

**FEEDBACK
FORM INSIDE**
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**FRASER SURREY DOCKS
DIRECT TRANSFER COAL FACILITY**

DISCUSSION GUIDE & FEEDBACK FORM

MAY 13 – June 7, 2013

SECTION 1: BACKGROUND AND LOCAL ECONOMIC BENEFITS

BACKGROUND

Fraser Surrey Docks (FSD) is a multi-purpose marine terminal located on the Fraser River in Surrey, BC. It handles containers, forest products, steel, agricultural products and other items. FSD has been an integral and responsible part of the community since 1962.

FSD's existing business has decreased significantly since 2009 and we are looking for opportunities to serve new customers. As a result, FSD is proposing to construct a direct transfer coal handling facility (the Project) on the existing terminal site and has applied to Port Metro Vancouver (PMV) for approval. The Project would allow FSD to maintain and increase employment opportunities, increase export revenues for BC, and generate other local economic benefits. While pursuing these goals, FSD recognizes its responsibility to protect the local environment and minimize the impact of our operations.

FSD is committed to maintaining a strong relationship with the local community and engaging in an active dialogue regarding the Project.

LOCAL ECONOMIC BENEFITS

FSD has been an active member of the local community for over 50 years. We currently have 230 full-time employees and the Project would allow us to add 50 new high paying jobs to the community. We pay taxes to the City of Surrey and Corporation of Delta, in addition to the provincial and federal governments. Indirectly, we help generate additional employment through suppliers and other companies we do business with on a daily basis. As the only marine terminal located in Surrey, we are an integral part of Canada's gateway to the Asia Pacific and other ports around the world.



COMMUNITY ENGAGEMENT

FSD shared Project information with local residents and businesses, municipal, provincial and federal government staff and elected officials, First Nations, beginning in September 2012. Since then, FSD has conducted over 35 stakeholder meetings. The goal of this outreach is to ensure that Project information is shared and feedback is received and considered. All feedback gathered during Phase 1 consultation has been included in an Engagement Summary Report, which is available on the FSD and PMV websites www.fsd.bc.ca/index.php/company/community-outreach. The feedback received expressed concerns in six key areas:

1. Coal Dust
2. Noise
3. Traffic Impacts
4. Coal Barges
5. Coal Impact on Marine Life
6. Emergency Preparedness

FSD has worked closely with Port Metro Vancouver, local stakeholders, independent environmental and engineering experts, emergency services and our operational partners to address these areas and develop appropriate mitigation measures.

The specific plans are outlined in this discussion guide, starting on page 5.

NEXT STEPS

Subject to approval from Port Metro Vancouver, Project construction would begin in summer 2013 and to be completed in early 2014. FSD will keep the community informed of Project status throughout this period through the FSD website and email for those who prefer that option. Page 4 provides additional detail regarding the expected construction activities and timing.

Any Project questions or comments can be addressed to community@fsd.bc.ca or 604.582.2244. Feedback can also be provided through the feedback form attached to this guide and submitted via e-mail to community@fsd.bc.ca or in person at the upcoming open houses. Questions and comments will be responded to and a summary of feedback received will be available at www.fsd.bc.ca.

OPEN HOUSE DATES:

Sheraton Vancouver Guildford Hotel
15269 104th Avenue, Surrey, BC V3R 1N5

Thursday, May 23rd, 5:30 pm to 8:30 pm
Saturday, May 25th, 1:00 pm to 4:00 pm

Tel: 604.582.2244

Email: community@fsd.bc.ca

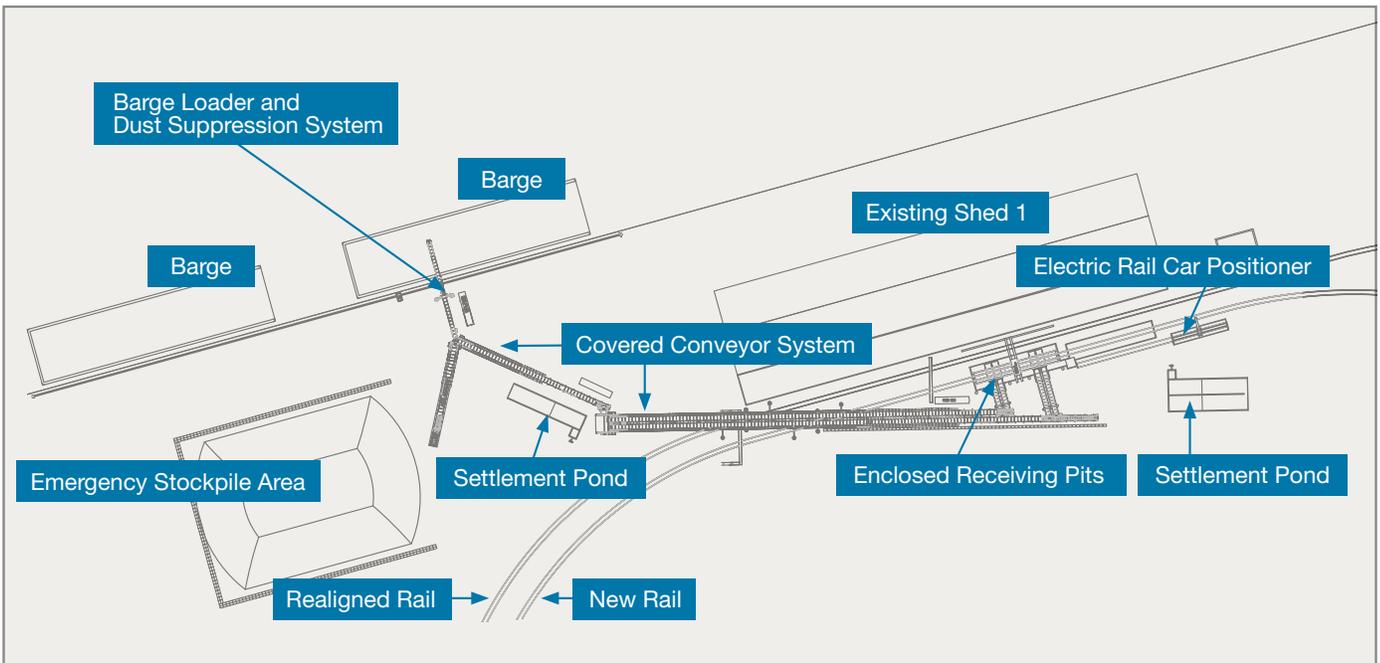
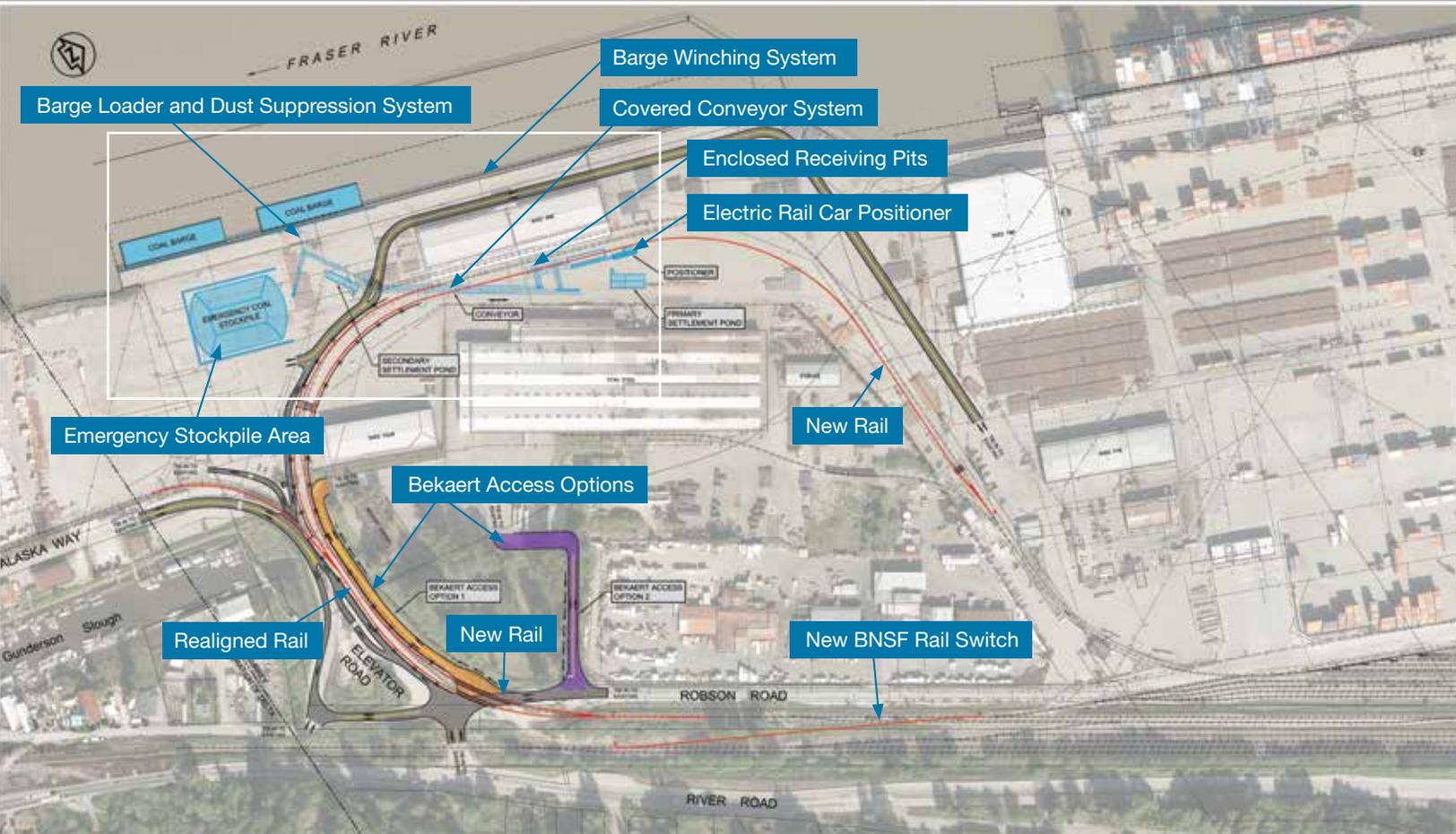
For information about Port Metro Vancouver's project review process, please visit the website www.portmetrovancover.com

SECTION 3: KEY PROJECT FACTS

KEY PROJECT FACTS

- The Project includes installation of:
 - i. approximately 3,250 feet (990 metres) of additional rail track on FSD's existing site and the adjacent Port Authority Rail Yard
 - ii. an enclosed rail receiving shed
 - iii. two coal receiving pits inside the receiving shed
 - iv. a covered conveyor system to transport coal directly from the receiving pits to barges
 - v. a dust control system and water treatment facility
 - vi. an electric rail car positioner
 - vii. a land-based barge winching system
 - viii. once project Volumes reach 2 million metric tons per year, 6,400 feet of new track in the Port Authority Rail Yard
- There will be no coal storage at FSD during normal operations. A small coal stockpile area, approximately 2.47 acres, has been proposed for use in emergency circumstances only. The stockpile area will have a maximum capacity of 30,000 MT and is expected to be used for 48 hours or less at a time.
- There is minimal new in-water equipment required. For proper operation of the barge winching system, we will install approximately 12 new steel piles next to the existing berth face
- The Project is being reviewed by Port Metro Vancouver. This review includes detailed technical and environmental assessments, and public, municipal and First Nations consultation
- If approved, the Project would take approximately eight months to construct and start operating





SECTION 4: CONSTRUCTION PROCESS AND MITIGATION STRATEGIES

PROJECT CONSTRUCTION PROCESS

Should the Project receive a permit, it is expected to be operational approximately eight months after permit issuance. Actual construction activities on the terminal are expected to last approximately six months. During this six-month period the following installation activities will be completed:

- Installation of approximately 3,250 feet (990 metres) of rail track and realignment of approximately 2,040 feet (622 metres) of existing rail on the FSD site and the adjacent Port Authority Rail Yard
- Installation of two bottom dump coal receiving pits and associated concrete foundations inside a new shed enclosure
- Installation of an electric rail positioner and associated concrete rail beam
- Installation of a conveyor system, surge bin and associated support footings and electrical hook ups
- Installation of water treatment concrete weirs, piping and plumbing
- Installation of a barge winching system, including 12 new piles driven along existing berths 2 and 3
- Installation of a concrete containment berm and water spray equipment for the emergency stockpile area
- Relocation of the non-commercial vehicle access gate at Elevator Road
- Reconfigure road access to Bekaert Canada site, in one of two options currently being considered

Once Project volumes reach 2 million metric tons per year, which is expected by the end of the first year of operations, further upgrades to the Port Authority Rail Yard will be made. A portion of the funding for these Port Authority Rail Yard upgrades may be provided by Transport Canada. These upgrades include:

- Installation of 5,600 feet (1706 metres) of new rail track, in two different segments
- Extension of two existing tracks, each by 400 feet (122 metres)

All construction activities will be completed within the guidelines of detailed construction management plans, which will form part of the Project's Environmental Management Plan.

NOISE MITIGATION

- During Project construction, contractors and supervisory staff will be required to take a noise awareness training program that is specifically tailored to the FSD site and surrounding areas.
- Construction activity will take place in accordance with City of Surrey noise bylaws, which require that most activity occur between 7:00 am and 10:00 pm on Monday to Saturday. Generally all construction work will be completed between 7:00 am and 6:00 pm on weekdays only.
- Apart from the installation of the 12 pilings along the berth face, all major construction work will consist of low impact activities with minimal expected noise generation. These activities will generally be excavation, concrete forming and pouring, and assembly of the conveyor system.

PILE DRIVING IMPACT MITIGATION

Pile driving for the 12 new piles is expected to be the loudest construction activity and is expected to last for approximately two weeks. To minimize noise and light impacts, the pile driving will be performed within the guidelines of Best Management Plan for Pile Driving and Related Operations – BC Marine and Pile Driving Contractors Association 2003. Specific mitigation measures include, but are not limited to:

- Use of a vibratory driving process, rather than a hammer process, to reduce noise
- All pile driving will be done during daylight hours eliminating the need for additional lighting
- Coordinate pile driving activities with the Department of Fisheries and Oceans (DFO) to ensure timing and methods minimize impact on marine environment

LIGHT MITIGATION

FSD does not expect to require any additional lighting during the construction process. Should additional lighting ultimately be required, it will use bulbs no brighter than 200 watts, will be focused directly on the equipment being installed and will not be directed to residential areas.

SECTION 5: DUST CONCERNS AND MITIGATION STRATEGIES

1. Coal Dust

STAKEHOLDER CONCERNS

Though FSD's Phase 1 community consultation process, stakeholders have voiced concerns regarding potential coal dust emissions from five primary sources:

1. Coal rail cars in transit to FSD and empty cars going back to the mine
2. Unloading of railcars at FSD
3. Loading barges at FSD
4. Potential coal stockpiling at FSD
5. Coal barges in transit between FSD and Texada Island

MITIGATION STRATEGIES

FSD and our partners have developed mitigation strategies for each of these potential sources.

COAL RAIL CARS IN TRANSIT TO FSD AND EMPTY CARS GOING BACK TO THE MINE

Coal will be transported to FSD with BNSF railcars. In 2012, BSNF transported 2.2 million coal rail cars, many of which came through the Lower Mainland.

Over the last five years, BNSF has undertaken extensive research and development regarding coal rail dust emissions, including trials in which several different mitigation measures have been tested. As a result of its research, BNSF implemented new coal loading requirements, effective October 1, 2011. The requirements include measure be taken to prevent coal dust from being blown out of the loaded car. Approved measures include:

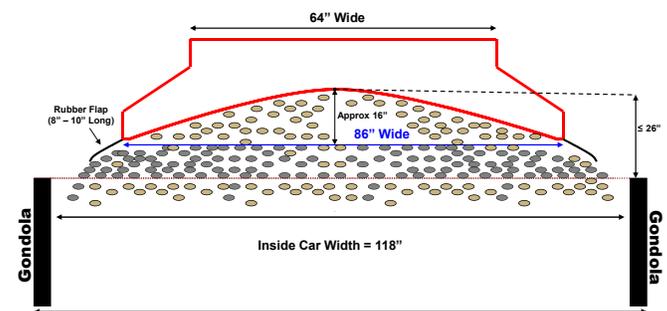
- All coal shipped on BNSF railcars must be covered with a topper coating or surface stabilizer that has been proven through operations to reduce dust releases by at least 85% compared to an untreated train
- All coal shipped on BNSF railcars must be loaded in accordance with BNSF's Load Profile Template, which requires smoothing of the coal such that it is more aerodynamic and less susceptible to loss from wind

BNSF's research and active monitoring have demonstrated that these two approaches have effectively address coal dust emissions from rail cars.

After unloading at FSD, empty rail cars will be sprayed with water to remove any remaining coal dust prior to the return journey.



Application of Topper Coating on BNSF Car



BNSF Load Profile Template



UNLOADING RAILCARS AT FSD

Coal will be unloaded through a series of trap doors that open in the bottom of each rail car and dump the coal from a maximum height of about three feet (just under a metre) into contained shallow receiving pits below the car, in order to minimize potential dust. All unloading will occur in a building with full water misting, which will contain any dust that is emitted through the process. Coal will then be transported via a fully covered conveyor system from the unloading pits to the barge loading conveyor. All transfer points within the conveyor system will be fitted with water spray for added dust suppression.

Throughout construction and the first year of operations, air quality, including potential coal dust emissions, will be monitored through two Met-one air quality measurement stations. After the first year of operations, the monitoring strategy will be assessed and possibly modified depending on initial results.

LOADING BARGES AT FSD

A dedicated barge loading conveyor will be utilized to deposit coal from the on-dock conveyor system to the waiting barge. Potential dust emissions will be minimized through use of:

- A covered loader, with the ability to limit the drop height between the barge loader and the barge surface
- Barge sidewalls to reduce airflow;
- A short direction snorkel, which will be used to reduce coal drop height and related turbulence
- A water spray, as required by weather conditions
- A wind speed gauge and dust monitor on the tip of the barge loader or immediate vicinity, to allow for real-time monitoring of conditions and to facilitate operations shutdown if an issue is detected

POTENTIAL COAL STOCKPILING AT FSD

There will be no coal storage at FSD during normal operations. FSD has made provisions for an emergency coal stockpile area, which will have a capacity of 30,000 MT, and which could only be used for temporary storage after more than six months of successful operation. In the unlikely event of a logistics chain disruption that leads to the temporary storage of coal at FSD, the coal in the emergency storage pile will be loaded onto the barge before any new coal is received at the facility. Under normal operating conditions, coal would be stored within the temporary stockpile area for less than 48 hours. In addition, there are business incentives for all parties to not stockpile coal.

If the coal stockpile area is used for temporary storage, potential dust emissions will be mitigated through:

- A covered loader, with the ability to limit drop height and therefore reduce turbulence
- Equipment to spray water on the stockpile
- Profiling of the stockpile, to limit height, to a maximum of five metres, and eliminate uneven edges that could lead to potential dust emissions
- A 2.3 metre concrete wall around the stockpile area to reduce air flow



COAL BARGES IN TRANSIT BETWEEN FSD AND TEXADA ISLAND

FSD has worked with air emissions experts Levelton Consultants to model potential dust sources from coal barges. Levelton has concluded that air quality impacts are expected to be negligible. Nonetheless, FSD will be employing several dust mitigation techniques for the barges:

- Coal load will be profiled in order to remove uneven surfaces that could catch the airflow more easily and create dust
- Prior to departure from FSD, the coal barge may be sprayed with water if the wind and temperature conditions have created an increased dust risk
- Coal barges will be subject to a speed limitation of 7 knots

To ensure that the risk of coal barge dust is being managed properly, we will implement a barge monitoring program. Two of the barges involved in the Project operations will be fitted with dust monitoring stations. These stations will monitor for potential dust released during the coal loading operations and for dust released during the barge transit from FSD to Texada Island during the first year of operations. After the first year of operations, the monitoring strategy will be assessed and possibly modified depending on initial results.

FSD will be working with Lafarge Canada Inc. who has been successfully operating barges in the Fraser River and Strait of Georgia for over 40 years. Lafarge has extensive experience in handling coal and other bulk products from its existing operations.

PROPOSED BARGE ROUTE



Map intended as overview of routes taken. This map is not to scale nor considered a navigational aid.

2. Noise

Stakeholder concern: excess noise generated by coal operations at FSD

MITIGATION STRATEGIES

Operations noise mitigation strategies:

- All rail movement within FSD and the adjacent Port Authority Rail Yard will be restricted to 3 mph or less
- When being unloaded from the rail cars, the coal will drop three feet or less. This shallow drop height and the shed enclosure around the receiving pits will minimize associated noise
- To avoid unnecessary coupling and de-coupling of rail cars, an electric rail positioner will be used to move the cars through the facility at a consistent speed, rather than using a locomotive which can be prone to noisy stopping and starting
- The new rail is being installed with curvatures of 12 degrees or less to minimize noise caused by steel railcar wheels pulling on steel track when turns are tighter – if excess noise does occur, FSD will install track lubricators to minimize the impact

3. Traffic Impacts

Stakeholder concern: increased coal rail traffic in the Lower Mainland will result in:

- longer vehicle wait times at rail crossings
- more train whistle noise
- reduced emergency services access

MITIGATION STRATEGIES

VEHICLE WAIT TIMES:

FSD is proposing an approximate 10% increase in Surrey rail traffic. Trains are expected to arrive at FSD between 12:00 am and 6:00 am and to depart between 5:00 pm and 10:00 pm, on both weekdays and weekend days. This schedule is anticipated to reduce the potential for increased vehicle wait times because it is outside of heavy road volume periods. FSD previously handled eight train movements per day, including four arrivals and four departures. Currently, FSD is handling two train movements per day and the Project would increase train volume to four movements per day.

TRAIN WHISTLE NOISE:

We are working with specific stakeholders, including BNSF, regarding concerns over train whistles at vehicle crossings and, where possible, we are working with the stakeholders and rail carriers to investigate mitigation strategies.



EMERGENCY SERVICES ACCESS:

BNSF has a policy for providing immediate access at railway crossings during emergency situations. This policy is consistent with the agreement currently in place and which FSD and BNSF have been operating under without incident for more than 50 years. BNSF's operating and emergency access plans are approved and monitored by Transport Canada.

4. Coal Barges

Stakeholder concerns: coal barges in the Fraser River will:

- Lead to an increased potential for marine accidents
- Impacts to fishing

MITIGATION STRATEGIES

MARINE SAFETY CONCERNS

FSD is committed to maintaining safe and environmentally sustainable practices in all of its operations. As members of Green Marine and Climate Smart, we continually monitor our environmental impact and adjust our standard procedures accordingly.

FSD commissioned Det Norske Veritas (DNV) to conduct an assessment of possible marine navigational risks on the Fraser River associated with the coal barge movements. DNV reviewed the navigational impacts of increased barge traffic and evaluated potential risks related to public safety, the marine environment and occupational health and safety. DNV and FSD also conducted a workshop with seven other Fraser River stakeholders to discuss the proposed operations, potential risks and mitigation strategies. Both the DNV model and the Fraser River stakeholders concluded that the proposed barge movements do not present any risk factors that are not already being considered and managed on the Fraser River and that the operations are not expected to create meaningful additional risk exposure.

For existing risk factors that also apply to other Fraser River marine traffic, FSD has worked with DNV and the Fraser River stakeholders to develop a set of mitigation strategies. These strategies include, but are not limited to:

- Only conducting barge operations in low wind conditions
- Utilizing a berth at FSD that is not directly open to the main shipping channel, minimizing the potential for vessel impact
- Using compartmentalised barges, so that a puncture and leak in one compartment does not make the barge inoperable
- Regularly inspecting tug boats and selecting tug boats in accordance with the current weather conditions
- Using barges in which the coal is not stored in the hull, so that a hull puncture would not lead directly to a coal spill
- Ensuring all tug boats and captains are certified by Transport Canada, per normal operation

Many of the barges that are expected to be used in Project operations are already in transit on the Fraser River. These barges are currently travelling empty from the Fraser River to Texada Island. When the Project begins operations, coal would be used as backhaul cargo on the empty barges whenever possible.

CONCERNS REGARDING IMPACTS TO FISHING

The coal barge schedule will be publicly available on FSD's website to provide all Fraser River users with easy access. FSD and its barge operator partner will also monitor designated fishing windows and, where possible, work to schedule traffic around these windows. FSD and its partners, who have been successfully operating on the Fraser River for decades, will review potential barge movement impacts on regular basis and work with stakeholders to help minimize impacts.



5. Coal Impact On Marine Life

Stakeholder concerns: if coal spills or coal dust is released in the Fraser River, could it have a negative impact on the marine environment?

MITIGATION STRATEGIES

FSD will implement multiple strategies to prevent coal from entering the Fraser River and offshore marine waters. These will incorporate a variety of system maintenance, storm water runoff collection, dust control, spill and accident prevention measures. These include, but are not limited to:

- Active dust suppression, primarily with water, throughout the operation
- Storm water runoff collection, treatment and re-use, with no discharge to the Fraser River
- Enclosure of the onsite receiving pits and coal conveyor system
- Having no onsite coal storage during normal operations, except in case of an emergency
- Utilizing barge sidewalls and profiling load to minimize dust potential
- Discontinuing operations during high wind or other weather conditions that could affect operations
- Coal load profiling in order to remove uneven surfaces that could catch the airflow more easily and create dust
- Using compartmentalized barges for added protection against spills
- Daily site cleaning and inspection

FSD is confident that we can largely eliminate the potential of a coal spill or coal dust release with these mitigation measures. However, we recognize that there is the potential for coal to enter the Fraser River or other water. In the water along the proposed barge route, the coal being transported would be considered largely inert and non-toxic. The potential physical and chemical effects, provided by environmental experts Triton Environmental, are noted below.

POTENTIAL PHYSICAL EFFECTS

A spill of coal could temporarily impact water quality as particles could become suspended in the water. Coal particles could also settle onto sediments in slow moving areas (e.g. backwaters). The physical effects of coal would be similar to those of suspended and settled sediments, such as disturbed clay or sand, and, depending on the nature of the receiving waterbody, can include: reduced availability of light, abrasion, smothering, and clogging of respiratory and feeding organs. These effects would be less prevalent in swift moving areas, such as those found along the proposed barge route.

POTENTIAL CHEMICAL EFFECTS

Coal contains metals and Polycyclic Aromatic Hydrocarbons (PAHs) that may affect certain aquatic life under specific conditions. These conditions do not generally exist along the proposed barge route. In the event of coal entering water along the proposed barge route, metals are not expected to negatively affect aquatic life because of the nature of the water in the Fraser River and Strait of Georgia, including the relatively neutral pH, relatively quick moving current and large water volumes. Similarly, PAH are not expected to negatively affect aquatic life in the event of a spill along the proposed barge route. PAH do not readily dissolve in water.

6. Emergency Preparedness

Stakeholder concern: If there is a coal related accident at FSD or during barge transit, what are the emergency response procedures?

MITIGATION STRATEGIES

FSD and our barging partner have worked together and with external advisors to conduct extensive risk assessments and develop detailed emergency response procedures for the Project.

For emergency preparedness at the FSD terminal, we have worked with independent experts RKMS Group and emergency response consultants to ensure that all applicable standards and best industry practices are followed. Example mitigation measures include:

- Belts conveyors equipped with fire taps with valves at regular intervals
- A hose tap at the belt drive area directly upwind of the belt drive
- Fire retardant hydraulic fluids and fire resistant belting

During the construction and start-up phase, and prior to operations start, FSD will engage with the City of Surrey and Corporation of Delta emergency responders to present the Project emergency response plans and make any required or suggested amendments.

For potential marine emergencies, FSD has worked with our barging provider to develop an appropriate emergency response protocol. Lafarge has an existing contract with Quantum Environmental for emergency response preparedness for its existing barge operations. The emergency protocol prioritizes response in the following manner:

1. **Human safety:** ensure the wellbeing of the surrounding public, emergency responders and staff
2. **Containment:** ensure vessel is secure to mitigate further damage or spillage and if relevant, employ containment tactics to surround and recover lost cargo

3. **Assessment:** review shoreline impacts using adapted Shoreline Clean-Up Assessment Tactics, in close consultation with Environment Canada, and review marine impacts in consultation with the Department of Fisheries and Oceans
4. **Cleanup:** following consultation with regulators and other stakeholders, undertake dredge or other clean up operations. This activity would likely be done in collaboration with specialized clean up agencies
5. **Resumption of business for users of the Fraser River:** once it is deemed safe to do so, open route in Fraser River so users can resume business in a timely manner

For a marine accident, depending on the severity, FSD and its barging partner would expect to work with the following agencies on a response.

- Canadian Coast Guard
- Provincial Emergency Program
- Department of Fisheries and Oceans
- Vancouver Traffic Authority
- Port Metro Vancouver
- Environment Canada
- Quantum Murray LP
- Local municipal governments
- Local First Nations groups, land owners and other stakeholders



FEEDBACK FORM

We Would Appreciate Your Feedback

Throughout our Public Engagement process we will compile feedback received and summarize it in an Engagement Summary Report which will be posted online at www.fsd.bc.ca. This report and a thorough review of feedback received will be part of Port Metro Vancouver’s evaluation of the project permit application.

Mitigation During Construction:

- 1. Please share any additional comments that you may have in regards to FSD’s mitigation strategies during construction.**

Noise:

Pile driving:

Lighting:



FEEDBACK FORM

2. If you would like to, please provide your contact information:

Name:

Organization (if applicable):

Address:

Postal code:

Email address:

Phone number:

The deadline to submit feedback is June 7, 2013.

You can return the feedback in the following ways:

Online: <http://www.fsd.bc.ca/index.php/survey>

By email: community@fsd.bc.ca

By mail: 11060 Elevator Road, Surrey BC, V3V 2R7





Being a good neighbour and an environmentally responsible operation means that we'll be reaching out to people and sharing our plans for the future. FSD will ensure that required stakeholders are notified of the project and kept up to date on a regular basis.

For more information, including FAQs, please check out our website at www.fsd.bc.ca/index.php/company/community-outreach or follow us on Twitter at @FSDocks.

Contact:
Brittany Allison
Public Affairs
Tel: 604.582.2244
Email: community@fsd.bc.ca

For information about Port Metro Vancouver's permit review process contact:

Website:
[www.portmetrovancover.com/
projectreview](http://www.portmetrovancover.com/projectreview)