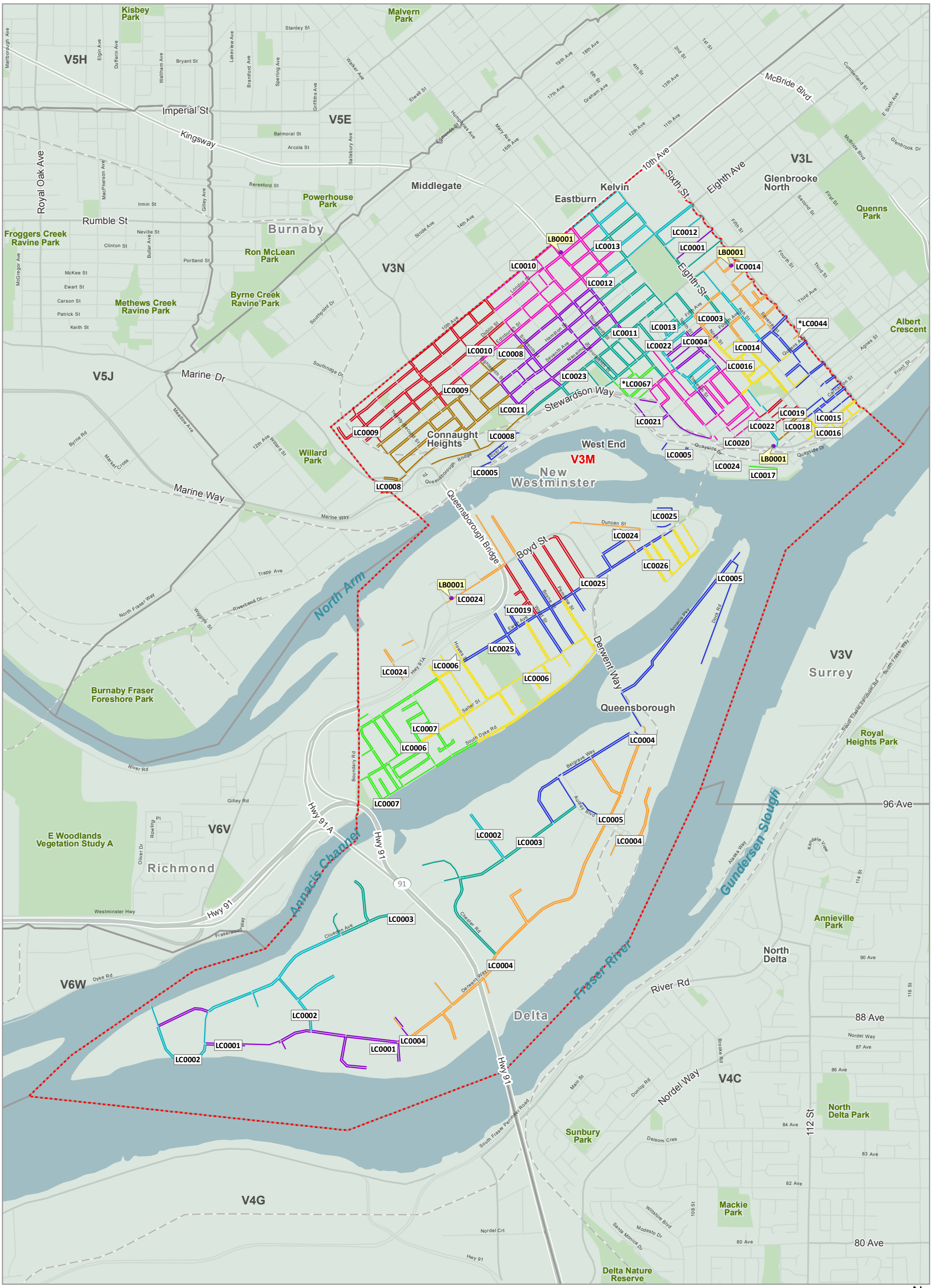
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FSA / RTA: V3M BC

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FSA Map
Carte de RTA

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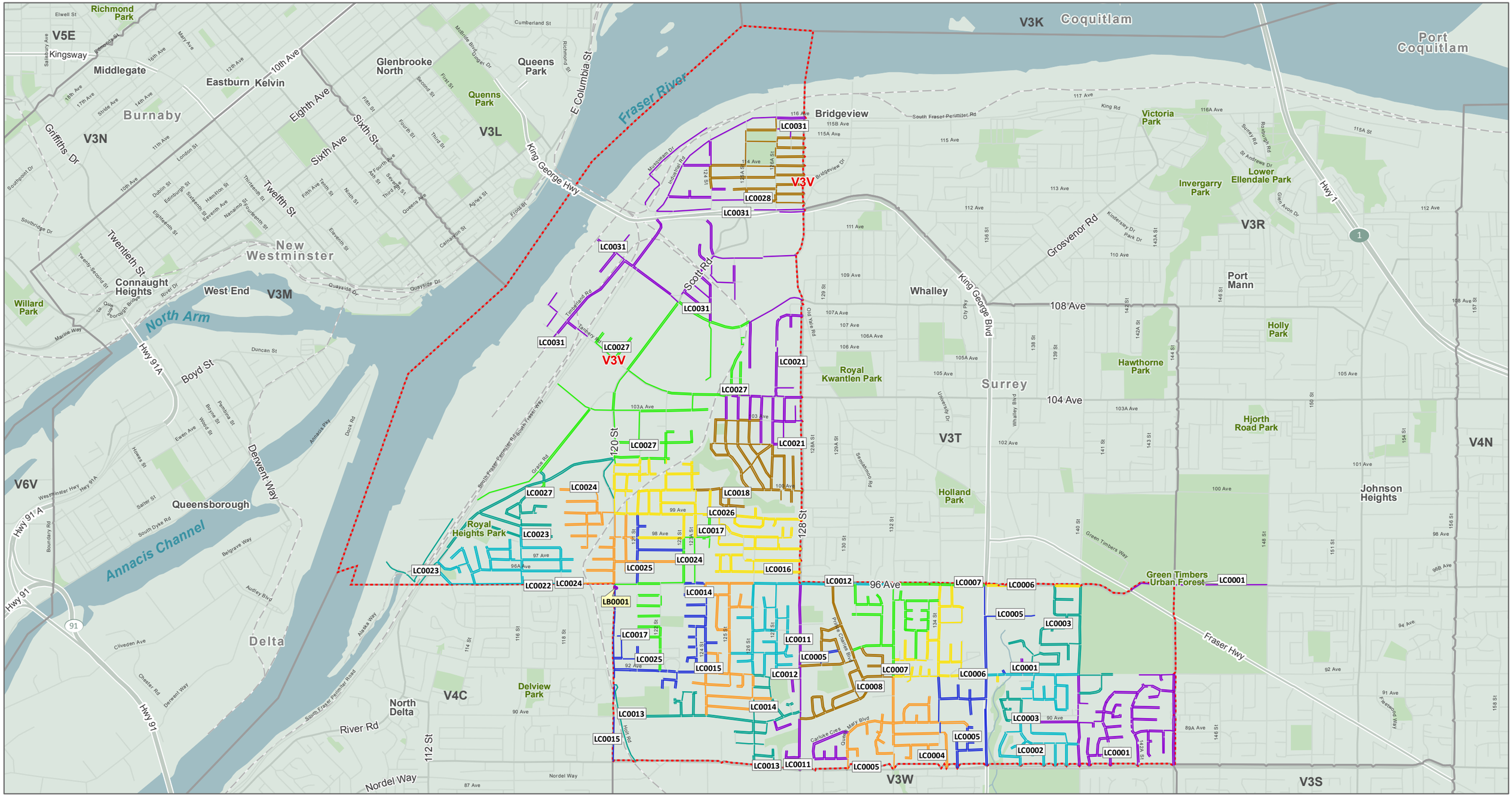
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FSA / RTA: V3V BC

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FSA Map
Carte de RTA

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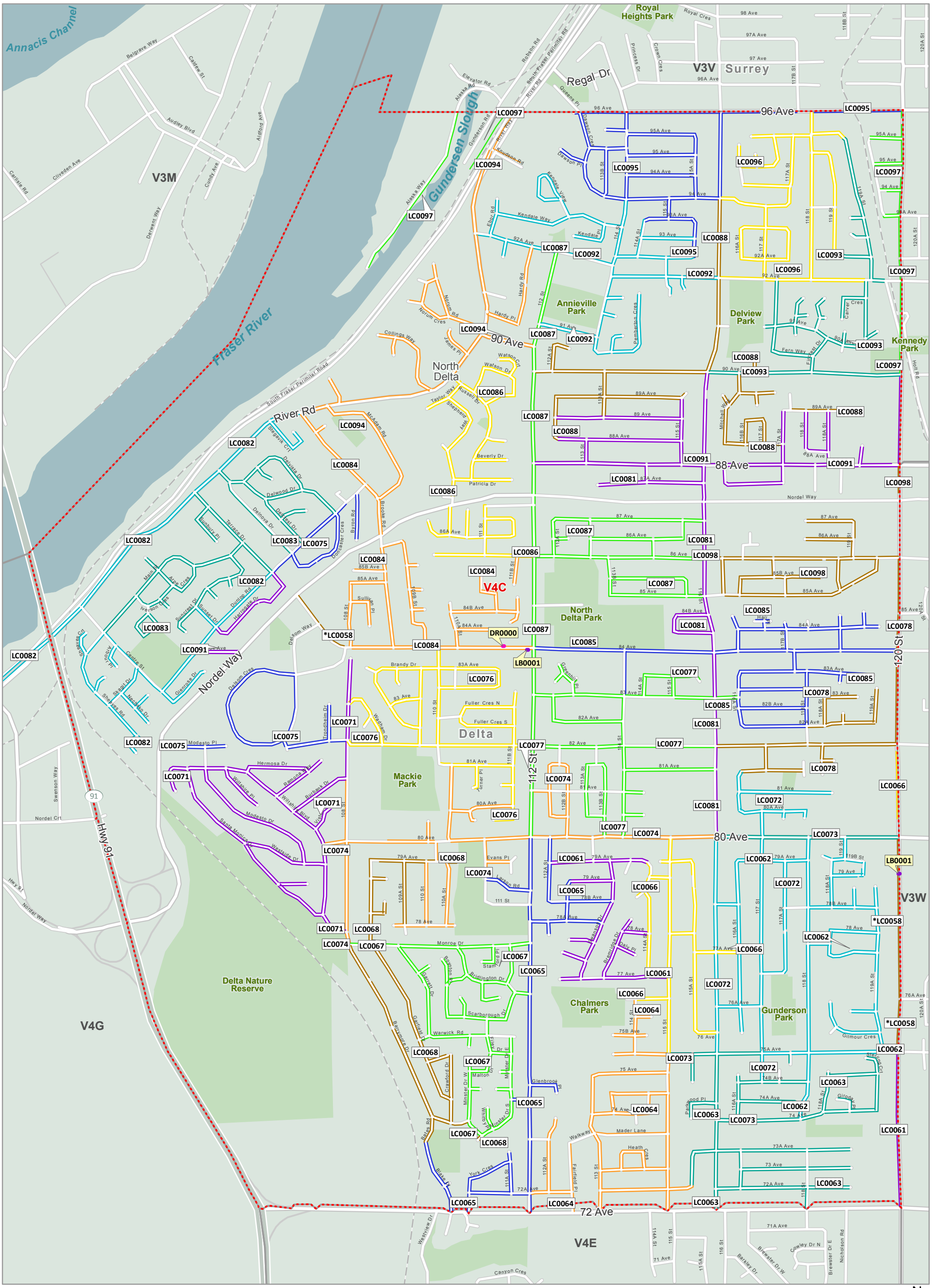
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FSA / RTA: V4C BC

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FSA Map
Carte de RTA

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Consultation Summary Report
Appendix B

June 2015

FRASER SURREY DOCKS LP
Pacific Rim Stevedoring



Public Comment Period

Consideration to Amend Permit No. 2012 – 072
Direct Transfer Coal Facility

May 4 – 19, 2015

Discussion Guide and Feedback Form

Consideration to Amend Permit No. 2012 – 072 Direct Transfer Coal Facility

On August 21, 2014, Fraser Surrey Docks LP (FSD) was granted a permit by Port Metro Vancouver that gives it conditional approval to build and operate a Direct Transfer Coal Facility within its existing lease area.

FSD is considering applying to amend its existing permit. The proposed amendment would allow FSD to load coal directly from the facility to ocean-going vessels (OGVs). Using OGVs would allow FSD to eliminate or reduce the number of barges required. The proposed amendment to the existing permit would have no impact on the volume of coal permitted to be shipped through FSD (4 million metric tonnes per year).

This Discussion Guide outlines aspects of the existing permit FSD is considering applying to amend, and seeks comments on the proposed scope of studies associated with the potential amendment to Permit No. 2012 – 072.

How Can I Provide Feedback?

- Provide a written submission
- Submit your Feedback Form:
  - Online
  - By email
  - By mail

Reporting

- Community and stakeholder feedback will be summarized and posted online at www.fsd.bc.ca/amendment

Correspondence and Inquiries

- **Telephone:** 604-891-1695
- **Web:** www.fsd.bc.ca/amendment
- **Email:** amendment@fsd.bc.ca
- **Mail:** PO Box 2233 Vancouver Main, Vancouver, BC V6B 3W2

Port Metro Vancouver Permit Process

Port Metro Vancouver is the permitting authority for the proposed amendment.

On August 21, 2014 Port Metro Vancouver issued a Project Permit to Fraser Surrey Docks LP (FSD) for the development of a Direct Transfer Coal Facility to handle up to 4 million metric tonnes of coal, per year.

The permitting process considered environmental and technical information, as well as First Nations, municipal, agency, and community input.

In completing its federal environmental review, and as per Section 67 of the *Canadian Environmental Assessment Act 2012 (CEAA 2012)*, Port Metro Vancouver considered the information and the proposed mitigation measures provided by FSD, along with other relevant information. Port Metro Vancouver concluded that, with the implementation of proposed mitigation measures and subject to the conditions of the permit, the project is not likely to cause significant adverse environmental effects.

Fraser Surrey Docks LP (FSD) is the largest employer on the Fraser River waterfront, with more than 300 full-time employees. FSD has been a major employer and contributor to local communities for over 50 years, handling over 3 billion dollars-worth of goods annually. FSD has directly contributed over 280 million dollars to B.C. communities over the last 5 years through wages, taxes and buying of local goods and services.

There will be two opportunities to provide input regarding the proposed amendment. FSD will consider your input, along with information provided by technical experts, as part of its consideration to apply for an amendment to the existing permit.

Round 1
Public Comment Period

Consideration to Amend Permit No. 2012 – 072

Review of proposed changes to the existing permit and proposed scope of studies.

May 4 – 19, 2015

Round 2
Public Consultation

If FSD submits the proposed amendment, the public will be provided with an additional opportunity to review and comment on changes to the project design and on the final results of the studies.

Overview of Changes Under Consideration

Consideration to Amend Permit No. 2012 – 072 Direct Transfer Coal Facility

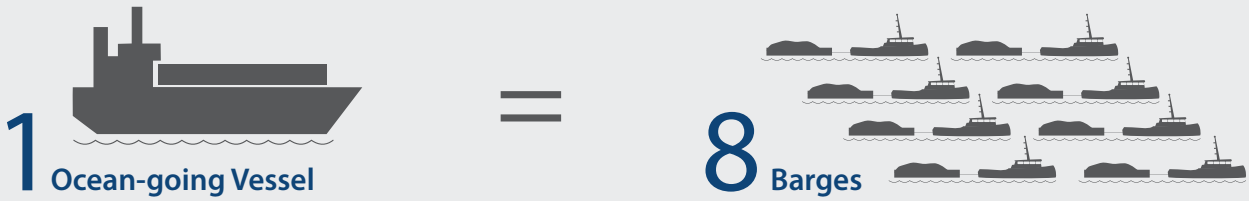
Fraser Surrey Docks LP (FSD) is considering applying to amend its existing permit (Permit No. 2012 – 072) that gives it conditional approval to build and operate a Direct Transfer Coal Facility within its existing lease area.

The application to amend the existing permit would have no impact on the volume of coal permitted to be shipped through FSD (4 million metric tonnes per year).

The proposed amendment would allow FSD to load coal directly from the facility to ocean-going vessels (OGVs) and would allow FSD to eliminate or significantly reduce the number of barges required. One loaded Panamax size OGV can carry approximately four train loads of coal, and the same volume as eight loaded barges (i.e. 1 OGV = 8 barges).

- The proposed amendment under consideration by FSD would increase the current size and height of the loader, allowing for direct loading to OGVs.
- Use of OGVs would replace most or all barges. If approved, FSD plans to replace all barges with OGVs, but would retain barging as a potential secondary option.
- It is anticipated that the use of OGVs would further mitigate the potential for fugitive dust, as coal would be transported in a closed hatch.
- The conveyance system, receiving pit and rail tracks would be shifted on site to accommodate the larger vessel loader.
- The footprint of the facility area would decrease, which would reduce the amount of rain water runoff collected.

Ocean-going vessels would eliminate or reduce the number of barges required.
One ocean-going vessel holds the same volume as eight barges.



The following are potential shipping scenarios based on 4 million metric tonnes per year:

Potential Shipping Scenarios	Loaded Trains / Year	Loaded OGVs / Year*	Loaded Barges / Year*
Current permit approval	320	0	640
25% shift to OGVs (with proposed amendment)	320	20	480
50% shift to OGVs (with proposed amendment)	320	40	320
75% shift to OGVs (with proposed amendment)	320	60	160
100% shift to OGVs (with proposed amendment) FSD's preferred operational scenario	320	80	0

** Numbers represent return-trip vessel movements.*



Potential Modifications to Original Project Design:

To accommodate a larger vessel loader, the conveyance system, receiving pit and rail tracks would be shifted in order to achieve proper angles and elevations. Primary changes would be as follows:

Project Features	Approved Permit	Proposed Amendment Application
Volume of coal shipped	4 million metric tonnes / year	No change
Mode of shipping	1,280 barge movements / year based on 640 barge return trips	Use of OGVs to replace some or all barges
Marine Vessel Loader	14.3 metre (m) outreach (length of boom) from the edge of the berth and a maximum height of 15.0m	27.4m outreach from the edge of the berth and a maximum height of 36.2m
Receiving pit and building	A fabric building spanning a 17m-in-length bottom discharge pit with 125 tonne surge bin	Metal-clad building; shifted 12m east and 16m south Receiving building and pit dimension stay the same
Wastewater settling basins	A two-stage primary and secondary settling basin with an approximate capacity of 300 m^3	Shifted 37m west and rotated 90 degrees counter clockwise Dimensions for settling basins stay the same Also included is a 560,000 litre tank for contingency storage purposes for storm events Basins would reside under the Out Feed Conveyor for more effective use of space and water management practices
Dust mitigation	Dust mitigation measures meet regulatory standards	Additional dust mitigation through use of closed hatches on OGVs, spraying of empty outbound railcars
Overall water catchment area (Facility footprint)	5,340 m^2	Decreased to 3,680 m^2 Estimated to reduce water runoff by 10 -15%
Rail tracks	Relocation of the front gate	Adjustments to the rail loop; removal of Shed 4 and no relocation of the front gate
Jobs	Estimated 20-25 full-time jobs	An increase of up to 20 additional full-time jobs (total of up to 40-45 new full-time jobs) due to extra shifts required to load OGVs (based on 100% shift to OGVs)

Studies

Fraser Surrey Docks LP (FSD) is working with consultants, who are subject-matter experts, to update studies that were undertaken for the existing permit (Permit No. 2012 - 072). The updated studies will identify and analyze any potential impacts of the proposed amendment.

Studies to be updated with respect to the proposed amendment include:

1. Human Health Risk Assessment (HHRA) – SNC-Lavalin Inc. (Environment & Water)
2. Environmental Impact Assessment (EIA) – SNC-Lavalin Inc. (Environment & Water)
3. Air Quality Assessment (AQA) – Levelton Consultants Ltd.
4. Marine Risk Assessment – DNV (Det Norske Veritas)
5. Environmental Management Plan (EMP) – Soleil Environmental Consultants Ltd.
6. Water Management Plan – Omni Engineering Inc.
7. Fire Life Safety Plan – Hatch Mott MacDonald
8. Spill Response Plan – prepared by Director of Engineering, Fraser Surrey Docks LP

Updated studies, as listed above, would be reviewed by Port Metro Vancouver, the regulating authority, as part of an application to amend Permit No. 2012 - 072.

FSD anticipates that Port Metro Vancouver will contract a third-party reviewer, Golder Associates Ltd., to assist in the review of the following studies:

- Human Health Risk Assessment (HHRA)
- Environmental Impact Assessment (EIA)
- Air Quality Assessment (AQA)

1. Human Health Risk Assessment (HHRA) – SNC-Lavalin Inc. (Environment & Water)

A Human Health Risk Assessment (HHRA) was undertaken for the original project design. Port Metro Vancouver referred the HHRA for review by an independent third party (Golder Associates Ltd.), prior to the approval of Permit No. 2012 – 072.

In consideration of the proposed amendment, SNC-Lavalin will undertake a review of the HHRA (July 2014) to understand the impact of the proposed amendment on health risks. Human health risk assessments are tools used to determine if people will be safe if they are exposed to substances that are in the environment, food, or consumer products. The review of the HHRA will look at a comprehensive list of substances which may be present in emissions that could arise from the proposed amendment.

The HHRA will be updated, in part, based on the results of the Air Quality Assessment (AQA) conducted by Levelton Consultants Ltd. (Levelton) for the proposed amendment. A comprehensive list of emission sources will be evaluated in the AQA including the proposed coal operations at Fraser Surrey Docks LP (FSD) (i.e. emissions from marine vessels, and fugitive dust generated from material transfer points, as well as during coal unloading and loading), and in-transit emission sources (including emissions from marine vessels on the Fraser River).

SNC-Lavalin has reviewed the HHRA and based on their understanding of the proposed amendment, determined that the following areas of the report that will require further analysis:

- The HHRA will be updated to reflect Levelton's AQA results;
- Exposure Point Concentrations (EPCs) will be interpreted based on the updated Levelton AQA results. EPCs are used to estimate exposures to fugitive dust and combustion emissions at specific geographic locations; and,
- Risk estimates associated with exposures to the emissions will be re-calculated based on updated EPCs, and the results of the HHRA will be reviewed and updated as necessary.

The remaining sections of the HHRA require only minor edits as they are accurately described and remain applicable with respect to the proposed amendment, such as the scope of the HHRA, project location, baseline and rail corridor EPCs and associated risk estimates.

To facilitate an update of the proposed amendment application, SNC-Lavalin will revise the July 2014 HHRA report, and summarize the revisions in a technical memorandum.

SNC-Lavalin will:

- Review the description of refinements to the project associated with the proposed amendment;
- Review the extent to which the HHRA accurately estimates human health risks, taking into account the refinements to the project associated with the proposed amendment;
- Describe and discuss the refinements to the project associated with the proposed amendment which are material to the HHRA; and,
- Review and analyze the extent to which mitigation measures should be updated, where applicable.

The original Human Health Risk Assessment (July 2014), and the scope and rationale documents (April 2015) provided by SNC-Lavalin in consideration of the proposed amendment can be found at www.fsd.bc.ca/amendment

2. Environmental Impact Assessment (EIA) – SNC-Lavalin Inc. (Environment & Water)

An Environmental Impact Assessment (EIA) was undertaken for the original project design. Port Metro Vancouver referred the EIA for review by an independent third party (Golder Associates Ltd.), prior to the approval of Permit No. 2012 – 072.

In consideration of the proposed amendment, SNC-Lavalin will undertake a review of the EIA (November 2013) to update the environmental impacts and proposed mitigation measures associated with loading coal directly onto OGVs as opposed to barges.

SNC-Lavalin has reviewed the EIA and, based on their understanding of the proposed changes to the project, have determined that the following sections will require further investigation or analysis:

- Project Description
- Consultation
- EIA Methodology
- Air Quality
- Surface Water and Groundwater
- Fish and Fish Habitat
- Vegetation and Wildlife
- Lighting
- Vessel Traffic
- Recreational and Commercial Fishing
- Human Health
- Cumulative effects
- Environment Management Plans
- Summary of Project Effects, Mitigation Measures and Residual Effects
- Conclusion

SNC-Lavalin will prepare a technical memorandum that will review and analyze the changes to each of the relevant sections in the EIA. The technical memorandum will discuss environmental effects and provide additional mitigation measures relevant to the proposed amendment which are not currently covered in the EIA, if applicable.

SNC-Lavalin will:

- Review the description of refinements associated with the proposed amendment to the project;
- Review the extent to which the EIA adequately describes the potential environmental impacts, taking into account refinements associated with the proposed amendment to the project;
- Describe and discuss the refinements associated with the proposed amendment to the project which are material to the EIA; and,
- Review and analyze the extent to which the potential impacts and mitigations should be updated, where applicable.

The original Environmental Impact Assessment (November 2013), and the scope and rationale documents (April 2015) provided by SNC-Lavalin in consideration of the proposed amendment can be found at www.fsd.bc.ca/amendment

3. Air Quality Assessment (AQA) – Levelton Consultants Ltd.

An Air Quality Assessment (AQA) was undertaken for the original project design. Port Metro Vancouver referred the AQA for review by an independent third party (Golder Associates Ltd.), prior to the approval of Permit No. 2012 – 072.

In consideration of the proposed amendment, Levelton will update the air quality study by conducting a review of the AQA submitted for the original permit (June 2014) to evaluate the potential impacts from the proposed project changes. A comprehensive list of emission sources will be evaluated related to the refinements associated with the project in the AQA, including the proposed coal operations at Fraser Surrey Docks LP (FSD) (i.e. emissions from marine vessels, and fugitive dust generated from material transfer points, as well as during coal unloading and loading), and in-transit emission sources (including emission from marine vessels on the Fraser River).

Levelton has reviewed the AQA and, based on their understanding of the proposed amendment, determined that the following areas of the report will require further analysis:

- Source Emissions Estimation
    - The key revisions will reflect the differences in the project components associated with the change from a barge loader to a ship loader, vessel emissions, and additional mitigation measures implemented for FSD's agricultural goods handling operation.
- Modelling Methodology
    - Revisions will reflect the differences in the project components associated with the change from a barge loader to a ship loader, and changes to FSD's agricultural goods handling operation.
- Air Dispersion Modelling Results
    - Key revisions will reflect the differences in the project components associated with the change from a barge loader to a ship loader, vessel emissions, and changes to FSD's agricultural goods handling operation, which will be used to assess the potential impacts from emissions.
- In-Transit Analysis
    - Revisions of combustion and fugitive dust emissions from transport on the Fraser River will be required to reflect the changes in the project components associated with the change from a barge loader to a ship loader, vessel emissions, and additional mitigation measures implemented for the agricultural goods handling operations. The analysis is to be re-conducted to determine potential impacts.
- Combustion Volatile Organic Carbons (VOC) Speciation
    - Revisions to this section will be required to reflect the changes to combustion emission sources. The analysis is to be updated for consideration in the HHRA (SNC-Lavalin).

To facilitate an update of the proposed amendment application, Levelton will revise the June 2014 AQA report, and summarize the revisions in a technical memorandum.

Levelton's scope of work in updating the AQA study will include the following:

- A review of the description of the refinements to the project associated with the proposed amendment;
- A review of the extent to which the AQA provides a representative assessment of the potential air quality impacts, considering the refinements to the project associated with the proposed amendment;
- A description and discussion of the refinements to the project associated with the proposed amendment which are material to the AQA; and,
- A review and analysis of the extent to which the potential impacts should be updated, including changes to the assessment methodology, where applicable.

The original Air Quality Assessment (June 2014), and the scope and rationale documents (April 2015) provided by Levelton Consultants in consideration of the proposed amendment can be found at www.fsd.bc.ca/amendment

4. Marine Risk Assessment – DNV (Det Norske Veritas)

A Marine Risk Assessment was undertaken for the original project design prior to the approval of Permit No. 2012 – 072 by Port Metro Vancouver.

In consideration of the proposed amendment, DNV will undertake a review of the Marine Risk Assessment to review the marine vessel movement and navigation risks associated with the proposed amendment of loading directly to OGVs as opposed to barges. The Marine Risk Assessment will review the navigational impacts associated with changing from barges to OGVs.

DNV has reviewed the Marine Risk Assessment and, based on their understanding of the proposed amendment, identified the following areas of the report that may require further analysis:

- Fraser Surrey Docks LP (FSD) Coal Barge Operations
  - This section will be redrafted to accurately describe the Panamax size vessels that are being considered for operations.
- Methodology and Approach
  - The methodology for calculating marine accident risk remains accurate with the exception of the case definitions. The cases described in this section are no longer accurate based on the refinements associated with the proposed amendment as they describe barge movements. The new cases that are proposed for analysis will be updated to include OGV movements.
- Risk Model Results
  - A new analysis will be conducted for the operations described in the proposed amendment. Because the environmental and traffic data for the Fraser River is still valid for the proposed amendment, the incident frequency results will be adjusted based on the number of OGV movements.

The traffic data (of vessels not associated with FSD) and the environmental data and assumptions from the original risk assessment will be utilized in the updated assessment. A complete re-model of the study area is not considered necessary due to the fact that the only parameter that would be altered is the number of vessels transiting the Fraser River.

The findings of the Marine Risk Assessment review, as outlined by DNV's scope below, will be summarized in a technical memorandum. In addition, mitigation measures will be revised to reflect the refinements associated with the proposed amendment to the project.

DNV's scope will include the following:

- Update the potential vessel accident frequency, consequence and risk from the previous projected activity of 640 barge movements to 80 OGV movements, and a range of scenarios in between;
- Linear adjustment of the accident frequency, based on the updated number of vessel movements; and,
- An update to the marine risk assessment based on the updated frequency of OGVs compared to barges.

The original Marine Risk Assessment (September 2014), and the scope and rationale documents (May 2015) provided by DNV in consideration of the proposed amendment can be found at www.fsd.bc.ca/amendment

5. Environmental Management Plan (EMP) – Soleil Environmental Consultants Ltd.

An Environmental Management Plan (EMP) was undertaken on the original project design prior to the approval of Permit No. 2012 – 072 by Port Metro Vancouver.

In consideration of the proposed amendment, Soleil Environmental Consultants Ltd. will undertake a review of the current EMP and, with Fraser Surrey Docks LP (FSD), update the plan where required. The EMP previously prepared for the original permit will be revised to reflect the proposed amendment to the permit to use OGVs.

As part of the review, Soleil Environmental Consultants Ltd. will consider if any of the proposed changes will impact the environment relative to the originally approved permit. For example, it is anticipated that a change to a taller ship loader with a covered telescoping chute will reduce the potential for fugitive coal dust. The proposed relocation of some infrastructure will require the production of new drawings for inclusion into the revised EMP.

Revisions to the current EMP will be completed and a new draft document produced for review, comment and approval by FSD with subsequent submission for review and approval to Port Metro Vancouver.

The original Environmental Management Plan (June 2013), and the scope and rationale documents provided by Soleil Environmental Consultants in consideration of the proposed amendment can be found at www.fsd.bc.ca/amendment

6. Water Management Plan – Omni Engineering Inc.

A Water Management Plan (WMP) was undertaken on the original project design prior to the approval of Permit No. 2012 – 072 by Port Metro Vancouver.

In consideration of the proposed amendment, Omni Engineering Inc. will undertake a review of the Water Management Plan (August 2014, WMP) to confirm the relevance of the water management impacts due to the proposed project changes.

The updated Water Management Plan will review:

- Updated wastewater containment area and associated water volumes;
- Re-location and re-sizing of the wastewater settling capacities accordingly;
- Minor modification to the out feed conveyor spill trays; and,
- Review of vessel loading dust mitigation technology strategies.

Results of the WMP review will be summarized in a revised WMP, covering the topics within the scope of work described above.

The original Water Management Plan (August 2014), and the scope document provided by Omni Engineering Inc. in consideration of the proposed amendment can be found at www.fsd.bc.ca/amendment

7. Fire Life Safety Plan – Hatch Mott MacDonald

A Fire and Safety Plan was undertaken on the original project design prior to the approval of Permit No. 2012 – 072 by Port Metro Vancouver.

In consideration of the proposed amendment, Hatch Mott MacDonald (HMM) will undertake a review of the Fire and Safety Plan (August 2014) to confirm the relevance of the fire and safety management impacts described to the proposed project changes. Further to this, HMM will conduct a full operational review to update the existing plan as a whole, bringing all aspects of the plan to relevance, and develop a Fire Life Safety Plan.

Review of the Fire and Safety Plan will:

- Undertake a complete revision of the existing Fire and Safety Plan for the proposed coal operations at FSD. The review will take into consideration:
    - Planned revisions to the proposed operation (barge loader to ship loader)
    - Revised operations of the loading vessels
- Summarize the requirements and regulatory frameworks for a coal handling facility;
- Describe the hazards and consequent risks; and,
- Detail the planned design mitigation and operational controls contained within the design.

Results of the Fire and Safety Plan review will be summarized in a revised Fire Life Safety Plan, covering the topics within our scope of work described above.

The original Fire and Safety Plan (RKMS, September 2012), and the scope document provided by Hatch Mott MacDonald in consideration of the proposed amendment can be found at www.fsd.bc.ca/amendment

8. Spill Response Plan – Fraser Surrey Docks LP

A Spill Response Plan for FSD's terminal and FSD's berth corridor was undertaken on the original project design prior to the approval of Permit No. 2012 – 072 by Port Metro Vancouver.

In consideration of the proposed amendment, Fraser Surrey Docks LP (FSD) will undertake an internal review of its existing Spill Response Plan to confirm the relevance of loading dry bulk ocean-going vessels (OGVs) described to the proposed project changes. The review will be led by Fraser Surrey Docks LP Director of Engineering and Terminal Development, with guidance from the Director of Operations and Health and Safety Officers. As FSD is a deep sea marine terminal with over 50 years of experience, no significant impacts or changes are anticipated to the existing Spill Response Plan, though this will be confirmed through a detailed review.

Results of the Spill Response Plan review will be summarized in an updated Spill Response Plan.

The original Spill Response Plan (January 2013), and the scope document prepared by FSD in consideration of the proposed amendment can be found at www.fsd.bc.ca/amendment

Frequently Asked Questions (FAQs)

1. *Why is Fraser Surrey Docks LP (FSD) building a Direct Transfer Coal Facility?*

- FSD is a major, multi-purpose marine terminal that facilitates shipping of a variety of goods including general cargo, steel, forest products, agricultural products and containers.
- FSD has the capacity to handle a portion of the 38 million metric tonnes of coal that are transported through Port Metro Vancouver annually, and has been permitted to do so following a thorough review process (completed August 2014).

2. *Why is FSD considering applying to amend its existing permit to build a Direct Transfer Coal Facility?*

- The proposed amendment would allow FSD to load coal directly from the facility to ocean-going vessels (OGVs), reducing the need for barges. OGVs have more capacity than barges. One loaded OGV can carry four train loads and the same amount as eight loaded barges.
- The proposed application to amend the existing permit would have no impact on the permitted volume of coal shipped through FSD (4 million metric tonnes per annum).
- Due to changes in commercial conditions, FSD anticipates shipping most or all of its volume by OGVs. The use of OGVs would reduce the number of marine vessel movements.

3. *What changes would the proposed amendment include?*

- The proposed amendment would increase the current size and height of the barge loader, allowing for direct loading to OGVs.
- Use of OGVs would replace most or all barges. If approved, FSD plans to replace all barges by OGVs, but would retain barging as a potential secondary option.
- It is anticipated that the use of OGVs would further mitigate the potential for fugitive dust, as coal would be transported in a closed hatch.
- The conveyance system, receiving pit and rail tracks would be shifted on site to accommodate the larger vessel loader.
- The footprint of the loading area would decrease, which may reduce water runoff.

4. *Will this change the volume of coal that FSD is permitted to transport through the facility?*

- The proposed amendment to the permit would not have any impact on the amount of coal that FSD is permitted to transport through the facility. The existing permit is for 4 million metric tonnes of coal (4 MMT) per year, and anything over this amount would require a new project review.

5. *How would the proposed amendment change vessel movements on the Fraser River?*

- The proposed amendment would allow FSD to load coal directly from the facility to OGVs, reducing the use of barges and reducing the number of vessel movements from the original project permit. An OGV can carry the volume of 4 trains. In comparison, 8 barges would be required to carry the same amount (1 ship = 8 barges).
- FSD anticipates shipping coal mostly or entirely by OGVs, while retaining barging as a secondary option.

6. *What type of vessels would be used with the proposed amendment?*

- Any vessel accommodated at FSD would be in accordance with current size limitations for the Fraser River. The ship loader being proposed would be able to accommodate Panamax class vessels that would not exceed 11.5 metre draft when loaded.

7. *Why is it necessary for the height of the vessel loader to be increased?*

- Vessels sit much higher in the water than barges and the loader must be able to reach over the side of the vessel into the hatch. This height will allow the vessel loader the appropriate reach to load coal directly into the specific vessel hatch it is loading.
- The vessel loader would require a maximum height of 36.2 metres to load coal directly into OGVs. By comparison, the gantry cranes used to move containers onsite at FSD are 55 metres high with the boom down, and are 82 metres high with the boom up.

8. *How does this proposed amendment affect the studies that were completed for the original permit application?*

- The following studies (available at www.fsd.bc.ca/amendment) will be reviewed and updated as necessary with a supplementary technical memo or report:
  - Human Health Risk Assessment (HHRA) – SNC-Lavalin Inc. (Environment & Water)
  - Environmental Impact Assessment (EIA) – SNC-Lavalin Inc. (Environment & Water)
  - Air Quality Assessment (AQA) – Levelton Consultants Ltd.
  - Marine Risk Assessment – DNV (Det Norske Veritas)
  - Environmental Management Plan (EMP) – Soleil Environmental Consultants Ltd.
  - Water Management Plan – Omni Engineering Inc.
  - Fire Life Safety Plan – Hatch Mott MacDonald
  - Spill Response Plan – prepared by Director of Engineering, Fraser Surrey Docks LP
- The public will have the opportunity to review and provide comments on the scope and results of the studies.
  - For further information on how to provide feedback, please visit www.fsd.bc.ca/amendment

9. *What does this proposed permit amendment application mean with respect to the recent wastewater permit application to Metro Vancouver?*

- The waste discharge permit application submitted to Metro Vancouver is for a maximum volume discharge rate of 5 litres per second of treated wastewater, and this would not change as a result of the amendment. Overall, FSD's treated wastewater would be 9,000 tonnes (0.0001%) of the 172 million tonnes of regional wastewater flowing through the Annacis Island facility every year, which includes a number of other industrial users, undergoing similar treatment.
- Wastewater from the proposed facility would first be treated onsite and discharged directly to the Annacis Island Treatment Facility via Metro Vancouver's North Surrey Interceptor Sewer, which runs directly under the FSD facility. As such, wastewater would be treated to meet or exceed Metro Vancouver's rigorous standards protecting water quality.

10. *How many OGVs currently berth at FSD per year?*

- Approximately 275 OGVs called at FSD in 2014.

11. *What is being done to reduce coal dust from railcars?*

- The coal will be sprayed with a binding agent at the mine site during loading to railcars. Once the railcars are loaded, a topping agent is applied to the coal in each railcar. In addition, Burlington Northern Santa Fe (BNSF) is constructing a re-spray station at Pasco, Washington to mitigate dust. This will provide additional dust mitigation for coal shipments en route to FSD.
- Although FSD is not responsible for the movement of products by rail, we are working closely with the mines and our rail partners to ensure dust mitigation strategies are consistently applied.

Reference Documents

The following supporting documents for the original project permit are available on the Project Updates page at www.fsd.bc.ca/amendment:

- Direct Transfer Coal Facility Project Application
- Human Health Risk Assessment (HHRA)
- Air Quality Assessment (AQA)
- Environmental Impact Assessment (EIA)
- Phase 1 Community Engagement Summary Report
- Phase 2 Engagement Summary Report
- Marine Risk Assessment
- Coal Transfer Facility Fire Safety Plan
- Preliminary Environmental Management Plan
- Air Dispersion Modelling Assessment
- Spill Response Plan
- Water Management Plan (WMP)

The following supporting documents for the original project permit are available at www.portmetrovancouver.com/en/projects/OngoingProjects/Tenant-Led-Projects/FraserSurreyDocks.aspx:

Decision Documents, including:

- Project Review Report – August 2014
- Environmental Review Decision Statement – August 2014
- Human Health Risk Assessment Third Party Review (Golder Associates)
- Fraser Surrey Docks Direct Transfer Coal Facility Mitigation Strategy Description
- Backgrounder – About This Project and Decision Process
- Port Metro Vancouver Project Review Process
- Human Health Risk Assessment (HHRA) (July 2014)
- Environmental Impact Assessment Public Comments Response Memo
- Documents Referenced in the Environmental Review Decision Statement (including correspondence)
- Environmental Impact Assessment Public Comments Response Memo
- Fraser Surrey Docks Environmental Impact Assessment Public Agency Comments

Feedback Form

This feedback form seeks your input regarding the scope of the preliminary studies being undertaken by Fraser Surrey Docks LP (FSD) as part of its consideration to amend **Permit No. 2012 - 072**. The proposed amendment would be made to its existing permit that gives it conditional approval to build and operate a Direct Transfer Coal Facility within its existing lease area.

1. **Human Health Risk Assessment (HHRA) completed by SNC-Lavalin Inc. (Environment & Water).**

   An overview of the proposed scope of this study can be found on page 7 in this discussion guide and the original study can be found at www.fsd.bc.ca/amendment

   Please provide comments on the proposed scope of the Human Health Risk Assessment (HHRA) associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

2. **Environmental Impact Assessment (EIA) completed by SNC-Lavalin Inc. (Environment & Water).**

   An overview of the proposed scope of this study can be found on page 8 in this discussion guide and the original study can be found at www.fsd.bc.ca/amendment

   Please provide comments on the proposed scope of the Environmental Impact Assessment (EIA) associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

3. **Air Quality Assessment (AQA) completed by Levelton Consultants Ltd.**

An overview of the proposed scope of this study can be found on page 9 in this discussion guide and the original study can be found at www.fsd.bc.ca/amendment

Please provide comments on the proposed scope of the Air Quality Assessment (AQA) associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

4. **Marine Risk Assessment – DNV (Det Norske Veritas)**

An overview of the proposed scope of this study can be found on page 10 in this discussion guide and the original study can be found at www.fsd.bc.ca/amendment

Please provide comments on the proposed scope of the Marine Risk Assessment associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

5. **Environmental Management Plan (EMP) completed by Soleil Environmental Consultants Ltd.**

An overview of the proposed scope of this study can be found on page 11 in this discussion guide and the original study can be found at www.fsd.bc.ca/amendment

Please provide comments on the proposed scope of the Environmental Management Plan (EMP) associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

6. **Water Management Plan – Omni Engineering Inc.**

An overview of the proposed scope of this study can be found on page 11 in this discussion guide and the original study can be found at www.fsd.bc.ca/amendment

Please provide comments on the proposed scope of the Water Management Plan (WMP) associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

7. **Fire Life Safety Plan - Hatch Mott MacDonald**

An overview of the proposed scope of this study can be found on page 12 in this discussion guide and the original study can be found at www.fsd.bc.ca/amendment

Please provide comments on the proposed scope of the Fire Life Safety Plan associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

8. **Spill Response Plan – Fraser Surrey Docks LP**

An overview of the proposed scope of this study can be found on page 12 in this discussion guide and the original study can be found at www.fsd.bc.ca/amendment

Please provide comments on the proposed scope of the Spill Response Plan associated with Fraser Surrey Docks LP (FSD) proposed application to amend Permit No. 2012 – 072:

9. **Please provide any additional comments you may have regarding the proposed application to amend Permit No. 2012 - 072:**

Please submit your feedback form by May 19, 2015.

Fraser Surrey Docks LP (FSD) will consider your input, along with information provided by technical experts, as part of its consideration to apply for an amendment to Permit No. 2012 - 072.

Please provide your contact information (optional):

Name:

Organization (if applicable):

Role: (if applicable):

Address:

Postal Code:

Email:

Phone:

Any personal contact information you provide to Fraser Surrey Docks LP on this form is collected and protected in accordance with the Freedom of Information and Protection of Privacy Act. If you have any questions regarding the consideration to amend Permit No. 2012-072 Direct Transfer Coal Facility or Fraser Surrey Docks LP and/or the information collection undertaken on this form, please contact Fraser Surrey Docks LP at amendment@fsd.bc.ca.

The deadline to submit feedback is May 19, 2015

You can return completed feedback forms:

Online: www.fsd.bc.ca/amendment

By email: amendment@fsd.bc.ca

By mail: PO Box 2233 Vancouver Main,
Vancouver, BC V6B 3W2

For general project information:

www.fsd.bc.ca/amendment

Phone: 604-891-1695