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

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

Reporting

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

<table>
<thead>
<tr>
<th>Potential Shipping Scenarios</th>
<th>Loaded Trains / Year</th>
<th>Loaded OGVs / Year*</th>
<th>Loaded Barges / Year*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current permit approval</td>
<td>320</td>
<td>0</td>
<td>640</td>
</tr>
<tr>
<td>25% shift to OGVs (with proposed amendment)</td>
<td>320</td>
<td>20</td>
<td>480</td>
</tr>
<tr>
<td>50% shift to OGVs (with proposed amendment)</td>
<td>320</td>
<td>40</td>
<td>320</td>
</tr>
<tr>
<td>75% shift to OGVs (with proposed amendment)</td>
<td>320</td>
<td>60</td>
<td>160</td>
</tr>
<tr>
<td>100% shift to OGVs (with proposed amendment)</td>
<td>320</td>
<td>80</td>
<td>0</td>
</tr>
</tbody>
</table>

*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:

<table>
<thead>
<tr>
<th>Project Features</th>
<th>Approved Permit</th>
<th>Proposed Amendment Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume of coal shipped</td>
<td>4 million metric tonnes / year</td>
<td>No change</td>
</tr>
<tr>
<td>Mode of shipping</td>
<td>1,280 barge movements / year based on 640 barge return trips</td>
<td>Use of OGVs to replace some or all barges</td>
</tr>
<tr>
<td>Marine Vessel Loader</td>
<td>14.3 metre (m) outreach (length of boom) from the edge of the berth and a maximum height of 15.0m</td>
<td>27.4m outreach from the edge of the berth and a maximum height of 36.2m</td>
</tr>
<tr>
<td>Receiving pit and building</td>
<td>A fabric building spanning a 17m-in-length bottom discharge pit with 125 tonne surge bin</td>
<td>Metal-clad building; shifted 12m east and 16m south Receiving building and pit dimension stay the same</td>
</tr>
<tr>
<td>Wastewater settling basins</td>
<td>A two-stage primary and secondary settling basin with an approximate capacity of 300 m³</td>
<td>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</td>
</tr>
<tr>
<td>Dust mitigation</td>
<td>Dust mitigation measures meet regulatory standards</td>
<td>Additional dust mitigation through use of closed hatches on OGVs, spraying of empty outbound railcars</td>
</tr>
<tr>
<td>Overall water catchment area</td>
<td>5,340 m²</td>
<td>Decreased to 3,680 m² Estimated to reduce water runoff by 10-15%</td>
</tr>
<tr>
<td>(Facility footprint)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rail tracks</td>
<td>Relocation of the front gate</td>
<td>Adjustments to the rail loop; removal of Shed 4 and no relocation of the front gate</td>
</tr>
<tr>
<td>Jobs</td>
<td>Estimated 20-25 full-time jobs</td>
<td>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)</td>
</tr>
</tbody>
</table>
**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.
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 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](http://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](http://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


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](http://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](http://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.


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:

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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:

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Feedback Form
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](http://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:**

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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](http://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:**

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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:

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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:

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Feedback Form
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](http://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:

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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](http://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:

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

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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