



PORT METRO
vancouver

Fraser Surrey Docks
Direct Transfer Coal Facility

Project Review Report
PP 2012-072

August 15, 2014



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To	Peter Xotta Vice-President Planning & Operations	From	Tim Blair Senior Planner
Cc	Greg Yeomans Acting Director Planning & Development	Date	August 15, 2014
	Lilian Chau Acting Manager, Planning	File	PP 2012-072
Project	Fraser Surrey Docks Direct Transfer Coal Facility		
Applicant	Fraser Surrey Docks	Address	11060 Elevator Road, Surrey, BC, V3V 2R7
Tenant	Fraser Surrey Docks	Level of Review	Planning Review with Consultation

Recommendation	That PMV Project Permit No. 2012-072 to construct a Direct Transfer Coal Facility at Fraser Surrey Docks be Approved subject to the identified conditions.
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1 SCOPE OF PROJECT REVIEW

The Vancouver Fraser Port Authority (VFPA), doing business as Port Metro Vancouver (PMV) conducted a review of the Fraser Surrey Docks (FSD) Direct Transfer Coal Facility Project (the Project) in accordance with its requirements to manage Port activities and development as described by the *Canada Marine Act*.

Only the portions of the proposed Project located on PMV managed land and within PMV's Navigational Jurisdiction are subject to this review. This includes the terminal boundary of Fraser Surrey Docks, the Port Authority Rail Yard (PARY), and the Fraser River from the terminal site to Sand Heads, approximately 10 kilometres to the west of Steveston, BC.

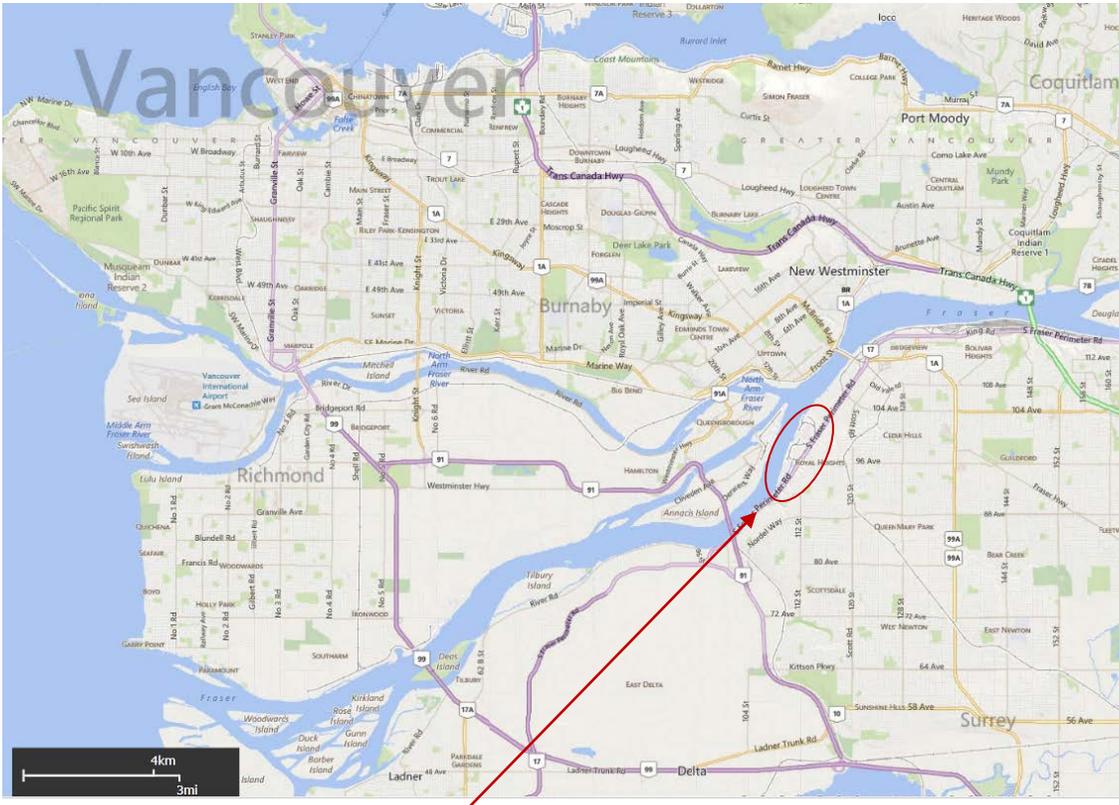
The level of review of this Project corresponded to the scope of the proposal, including its potential impacts. This review ensured that the proposed new development and ongoing activities met applicable standards, established best practices and minimize environmental and community impacts. This included review of numerous studies and plans and consultation with various parties including adjacent municipalities, residents, tenants, community groups, elected representatives, and other Federal, Provincial, and regional agencies. A summary of the technical review is described in Section 4 of this Project Review Report (the Report).

Feedback received through the consultation process, including First Nations input was considered as part of the technical Project Review Process and environmental review. A summary of the consultation process, comments, and responses, is described in Section 5 and 6 of this Report.

A summary of the environmental review conducted for the proposed Project is described in the *Environmental Review Decision Statement*, attached to this Report.



2 PROJECT SUMMARY



Fraser Surrey Docks terminal, Surrey

Fraser Surrey Docks (FSD) is a multipurpose marine terminal located on the Fraser River in Surrey, British Columbia, handling containers, bulk agricultural, and breakbulk commodities. FSD has submitted a Permit Application to Port Metro Vancouver (PMV) for the development of a Direct Transfer Coal Facility to handle the export of up to four million metric tonnes (MMT) of coal per year.¹ Direct Transfer means that transshipment of the product is proposed to be direct from land to water, without being stockpiled at the terminal.

Thermal coal, graded as sub-bituminous, is proposed to be delivered by rail from Wyoming or Montana in the United States (Powder River Basin) to the FSD terminal and loaded directly onto 8,000 dead weight tonne (DWT) barges at Berths 2 and 3. Once loaded, tugs are proposed to tow barges down the Fraser River and then north to an existing facility operated by Lafarge Canada Inc. (Lafarge) on Texada Island in the Georgia Strait. At Texada Island, the commodity will then be loaded into deep-sea vessels for export to international markets. Barges will be towed from the FSD terminal by the marine carrier (Lafarge), only when wind speeds do not exceed 40 km/h. Tows may be in tandem in the Georgia Strait leg of the trip. During peak capacity of movement of

¹ The Proponent has indicated an interest in increasing throughput up to eight million MT later, perhaps after four or five years. This Project Permit review considers only the four MMT maximum. PMV has stated that any increase beyond that amount would require a new, full environmental review and Project Permit.

four MMT per year, the frequency of tandem tows in the Georgia Strait leg would be one tow per day.

Rail traffic is proposed to be up to 320 coal trains annually via the Burlington Northern Santa Fe (BNSF) Railway. This translates into up to one rail delivery per day by BNSF, which would consist of a unit train between 124 and 135 cars in length. The train would be broken into parts for circulation around the loop track and through the dumper using an electric indexer. Each train will require two barges for transport to the facility on Texada Island.

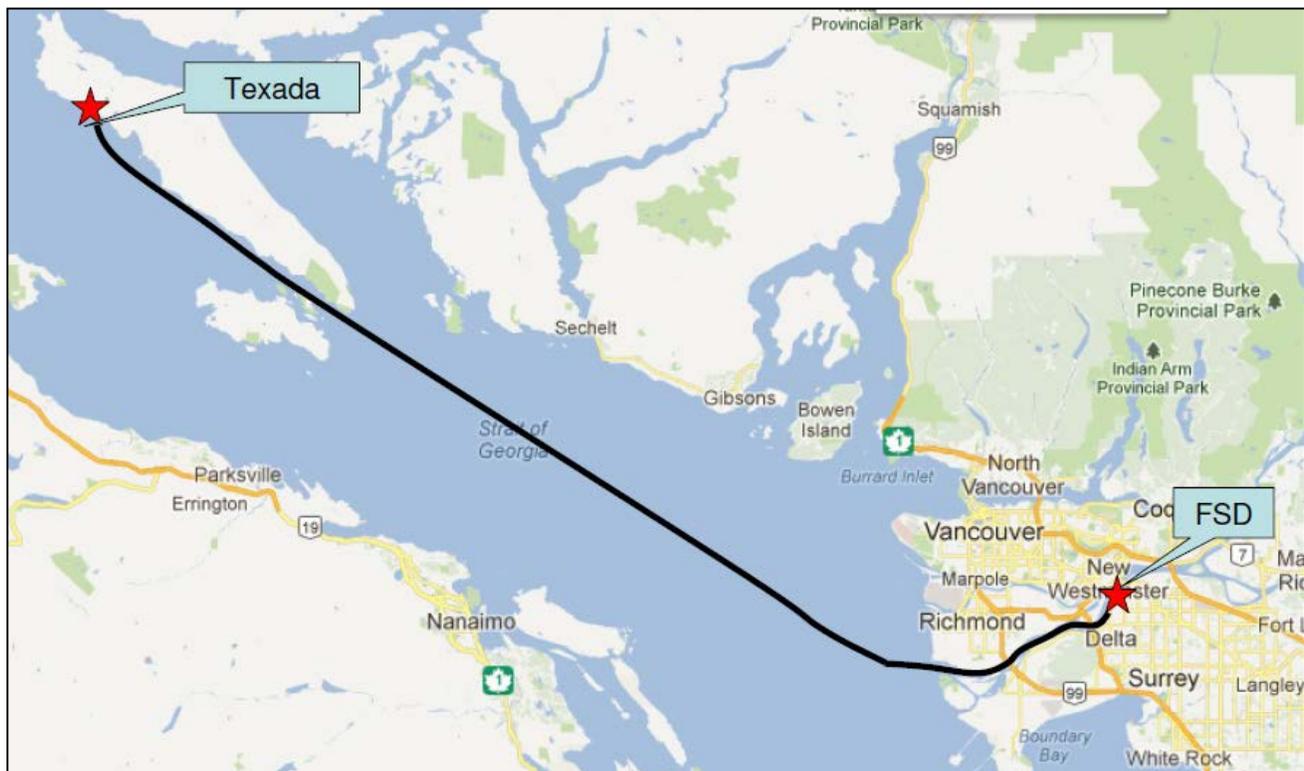
Specifically the proposed operations at the terminal are to occur as follows: the commodity will arrive by train and the cars will be unloaded using a bottom-dump mechanism into an open ended covered shed/receiving pit. The commodity will then be conveyed to the barges on fixed electric belts via a surge bin and transferred by a slewing barge loader (a pivoting conveyor) with an adjustable spout for direct loading into the barges. During loading, a binding agent or dust suppressant will be applied to the commodity as it is conveyed from the dumper to the berth face and barges. The conveyor systems are proposed to be covered but not enclosed. Barges and rail cars will not be covered but will be sprayed by a dust suppressant. Coal is not proposed to be stockpiled at the terminal.

The proposed operating hours of the Direct Transfer Coal Facility will be during normal working hours between 8:00 am to 4:30 pm, however there may be operations occurring between 4:30 pm to 1:00 am and 1:00 am to 8:00 am. FSD has committed to posting on their website 48 hrs in advance of any working periods that will be conducted outside of normal dayshift hours. FSD currently operates over 24 hours, 7 days a week.

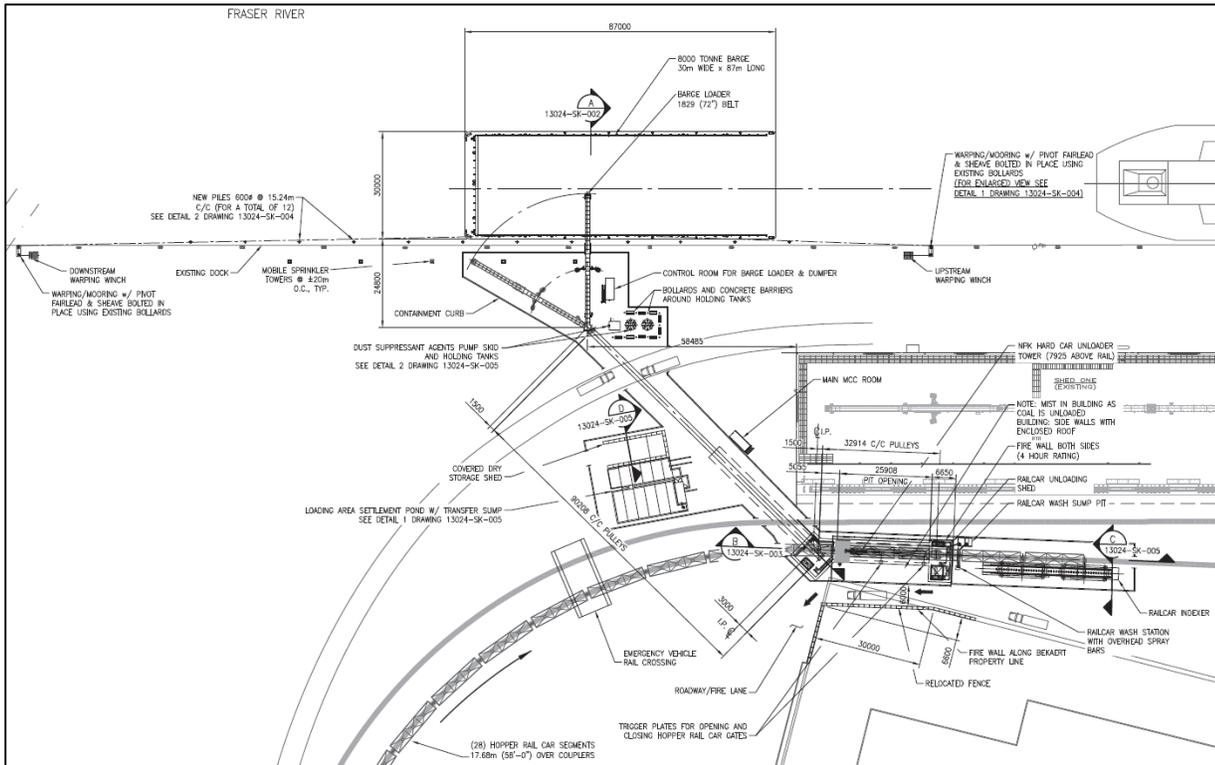
The proposed infrastructure developments at the terminal to support the Direct Transfer Coal Facility consist of the following:

- Installation of new rail track and realignment of existing track within the FSD lease area, across an adjacent PMV roadway, and within the Port Authority Rail Yard (PARY) to the east of the terminal;
- Construction of a new coal receiving/unloading facility including a receiving pit for unloading bottom-dump rail cars, conveyor systems and associated structures and enclosures;
- Construction of a new barge loading system at FSD Berths 2 and 3, including conveyors, a snorkel loading system, 12 new fender piles (steel pipe piles), and a land-based barge winching system;
- Construction of a new covered conveyor system between the new unloading and loading facilities;
- Installation of dust suppression systems along the unloading, loading and conveyor systems;
- Site drainage management systems to capture and treat site runoff for reuse on site or prior to offsite discharge (sanitary sewer discharge is proposed) as well as construction-related excavation dewatering;

- Construction necessary to mitigate certain potential adverse environmental effects associated with the Project, including installation of monitoring equipment, riparian restoration and planting, and development of new riparian fish and wildlife habitat to mitigate the effects of streamside construction associated with the Project;
- Relocation of existing non-commercial vehicle access gate at Elevator Road vehicle entrance;
- Realignment of existing Bekaert Canada access from Elevator Road to Robson Road;
- Removal of the Data Audit Industries truck scale and fencing the remaining area;
- Relocation of portions of Elevator Road to the south west;
- A fire suppression system;
- Lighting on all structures; and
- Installation of any necessary utility connections.



General Marine Route from the proposed Direct Transfer Coal Facility at FSD to Texada Island



Site plan of proposed Direct Transfer Coal Facility at FSD

3 PROCESS OVERVIEW

The Project Review for the proposed FSD Direct Transfer Coal Facility was conducted over three distinct phases. The phases spanned from June 2012, when the application was submitted by FSD, to August 2014, when all technical reviews and consultation activities were completed. The table below provides the general timeline and summary of major activities during each phase.

June 2012 to May 2013	
Phase 1 - Initial Review of Proposed Project	
<i>Timeframe</i>	<i>Major Activities</i>
June 2012	<ul style="list-style-type: none"> • Submission of Project Permit application package • PMV Project Permit technical review begins
Sept 2012	<ul style="list-style-type: none"> • Application considered sufficiently completed for consultation
Oct 2012	<ul style="list-style-type: none"> • Phase 1 Public, municipal, stakeholder and First Nations consultation begins • FSD conducts mail drop to surrounding community • PMV sends consultation packages and notices
Nov 2012 – Jan 2013	<ul style="list-style-type: none"> • PMV reviews and considers feedback received through consultation
Feb 2013	<ul style="list-style-type: none"> • FSD revises scope and design of Project (i.e. road and rail realignments, engineering design, and mitigation measures).
March 2013	<ul style="list-style-type: none"> • PMV requires FSD to conduct additional public consultation in response to feedback from Phase 1 consultation, the revised scope and proposed mitigation measures
Throughout Phase 1	<ul style="list-style-type: none"> • PMV technical review • PMV and FSD meets with municipalities, regional agencies, stakeholders and First Nations • PMV and FSD responds to questions and concerns
May 2013 to September 2013	
Phase 2 - Review of Revised Project Scope and Proposed Mitigations	
<i>Timeframe</i>	<i>Major Activities</i>
May 2013	<ul style="list-style-type: none"> • Phase 2 Public, municipal, regional agencies, stakeholder and First Nation consultation begins • FSD hosts two public open houses in Surrey with revised Project scope, how they addressed concerns raised during Phase 1 consultation, and proposed mitigation measures. • PMV sends consultation packages and notices
June – July 2013	<ul style="list-style-type: none"> • All feedback reviewed and considered • FSD and PMV meet with municipalities, regional agencies, stakeholders and First Nations • FSD and PMV respond to question and concerns • PMV technical review is on-going
Aug 2013	<ul style="list-style-type: none"> • PMV requires FSD to address public and technical concerns raised during Phase 2 about potential for fugitive dust emissions from the terminal and along the supply chain. In particular, FSD was requested to: <ul style="list-style-type: none"> ◦ Work with its rail provider to address the issue of potential dust migration from rail cars in a manner that is consistent with the best practices employed by other rail carriers into the Port; ◦ Revise its proposal by employing other measures in the supply chain to remove the necessity to have a temporary stockpile on site; and



	<ul style="list-style-type: none"> ○ Revise its proposal to ensure that coal dust does not migrate from the barges at the terminal and along its route to its destination • PMV required FSD to prepare an updated Project scope and description including revised drawings and supporting information • PMV required FSD to undertake an Environmental Impact Assessment (EIA), specifically including the effects of the Project on human and ecological health
Throughout Phase 2	<ul style="list-style-type: none"> • PMV technical review • PMV and FSD meets with municipalities, regional agencies, stakeholders and First Nations • PMV and FSD respond to questions and concerns
September 2013 to August 2014	Phase 3 - Review of Environmental Impact Assessment (EIA) and Human Health Risk Assessment
<i>Timeframes</i>	<i>Summary of Major Activities</i>
September 2013	<ul style="list-style-type: none"> • PMV announces additional requirements for FSD to revise their Project scope and to undertake an EIA
Oct 2013	<ul style="list-style-type: none"> • FSD submits draft EIA with revised Project scope for review • Phase 3 consultation activities begin, starting with a 15 –day interagency review period on the draft EIA
Nov 2013	<ul style="list-style-type: none"> • FSD submits a revised EIA for review and consultation • The 30-day comment period on the submitted EIA begins • PMV initiates a third party review of the submitted EIA
Dec 2013	<ul style="list-style-type: none"> • Phase 3 consultation on the EIA ends
Jan 2014	<ul style="list-style-type: none"> • PMV considers comments received on the EIA • PMV's third party review identifies deficiencies in the revised EIA. In particular, further assessment is required to address the potential effects of the proposed Project on human health • PMV requires FSD to conduct further assessment to address potential human health effects
Feb 2014	<ul style="list-style-type: none"> • PMV provides an update to municipalities, agencies, stakeholders, First Nations and the public on the status of the EIA review and need for additional assessment of potential effects of the Project on human health • PMV indicates there will be no further consultation on the proposed Project
April 2014	<ul style="list-style-type: none"> • FSD submits refined engineering designs • PMV requests that FSD conduct an Archaeological Overview Assessment (AOA) as the revised design includes excavation of a dumper pit to depths below native soils
July 2014	<ul style="list-style-type: none"> • FSD submits a Human Health Risk Assessment (HHRA), updated Air Quality Assessment (AQA) and AOA for PMV review
Aug 2014	<ul style="list-style-type: none"> • PMV receives report from third party review of HHRA and AQA • PMV completes review of the proposal, including the HHRA, AQA and all other technical requirements, considers the feedback from consultation, and prepares the recommendation for executive decision

4 INTERNAL REVIEW

The following sections of the report outline the comments and conditions required from specific PMV Departments who were involved in the technical review of the proposal. Many of the conditions require further actions, either prior to commencement of construction, prior to

operation of the facility, or once the works are operational. Several conditions require the creation of operations or monitoring plans. A full list of conditions is detailed in the Project Permit.

4.1 PLANNING REVIEW

The Planning group coordinated the technical review and PMV consultation activities and review with the following functional areas: Environmental Programs, Real Estate, Engineering, Transportation Planning, Marine Operations, and Community and Aboriginal Affairs.

Land Use Designation

Planning has reviewed the proposal, and confirmed that the proposed uses are permitted under the current designation of "Port Terminal" in the Vancouver Fraser Port Authority Land Use Plan.

Operational Activities

Given the significant concerns around the potential for fugitive dust impacts on surrounding communities, in addition to environmental mitigation measures for dust as conditions of the Permit, FSD must also submit an Operations Management Plan. The Operations Management Plan must be prepared and submitted for review prior to commencement of operations, and include details of dumper operations, rail car washdown, spraying of water and binding agents, barge loading and towing, and shutdown procedures.

FSD has committed to work with the City of Surrey Fire Department during final design and commissioning stages to solicit feedback and ensure that the final site layout is considered acceptable to Emergency Response providers.

Construction Activities

Due to the potential for construction noise to be generated by the proposed works, as a condition of the Permit, the proponent must ensure any construction activities do not exceed the limitations as stated in adjacent municipal noise by-laws of the City of Surrey, Delta and New Westminister. Should FSD request construction hours or noise limits outside of the limits in the municipal noise by-laws, they must receive approval from PMV and will include additional notification to area residents and the adjacent municipality.

FSD prepared a Construction Communications Plan to guide communications activities during the construction phase of the Project in order to ensure residents have a means of contacting the terminal in case of concerns. This plan includes the requirement for notification to adjacent residents prior to commencement of construction, and establishes terminal contacts in case of community concern. The plan was reviewed and is considered acceptable. Adherence to the plan is a condition of the Permit.

Building Permit

A Building Permit is required for the proposed Rail Receiving Shed and Electrical Control Rooms. An approved Building Permit is required prior to construction of the Shed and Control Room. This is a condition specified in the Project Permit. As of this date, FSD has not yet submitted a complete Building Permit package for review related to those structures.

The Planning Department has reviewed the application and is recommending to the Project Review Committee approval of this Project subject to the conditions stated in the Project Permit.

4.2 ENVIRONMENTAL PROGRAMS

As a federal authority under the *Canadian Environmental Assessment Act 2012* (CEAA 2012), PMV must assure itself that Projects it authorizes do not result in significant adverse environmental effects. The proposed Project is not a CEAA 2012 designated Project and a federal environmental assessment as described in CEAA 2012 is not required. Nevertheless, PMV authorization is required for the Project to proceed and in such circumstances, Section 67 of CEAA 2012 requires federal authorities to assure themselves that the Project will not result in significant adverse environmental effects. PMV Environmental Programs completed an environmental review for the proposed Project to provide assurance under Section 67.

PMV Environmental Programs assessed the potential environmental impacts from the proposed Project. Biophysical and socio-economic components were considered in the environmental review, including fish and fish habitat, vegetation, wildlife and wildlife habitat, surface water quality, including storm water management, soil and groundwater quality, air quality and fugitive dust, economic effects, traffic, lighting, noise and employment, heritage and archaeological resources, risks to human health, navigable waters, and cumulative environmental effects that could result from the proposed Project.

In addition, the detailed assessment and mitigations discussed in the *Environmental Impact Assessment* (EIA) and *Human Health Risk Assessment* (HHRA) prepared by the proponent have been reviewed by PMV. These documents form part of the application and were considered in the review of the project. For details of the environmental review, please refer to the companion *Environmental Review Decision Statement*, and the third party reviews of the human health and air quality components of the submissions, conducted by Golder Associates Ltd. on behalf of PMV.

Environmental Programs has reviewed the application and taken into account the relevant information available on the Project and has determined that with the implementation of appropriate mitigation measures, and subject to adherence with the conditions attached to the Permit, the Project is not likely to cause significant adverse environmental effects.

4.3 REAL ESTATE

FSD currently has a lease which permits the handling of bulk commodities including coal at the terminal. The proposed works require minor changes to the lease area boundary, related to the additional loop track which partly extends outside of the existing southern boundary of the site where it abuts Elevator Road.

Minor modifications are also required for some of the adjacent tenancies to address the relocation of vehicular access, the removal of the adjacent truck scale, and other road and rail modifications that are proposed as part of the Project. FSD is required to remove the truck scale as a condition of the Permit.

During the construction period, FSD will require a temporary tenure arrangement for making improvements to Elevator Road and other related works. This requirement is a condition of the Permit.

Real Estate has no concerns with the Project at this time.

4.4 ENGINEERING

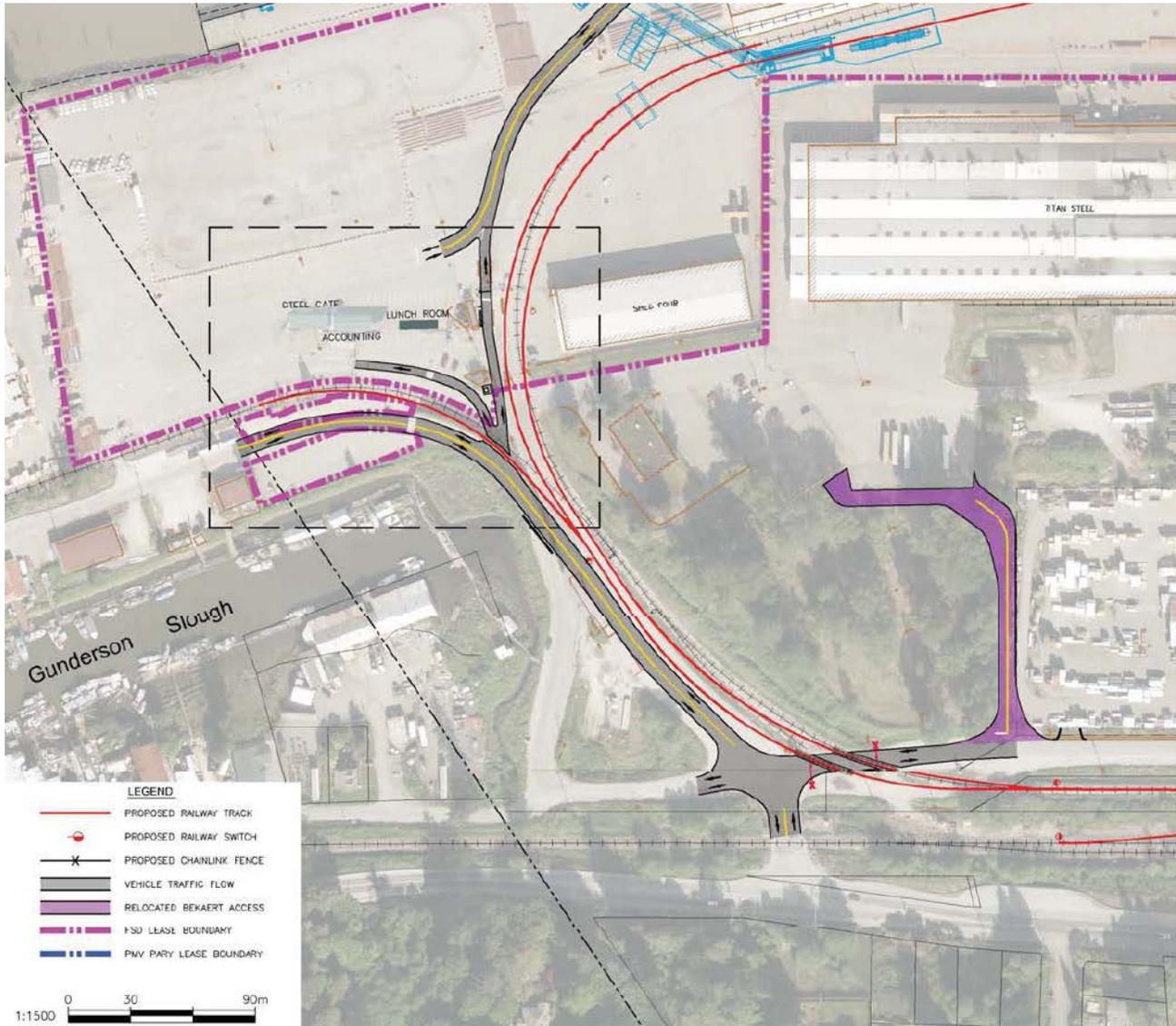
PMV Engineering has reviewed all Project plans and drawings, including site grading, trackage, excavation schematics, and utility drawings, the Water Management Plan, the Excavation and Dewatering Management Plan. PMV Engineering also reviewed the road and rail access and traffic from the perspective of potential impacts to local infrastructure.

Specific conditions relating to submission of final engineered design plans, submission of an updated Fire Code Report, adherence to the Coal Transfer Facility Fire Safety Plan, and confirmation of wheel loading related to the barge loader have been included as conditions of the Permit. In addition, FSD is also required to complete a survey documenting the pre and post construction condition of the adjacent Bekaert Canada building to the south. As this Project also includes works to areas that are outside of the terminal footprint (lease area), specific as-built drawing submission requirements have been included in the Permit.

The Engineering Department has reviewed the application and supports approval of the Project.

4.5 TRANSPORTATION PLANNING

PMV Transportation Planning has reviewed the proposed road, rail, parking and access issues related to the proposed Project.



FSD proposed road realignment, rail reconfigurations, and revised vehicular access points

Proposed Rail Traffic

For an annual coal volume of two MMT during Year 1 of the Project, FSD is proposing rail traffic up to 160 coal trains annually via the Burlington Northern Santa Fe (BNSF) Railway. This translates into one rail delivery every two days by BNSF, consisting of a unit train between 124 and 135 cars in length.

For an annual coal volume of four MMT during Year 2-5 of the Project, FSD is proposing rail traffic up to 320 coal trains annually via the Burlington Northern Santa Fe (BNSF) Railway. This translates into up to one rail delivery per day by BNSF, consisting of a unit train between 124 and 135 cars in length. The train would be broken into parts for circulation around the loop track and through the dumper using an electric indexer. Each train will require two barges for transport to the facility on Texada Island.

PMV commissioned a study completed by MainLine Management and MMM Group in October 2012 to analyze the impacts to rail and crossing road traffic generated by the proposal. The report confirmed that there will be no significant conflict between existing rail traffic servicing FSD's current bulk agricultural and container business, and vehicular traffic. The report also looked at the proposed increase in rail traffic and concluded it will not result in significant conflict. Should rail volumes increase beyond four MMT, this crossing point will require additional examination.

Proposed Rail Reconfigurations

FSD proposes an additional rail track crossing of Robson Road, just north of the intersection with Elevator Road. This changes the current single track at-grade crossing to a dual track crossing. As a result of this additional track, and anticipated planned changes to Elevator Road where it intersects with the South Fraser Perimeter Road in 2015, there will be additional vehicle traffic and potential opportunity for conflict at this crossing point.

The anticipated crossing volumes, while not a concern to PMV with respect to traffic delays, will result in required improvements to the crossing of Robson Road, including flashing beacons and bells, in order to comply with recently updated Transport Canada requirements. The additional rail crossing (modification of this crossing at the south west end of the loop track from a single to a double crossing) as well as the federally mandated safety improvements is the responsibility of the proponent. Included in the permit is a condition that requires FSD to submit a detailed design for this proposed crossing, to the satisfaction of PMV and BNSF, which meets federal safety and maintenance requirements for this at-grade crossing.

Rail carriers operating in Canada are not permitted to block level public road crossings for more than 5 consecutive minutes. PMV has confirmed with the municipalities of Surrey and Delta that emergency response protocols are in place to break up trains should there be an emergency that causes a level crossing to be blocked along the rail lines proposed to be used for this Project. These are existing protocols which are anticipated to continue to function at their normal level.

Proposed Road Realignment

FSD is proposing to realign Elevator Road to the south to accommodate an additional loop track from the Port Authority Rail Yard (PARY) into the FSD terminal. The realignment narrows Elevator Road, and creates a new vehicle circulation regime at the head of Gunderson Slough. This requires the removal of the truck scale. DAI, the operator of the scale, has consented to this removal, and the complete removal of the scale is a condition of the Permit.

Proposed Relocation of Vehicular Access Points

The proposed rail reconfiguration required the relocation of the vehicular access point for the Bekaert Canada site from Elevator Road on the south, to another point on the north side. Further changes to vehicular access may be warranted, as the result of the closure of Elevator Road, which prevents a connection to the South Fraser Perimeter Road. These changes are anticipated to occur by February 2015. PMV will be leading the resolution of the alternative access road alignment. This issue requires resolution before FSD can submit engineer stamped plans detailing the proposed road modifications related to the Project.

The rail reconfiguration also requires FSD to realign and relocate the current truck gate access from Elevator Road. The relocation of structures related to the truck gate is proposed as part of the Project.

Proposed Parking

FSD has adequate existing parking at two gate lots within the terminal footprint for the increased number of employees proposed for the project. In the unlikely event that these two locations are unable to accommodate staff and visitor parking requirements, FSD maintains two overflow lots located at Plywood Road off Robson Road, and at Shed 6 off of Timberland Road. The terminal is required to provide adequate off-street parking to meet the requirements of its employees and visitors.

4.6 MARINE OPERATIONS

Marine operations reviewed potential marine traffic impacts and safety issues related to this Project.

Proposed Barge Traffic

FSD is proposing to use standard barge stock with open tops and steel perimeter walls, with a capacity of 8,000 dead weight tonnes (DWT).

For the annual coal volume of two MMT during Year 1 of the Project, FSD's proposed barge movements would consist of 320 single-formation, fully-loaded barge tows, with approximately two tows every second day from the terminal to the mouth of the Fraser River. From the mouth of the Fraser River to Texada Island, barge movements would consist of 160 tandem-formation, fully-loaded barge tows, with approximately one tow every second day. Empty barge movements would be transiting in a similar fashion as loaded barges.

For an annual coal volume of four MMT during Years 2-5, FSD's proposed barge movements would consist of 640 single-formation, fully-loaded barge tows, with approximately two tows each day from FSD to the mouth of the Fraser River. From the mouth of the Fraser River to Texada Island, barge movements would consist of 320 tandem-formation, fully-loaded barge tows, with approximately one tow each day. Empty barge movements would be transiting in a similar fashion as loaded barges.

The stated goal of the proponent is to use existing barges which currently call at aggregate facilities nearby on the Fraser River, and make a return trip down the river and north on Georgia Strait empty. Reloading the vessels for a return to the mine site at Texada Island effectively allows the transport of this commodity without additional marine traffic on the Fraser River beyond what currently exists. The implementation of this practice is dependent on market conditions and availability of additional barges and is not a Permit condition. Should this practice not be practical or achievable on a permanent basis, the proposal would not result in additional marine traffic significant enough to be a concern to PMV Marine Operations.

Marine Risk Assessment

FSD was required to submit a Marine Risk Assessment outlining in detail the proposed marine movements anticipated when the Project is at full capacity, and outlining mitigations that should be followed in order to reduce navigational risks. FSD submitted the Risk Assessment Study for Coal Barge Operation, dated September 26, 2012, completed by Det Norske Veritas (DNV). Marine Operations has reviewed this assessment and has no navigational concerns with the proposed Project, provided that the proposed mitigation measures as outlined in the assessment are adhered to.

These mitigations include:

- Tugs to be inspected at regular intervals
- Tugs selected in accordance with current weather conditions and barge load characteristics
- Proposed 8,000 DWT barges are compartmentalized
- Tugs will conduct monthly fire drills and have fire suppression equipment
- Barge Operations will not be conducted in high wind conditions

Submission of written confirmation that the mitigation measures outlined in the DNV Assessment will be implemented and maintained throughout the life of the Project is a condition of the Permit. Given the overall increase in commercial and deep-sea traffic on this section of the Fraser River, Marine Operations also requested that the proponent be advised that PMV reserves the right to prioritize or manage marine traffic at a future date. This is included as a Permit condition that does not require action, but serves as formal notice.

Spill Response

The proponent has provided both a Spill Response Plan for the terminal, and a Spill Response Plan used by the barge operator, Lafarge, that is applicable for the marine route taken in transit to and from the terminal. The spill response plans address spills of coal or fuel, as well as general procedures in the event of an accident. Canada Shipping Act regulations apply to the transport of coal by barge, which is handled no differently than other bulk aggregate materials such as gravel or sand. Implementation and maintenance of the two spill response plans noted here are conditions of the Permit.

The annual maintenance dredging of the berthing areas at this terminal is currently the responsibility of PMV. Potential product spills during loading operations could affect the ability of this dredged material to be sold as bulk sand or disposed offshore. Development and implementation of a monitoring program that will include semi-annual sampling of sediments along the berth is therefore included as a Permit condition, to ensure that additional costs to dispose of this material are not incurred by PMV, should they arise in the future.

Any significant spill that occurs in the navigation channel would require dredging and disposal. PMV requires that the proponent bear the full cost of disposal of this material. A Permit condition to address this has been included.

Marine Operations has reviewed the application and supports approval of the Project.

5 CONSULTATION

Planning and Community & Aboriginal Affairs Departments reviewed the proposal and identified there may be potential impacts to adjacent communities, stakeholders (tenants), municipalities and First Nations during the construction and operations of the Project. Therefore, it was determined that public, municipal, stakeholder and First Nations consultation was required as part of the Project Review Process.

Overview of Consultation Activities

This section provides a summary of the consultation activities according to each phase. Detailed responses and comments by First Nations, municipalities and regional agencies, stakeholders and the public are described in sections 5.1 to 5.4. The summary of consultation with Provincial and Federal agencies as part of the environmental review is provided in the attached *Environmental Review Decision Statement*.

Phase 1 Initial Review of Proposed Project

FSD submitted a Project Permit application in June 2012, which was reviewed for completeness. FSD was subsequently asked to submit additional information on the Project. The application was considered sufficiently complete in September 2012 to initiate consultation activities.

FSD conducted their first round of public consultation in October 2012, which consisted of notifying adjacent residents of the project by targeted mail, and posting of project details to their website. PMV sent consultation packages and notifications to key municipalities adjacent to the project site and along the proposed marine route in the Fraser River, and to First Nations at the same time. In November 2013, supplementary studies from FSD were sent to municipalities and First Nations for their review and comment.

PMV also met and gave presentations on the Project Review Process to municipal staff, councils and committees and responded to public questions and concerns. FSD also met with municipalities and community groups and individuals on the proposed Project. All Project documentation and information were posted on PMV and FSD's website for public review and comment.

Partly in response to expressed municipal and community interest for more public consultation during Phase 1, and revisions made by FSD to the project in early 2013, FSD was asked to conduct a second round of consultation in March 2013.

Phase 2 Review of Revised Project and Proposed Mitigations

The second phase of consultation included two public open houses held by FSD in May 2013. The consultation was focused on FSD's revised Project scope (revisions to road and rail realignment, engineering design) and proposed mitigation strategies to address coal dust, noise, traffic impacts, coal barge impacts, potential coal impact on marine life, and emergency preparedness.

Previously consulted municipalities, stakeholders and First Nations were provided with consultation packages and notifications during this phase. Additional municipalities, and regional agencies such as Metro Vancouver and local health authorities, and Members of Parliament (MPs) and Members of the Legislative Assembly (MLAs), who expressed a strong interest in the proposed Project during Phase 1, were also consulted as part of Phase 2.

PMV and FSD continued to meet with municipalities, regional agencies, stakeholders and First Nations to provide information and to answer questions regarding the Project Review Process and

the proposed Project. FSD continued to meet with community and industry groups. Public responses continued to be logged and both PMV and FSD responded to questions from the public via email and telephone. All Project documentation related to Phase 2 consultation activities were posted to PMV and FSD's websites.

Feedback during Phase 2 consultation activities raised concerns about the potential for fugitive dust emissions from the terminal and along the supply chain. As a result of these comments and to satisfy PMV technical requirements, in August 2013 PMV requested FSD to incorporate additional mitigation measures into their proposed Direct Transfer Coal Facility Project.

These included the following:

- o Work with its rail provider to address the issue of potential dust migration from rail cars in a manner that is consistent with the best practices employed by other rail carriers into the Port;
- o Revise its proposal by employing other measures in the supply chain to remove the necessity to have a temporary stockpile on site; and
- o Revise its proposal to ensure that coal dust does not migrate from the barges at the terminal and along its route to its destination.

PMV also required FSD to prepare an updated Project scope and description including revised drawings and supporting information, as well as undertake an Environmental Impact Assessment (EIA), specifically including the effects of the Project on human and ecological health.

Phase 3 Review of Environmental Impact Assessment & Human Health Risk Assessment

In September, 2013 notifications were sent to all interested parties regarding PMV's requirements for FSD to revise their Project scope and undertake an EIA. FSD submitted a draft EIA for review in October 2013.

PMV invited Metro Vancouver, the two regional health authorities, as well as provincial and federal agencies to review the draft EIA during a 15-day agency review period held from mid-October to mid-November, 2013. FSD further revised the EIA in mid-November 2013, and the document was posted to the PMV website for public review and comment during a 30-day public comment period concluding on December 17, 2013. All documentation related to the EIA consultation was posted on PMV's website. A summary of the public comments received through the EIA consultation will be posted to the website in a document titled *EIA Public Comments Response Memorandum*.

Through the feedback received during the EIA consultation, including comments from the regional health authorities, and PMV's technical review, it was identified that additional information was required around the assessment of the potential effects of the proposed Project on human health.

As a result, in January 2014 FSD was asked to conduct additional work to address these issues and subsequently undertook a Human Health Risk Assessment (HHRA). In February, a Project update was provided to municipalities, agencies, stakeholders, First Nations and the public. PMV also indicated that there would be no further consultation on the proposed Project. Consultation on the HHRA was not undertaken as it was considered to be supplemental information to satisfy PMV's technical requirements.

In July 2014, having completed the additional assessment, FSD submitted a final HHRA for review. In August 2014, PMV received a report from Golder Associates Ltd., a third party reviewer of the HHRA, and completed its internal review of this study and supporting documents, and all other aspects of the Project Review Process.

During this last phase of consultation, FSD and PMV continued to correspond with municipalities, regional agencies, stakeholders and First Nations to provide information and to answer questions related to the Project Review Process and proposed Project. Public comments continued to be logged and responded to as appropriate. Relevant final documents related to the proposed Project will be posted on PMV's website after a decision has been made on the Project.

5.1 First Nations Consultation

Planning and Aboriginal Affairs reviewed the proposal to identify whether it necessitated consultation with First Nations. A Pre-Consultation Report was completed and approved by the Manager of Planning and the Manager of Aboriginal Affairs, and it was determined that the duty to consult was triggered. PMV led the First Nations consultation activities on the proposed Project.

Consultation activities included sending referral and information packages, response letters and emails to First Nations, in addition to meetings with First Nations to provide an overview of FSD's proposed Project and PMV's Project Review Process, and an opportunity to hear concerns from First Nations about the potential impacts of the Project on Aboriginal and Treaty rights. First Nations were also encouraged to attend the FSD-led public open house held in May 2013 during Phase 2 of consultation. PMV provided participation funding to ten First Nations, upon their request, to support the review of the Project. All letters and enquiries from First Nations were considered and responded to by PMV.

Scope of Consultation

The Project falls within the asserted traditional territories of the following First Nations:

- Musqueam Indian Band
- Tsleil-Waututh Nation
- Katzie First Nation
- Semiahmoo First Nation
- Sto:lo Tribal Council
- Sto:lo Nation
- Hwilitsum First Nation
- Hul'qumi'num Treaty Group
 - Cowichan Tribes
 - Halalt First Nation
 - Stz'uminus First Nation
 - Penelakut First Nation
 - Lyackson First Nation
 - Lake Cowichan First Nation

The Project also falls within the traditional territory of the Tsawwassen First Nation and lies within their Fishing Area, Migratory Bird Area, and Wildlife Area as defined in the Tsawwassen First Nation Final Agreement.

The Project is also located in the Aboriginal Communal Fishing Licence area of Qayqayt First Nation.

Consultation Activities

All First Nations listed above were consulted in the following three phases:

Phase 1

In October 2012, PMV sent initial referral packages regarding FSD's proposed Direct Coal Transfer Facility to First Nations for their review and comment. The package included a Project description, an explanation of PMV's environmental review and Project Review Process, and related ortho-photos, maps, and reports, followed in November 2012 with a supplemental package of additional material to First Nations for their review and comment.

Phase 2

In May, 2013, in response to First Nation, municipal and community interest for further consultation, PMV sent a second complete referral package to First Nations containing updated documentation on the Project in May 2013, as well as an invitation to attend FSD's open houses. The consultation period was extended and comments from First Nations were again requested.

Phase 3

In November 2013, PMV sent an update on the Project to First Nations. The update included a link to the EIA, and requested comment. In April 2014, PMV sent a follow-up letter to First Nations, advising them that the EIA review was still underway and that a human health risk assessment would also be required of the proponent.

First Nations' Comments

Comments provided by First Nations during consultation included concerns regarding impacts to air quality and marine habitat due to coal dust, increases in rail and vessel traffic, spill response, opportunities for employment and revenue/benefit sharing, as well as concerns regarding potential impacts to archaeological resources as a result of construction. First Nations concerns are specifically addressed as follows:

Impacts Due to Coal Dust

Concerns regarding environmental and human health due to coal dust have been addressed through FSD's EIA and HHRA, respectively. PMV has also included multiple conditions in the Permit that address management of dust emissions during construction and operation.

Rail and Vessel Traffic Increase

PMV is of the view that the anticipated increases in rail and vessel traffic will not result in significant adverse impacts to Aboriginal and Treaty rights, however FSD has proposed communicating anticipated barge traffic via notifications to First Nations.

Spill Response

Concerns regarding emergency and spill response are addressed through FSD's Environmental Management Plan, which includes a Spill Response Plan.

Employment and Revenue/Benefit Sharing

PMV will not be requiring that FSD provide revenue/benefit sharing or opportunities for employment to First Nations, however FSD have indicated that they are prepared to discuss First Nations access to employment with the BC Maritime Employers Association.

Archaeology

In May 2014, PMV advised First Nations that, in consideration of their archaeology concerns, PMV had directed FSD to conduct an Archaeological Overview Assessment (AOA) due to refinements to the Project design that extended the Project's depth of excavation beyond fill and into native soil.

First Nations were informed that the AOA would provide the Project team with recommendations with respect to the likelihood of impacting any archaeological resources.

The AOA results deemed the potential for both the presence and impacts to archaeological resources to be low. No further archaeological study was recommended, however to adequately address First Nations concerns, PMV has required that a Chance Find Procedure be drafted and adhered to as a Permit condition in the case that suspected archaeological resources are encountered during construction.

There are no outstanding issues in regards to First Nations' consultation comments.

Conclusion

Based on the record of consultation and the responses provided to First Nations, the Manager of Aboriginal Affairs has reviewed the record of consultation and is of the view that the duty to consult has been fulfilled.

5.2 Municipal & Regional Agency Consultation

Planning and Project Communications reviewed the proposal and determined that municipal consultation was required as part of the Project Review Process given that the proposed Project would require the use of municipal roads and services, and have the potential to have dust, noise and light impacts on surrounding communities and along the marine transit route.

Scope of Consultation

The proposed Project was referred to adjacent municipalities that may be potentially impacted by the Project. The municipalities identified included the City of Surrey, New Westminster, Richmond and the Corporation of Delta who are within 1 km of the terminal, or along the proposed marine transit route in the Fraser River from the terminal site to Sand Heads, approximately 10 kilometres to the west of Steveston, BC.

Additional municipalities such as Vancouver, Burnaby, White Rock, and regional agencies such as Metro Vancouver, Fraser Health Authority, and Vancouver Coastal Health who expressed a strong interest in the Project during Phase 1, were included in consultation activities during latter phases.

Consultation Activities and Summary of Comments

PMV led municipal consultation activities on this proposed Project, although FSD also conducted their own municipal and agency consultation as part of their engagement program. For full details of FSD's consultation activities, please refer to FSD's Phase 1 and Phase 2 Engagement Summaries, which are posted on the PMV website.

In general, consultation activities included sending consultation and information packages, notifications, response letters and emails, and meetings with staff, Councils and regional agencies. The following sections include a high-level summary of the concerns raised by municipalities and regional agencies. For details as to how FSD and PMV responded to municipal, stakeholder, public, First Nations and technical concerns raised during the Project Review Process, refer to Section 6 of this Report.

Phase 1

In October 2012, PMV sent consultation packages and notifications on the proposed Project to City of Surrey, New Westminster, Richmond and the Corporation of Delta for their review and

comment. The package included a Project description, an explanation of PMV's environmental review and Project Review Process, and related ortho-photos, maps, and reports. This was followed in November 2012 with a supplemental package of additional studies (FSD's *Air Dispersion Model* and *Fire Safety Plan*) for their review and comment.

Between January and February 2013, PMV and FSD met with municipal staff and attended Council meetings at Surrey, Delta, and New Westminster. PMV and FSD also presented to the Transportation and Infrastructure and Environmental Advisory Committees of the City of Surrey, and the Environmental Advisory Committee of City of New Westminister. In March 2013, PMV also met with Metro Vancouver, Fraser Health Authority and Vancouver Coastal Health to provide information about the Project Review Process and to receive comments and feedback on the proposed Project.

Between September 2012 and May 2013, FSD also met separately with Mayors, Councils and representatives from Surrey, Delta, New Westminister, Richmond, White Rock, Langley, Coquitlam and Metro Vancouver. FSD also met with elected provincial and federal representatives.

PMV received comments from the City of Surrey, Delta, New Westminister, Vancouver, White Rock, the City of Langley, Metro Vancouver, Fraser Health Authority and Vancouver Coastal Health Authority. The main concerns were around air quality, coal dust, rail and marine traffic, rail crossing impacts, noise, visual impacts, spill response, scope of public consultation, the Project Review Process and general concerns related to climate change, global warming and the export of coal.

Phase 2

In April 2013, PMV announced the requirement for FSD to conduct additional public consultation on their revised Project scope, how they addressed concerns raised in Phase 1, and proposed mitigation strategies.

In May 2013, PMV sent consultation packages to the City of Surrey, New Westminister, Delta and also Metro Vancouver, Fraser Health, and White Rock, who had expressed an interest and provided comments during Phase 1. They were also invited to attend FSD's two public open houses held in Surrey. The packages included updated Project plans and scope, studies, mitigation summary and public open house materials for review and comment.

FSD met with municipal representatives on their proposed Project throughout this phase. PMV met with Metro Vancouver and Fraser Health and Vancouver Coastal Health to discuss the Project Review Process and the proposed Project.

During Phase 2, PMV received comments from the City of Surrey, Delta, New Westminister, White Rock, Metro Vancouver, Sunshine Coast Regional District, Fraser Health / Vancouver Coastal Health. The main concerns continued to be around air quality, coal dust mitigation and monitoring strategies at the terminal and along the rail line, rail traffic, the Project Review Process and requests for a public hearing, and FSD to conduct an EIA and Health Impact Assessments. Comments in support of the Project were also submitted by the District of Sparwood and the City of Kamloops.

In August 2013 PMV requested FSD to revise their project scope and submit an EIA for review.

Phase 3

In September and October 2013, PMV notified City of Surrey, Delta, New Westminster, Richmond, White Rock, and Fraser Health of the requirement that the proponent revise the Project scope, and to submit an EIA to address the effects of the Project on human and ecological health.

In mid-October, 2013 FSD submitted a draft of the EIA for review and comment. In late October 2013, PMV hosted a meeting with government agencies and FSD. PMV invited a number of agencies having an interest in the proposed Project including Fisheries and Oceans Canada, Environment Canada, Health Canada, Transport Canada, Ministry of Forests, Lands and Natural Resource Operations (MFLNRO), Fraser Health, Vancouver Coastal Health, and Metro Vancouver. Of the invited agencies, Transport Canada, MFLNRO, Vancouver Coastal Health and Metro Vancouver participated in the meeting.

A 15-day agency review period on the draft EIA was held from late October to mid-November 2013. Technical comments were received from Metro Vancouver, MFLNRO and Fraser and Vancouver Coastal Health Authorities.

In November 2013, PMV sent notification letters to the City of Surrey, Delta, New Westminster, White Rock, and Richmond notifying them of the 30-day public comment period on the EIA. The notification included a link to the EIA, and requested comments by mid-December. A summary of the provincial and federal agencies consulted on the EIA and their feedback are included in the companion *Environmental Review Decision Statement*.

During the EIA consultation phase, comments were received from the City of Surrey, Delta, New Westminster, Richmond, Burnaby, Vancouver, Langley, White Rock, the Sunshine Coast Regional District and BC Parks. Metro Vancouver and Fraser Health/ Vancouver Coastal Health also submitted additional comments. The main concerns expressed in the letters continued to be around air quality at the terminal and along the rail line, deficiencies in the scope of the human health effects assessment, the lack of consultation under the Project Review Process, rail traffic impacts and rail crossing volumes, and marine traffic.

In February 2014, PMV sent an update to the Cities of Surrey, Delta, New Westminster, Richmond, Burnaby, Langley, Vancouver, White Rock, the Sunshine Coast Regional District, and Kamloops, on the review of the EIA and that during the course of the review, the assessment of the potential effects of the Project on human health was identified as an area requiring additional information. Subsequently, FSD conducted a Human Health Risk Assessment (HHRA) to address these concerns. As the information was considered to be supplemental to the EIA in order to satisfy PMV's technical requirements, additional consultation was not undertaken.

Throughout 2014, several submissions were received from the Corporation of Delta and the newly formed Independent Interagency Review Committee (consisting of representatives from the City of Surrey, Delta, New Westminster, Richmond, White Rock, and Fraser Health, Vancouver Coastal Health, Metro Vancouver, and Office of Kerry-Lynne D. Findlay, MP, Delta-Richmond East). The submissions related to concerns around potential health effects, the review process, and requests that PMV delay the decision until the Committee completes a separate review of the proposal.

Conclusion

Based on the record of municipal and regional agency consultation, PMV is of the view that the consultation for the proposed Project was thorough, is complete, and that all relevant comments received have been considered in the review.

5.3 Stakeholder Consultation

Planning reviewed the proposal and determined that consultation with key tenant stakeholders that may be impacted by the proposed Project was required as part of the Project Review Process.

Scope of Consultation

The proposed Project was referred to tenants who were identified as stakeholders as they may have adjacent operations and/or may be impacted by the proposed road and rail realignment proposed at Elevator Road. Consultation was conducted with Bekaert Canada, International Forest Products (Interfor), Western Cleanwood, Data Audit Industries (DAI), Global Rigging and Transport, and BC Trucking Association (BCTA).

Consultation Activities

PMV led consultation activities with tenant stakeholders occurred throughout various phases of consultation and included sending consultation and information packages, notifications, invitation to open houses, response letters and emails, and meetings with stakeholder representatives. FSD also attended tenant stakeholder meetings with PMV. In some cases, consultation was completed at different phases with each stakeholder, as resolutions were found to logistical issues related to vehicular access, site design and truck movements.

As part of their Phase 1 and Phase 2 consultation activities, FSD also met separately with and provided information about their proposed Project to a wide variety of additional stakeholders that included PMV tenants, employee unions, industry associations and rail companies.

Summary of Comments

The proposed rail reconfiguration required the relocation of the vehicular access point for the Bekaert Canada site from Elevator Road on the south, to another point on the north side. The proposed vehicular access on Robson Road has been found acceptable to Bekaert Canada (who have since vacated the site in March 2014) and Western Cleanwood, who is an adjacent tenant to the proposed alternative vehicular access.

Given that access to Elevator Road is likely be closed by February 2015, further changes to the proposed Bekaert vehicular access may occur depending on PMV's resolution of an alternative access road alignment for Elevator Road. Formal submission of engineer stamped plans detailing the proposed road modifications to be submitted by FSD, will be dependent on PMV's resolution of an alternative access to Elevator Road for surrounding tenants.

Interfor was consulted on the Project as their current operations are immediately adjacent to the proposed Project. In meetings with Interfor, they expressed some concerns regarding dust mitigation for the Project; however, their main concern was related to the provision of an alternative access to Elevator Road. They had no other concerns related to FSD's proposed road improvements and rail realignment on Elevator Road, and did not provide formal comments on the proposed Project.

DAI was consulted on the Project as the proposed road and rail realignment would have an impact on their existing truck scale located on Elevator Road. Impacts to the truck scale changed throughout the consultation phases, as FSD revised their Project scope and engineering designs. As the result of the revisions to the proposed Project, the truck scale will need to be removed entirely to accommodate the new road and rail realignment. DAI has agreed to the removal of the

truck scale, with the condition that FSD removes the truck scale and bears the full cost of the removal. This has been included as a condition of the Permit.

BCTA was consulted on the proposed modifications to the truck gate and impacts to the truck scale. They had no major concerns with the proposal.

Global Rigging and Transport was consulted on the Project as their existing water lot lease to the south of the terminal is adjacent to the proposed barge loading and transit area for the Project. They had no concerns with the proposal.

5.4 Public Consultation

Planning and Project Communications reviewed the proposal and determined that public consultation was required as part of the Project Review Process given that the proposed Project may have the potential to have dust, noise and light impacts on surrounding communities and along the marine transit route. FSD led specific public consultation activities throughout Phase 1 and 2. PMV led the public consultation for Phase 3 for the review of the EIA.

Scope of Consultation

The scope of public consultation was identified to be residents within 1 km of the proposed project site that may be potentially impacted by noise, light, dust, view and traffic impacts proposed by the Project. As public interest grew, comments were also submitted from residents outside of the consultation area, as well as other parts of British Columbia, Canada and internationally. Various MPs and MLAs also submitted letters summarizing concerns expressed by their constituents.

PMV reviewed and considered all public comments received and provided individual responses where appropriate. Comments received were also copied to FSD for their review and response as appropriate.

Consultation Activities and Summary of Comments

The following section describes the public consultation activities conducted during each phase, the number and type of responses, and a high level summary of major comments received. For full details of FSD's public consultation activities, please refer to FSD's Phase 1 and Phase 2 Engagement Summaries. For details as to how FSD and PMV responded to concerns raised during the Project Review Process, please refer to Section 6 of this Report, and FSD's *Mitigation Summary Table*, attached.

Phase 1

In October 2012, FSD began consultation activities with residents within one kilometer (1 km) of the terminal site whom may be potentially impacted by the proposed Project. FSD sent 3,200 newsletter notifications to residents in the City of Surrey, Delta, and New Westminister. The newsletter provided information about the proposed Project and included contact information for both FSD and PMV. The same information was also posted on FSD and PMV's websites.

During this phase, FSD also met with community groups and associations such as Quayside Community Board, Crescent Beach Property Owners Association, and Kids for Climate Action. FSD also met with MPs and MLAs to discuss the proposed Project and hear constituent concerns.

By December 2012, FSD received seven phone and email inquiries and comments; six requested additional information and one expressed concerns about coal dust.

Between November 2012 and April 2013, PMV received approximately 815 emails and letters stating their opposition to the proposed Project. A significant portion of the comments were in a form letter or email. The comments expressed concerns related to the environmental affects of coal dust and general concerns related to climate change, global warming and coal as a commodity. They also requested PMV either deny or delay issuance of the permit until further consultation on the Project took place. PMV also met with an opposition group to discuss their concerns around climate change and PMV's Project Review Process.

During this same period, PMV received 390 letters and emails in favor of the proposed Project and the trade of coal in general. A significant portion of these comments were in a form letter or email.

PMV also received letters from the MP representing Burnaby-New Westminster, and MLA representing Surrey-White Rock summarizing the concerns of their constituents. These letters indicate concerns regarding the health impacts of coal dust, impacts to rail infrastructure and increased whistling, and requests for a public hearing and further public consultation on the Project.

In March 2013, partly in response to expressed interest for more public consultation and revisions made by FSD to the Project in early 2013, FSD was asked to conduct a second round of consultation to address feedback and concerns received from Phase 1 consultation activities.

Phase 2

In May 2013, FSD began the second phase of public consultation with notifications and two public open houses held in Surrey. The consultation was focused on FSD's revised Project scope (revisions to road and rail realignment, engineering design) and proposed mitigation strategies to address concerns related to coal dust, noise, traffic impacts, coal barge impacts, potential coal impact on marine life, and emergency preparedness that were raised during Phase 1 consultation activities. All information related to the open houses were posted on PMV and FSD's websites.

Given the high level of interest from the community, FSD sent notifications to a wider area in the surrounding community. FSD sent a total of 8,900 notifications regarding the two open houses to residents in the City of Surrey, New Westminister and Delta. The open houses were also advertised five local community newspapers in Surrey, Delta and New Westminister.

Materials provided at the open house included a Discussion Guide and Feedback Form, along with presentation boards outlining the proposal, and information on the potential impacts and proposed mitigations during construction and operation. FSD staff, consultants and representatives from BNSF and Lafarge answered questions on the proposed Project. PMV staff attended the open houses and answered questions related to the Project Review Process.

185 people attended the two open houses. FSD received 52 feedback forms and 51 letters, emails and phone calls. Representatives from the City of Surrey and Delta attended. The feedback received from the open houses mainly expressed concerns related to dust and air quality, noise, marine traffic safety, vehicle traffic impacts, emergency response and marine environment impacts.

In late May 2013, PMV and FSD participated in a Town Hall meeting on the proposed Project hosted by the City of New Westminister. The panel of speakers included FSD and representatives from Fraser Health, New Westminister Environmental Partners and Metro Vancouver. PMV attended

as observers and responded to questions from the panel and audience about the Project Review Process and status of the application. FSD presented on the proposed Project and answered questions from the audience. Approximately 200 people attended the Town Hall meeting. Most of the concerns raised were similar to the feedback from the open house. There were also a few comments in support of job creation and trade.

Between May and November 2013, PMV received approximately 190 emails and letters expressing significant concern with the proposal. Comments were related to impacts of coal dust on human health and the environment, increased rail and marine traffic, and noise. In May 2013, PMV also received four petitions from groups opposing the Project and any coal transfer through local communities. PMV received the following petitions: Petition A – approximately 987 signatures, Petition B – approximately 430 signatures, Petition C – approximately 260 signatures, Petition D – approximately 39 signatures. PMV also met again with an opposition group to discuss their concerns around climate change and PMV's Project Review Process. General comments were also received related to the shipping of US coal through Canada, global warming and climate change.

In August 2013, as the result of comments received during consultation and to satisfy PMV technical requirements, PMV requested FSD to incorporate additional mitigation measures at the terminal and along the rail corridor into their proposed Project and revise their Project scope to remove the proposed stockpile. PMV also required FSD to prepare an EIA specifically including the effects of the Project on human and ecological health. PMV publically announced the requirement for an EIA in September 2013.

Phase 3

In November 2013, consultation on the EIA began. The 30-day public comment period ran from mid-November to mid-December. All information related to the proposed Project and EIA were posted on PMV's website for review and comment.

During the EIA public comment period, PMV received approximately 3,600 letters and emails. A significant portion of the comments were form letters and emails expressing concern with the proposal. A portion of the comments were also from community organizations, opposition and environmental organizations, school boards, health associations, universities and unions on behalf of their memberships.

PMV also received two petitions signed by approximately 5,800 and 3,835 individuals respectively, opposing the FSD Project, and demanding both a public hearing and a comprehensive Health Impact Assessment. Signatories to the petition were mostly local residents of Surrey, White Rock, and Delta. A few signatories were from locations beyond the local area and outside of Canada.

The public comments received during the EIA consultation period included concerns related to impacts to air quality, marine habitat, waterways and wildlife, and human health, concerns regarding dust, noise, light, rail and marine traffic, contingency planning, terminal capacity and site plan. There were also concerns raised regarding process, particularly the Project Review Process, scope of consultation, First Nations consultation and incorporating advice of health experts. There were also specific comments on the scope of the EIA, and sections and findings of the assessment. Feedback on more general concerns, similar to those expressed in earlier phases was also received. These were related mainly to coal as a commodity, the exporting of US coal, climate change, global warming, and community health over economic profits.

Although the majority of comments received were in opposition, there were also comments in support of the proposed Project. Several organizations such as Chambers of Commerce, industry, unions, and other associations wrote in favor of the proposed Project.

Once a decision has been made on the Project, PMV will post to the website a detailed public response to comments received during the EIA 30-day public comment period (*EIA Public Comments Response Memorandum*).

Although the formal consultation period for Phase 3 closed on December 17, 2013, PMV received an additional 19 emails expressing concerns with the FSD proposal.

Based on the record of public consultation, PMV is of the view that public consultation for the proposed Project was thorough, is complete, and that all relevant comments received have been considered in the review.

6 SUMMARY OF PERMIT CONSIDERATIONS

PMV has reviewed all concerns raised during the consultation process, and are satisfied that the mitigations proposed by FSD and the revisions made to their proposed design, in combination with the conditions that are attached to the Permit, adequately address the major technical concerns raised throughout the consultation process.

General topics such as PMV's jurisdiction, climate change, global warming, coal as a commodity, and the export of coal, is outside the scope of the Project Review. These topics have been previously responded to during the review process and are summarized in a Frequently Asked Questions (FAQ) document which is available on PMV's website.

Below is a table detailing the major concerns raised, mitigations proposed by FSD and PMV's technical requirements and conclusions for the proposed Project. In case of any conflicts between requirements noted in the below table and in the Project Permit, the latter shall prevail.

For a detailed summary of FSD's proposed mitigations, please refer to FSD's *Mitigation Summary Table*, attached to this Report.

Major Concerns	FSD Proposed Mitigations & Commitments	PMV Requirements & Conclusions <i>* Denotes that this is the subject of a Permit condition</i>
Air Quality / Dust from Barges	<ul style="list-style-type: none"> • Barges are not to be loaded or depart from the terminal when wind speed exceeds 40 km/hr. • Additional binding agents to be added to the coal during loading onto barge. • Application of water via spray to the barges while at berth, as required. • "Profiling" of the coal loaded onto the barge to reduce "windage" and potential for fugitive dust during transit on the marine route. 	<ul style="list-style-type: none"> • Submission of an Operations Management Plan detailing how coal binding agent, barge water spraying, and rail car water washdown will be managed, to the satisfaction of VFPA.*



<p>Air Quality / Dust from Terminal</p>	<ul style="list-style-type: none"> • Prepared a Construction Communications Plan outlining steps to be taken to minimize impacts during construction phase of the Project. • Use of a comprehensive water based dust suppression system. • Grading the construction site in phases, to minimize fugitive dust generated on the site, if grading done in periods of dry or windy weather. • Implement vehicle speed restrictions to minimize dust generated on site. • Observe industry best practices with respect to application of dust suppression water sprays to the construction site. 	<ul style="list-style-type: none"> • Adhere to the Construction Communications Plan dated August, 2014, to the satisfaction of VFPA.* • Submission of an Air Quality Management Plan prior to the commencement of operation, to the satisfaction of VFPA.* • Submission of an Operations Management Plan detailing how coal binding agent, barge water spraying, and rail car water washdown will be managed, to the satisfaction of VFPA.*
<p>Air Quality / Dust from Trains</p>	<ul style="list-style-type: none"> • Binding body agent applied to the coal as it is processed at the mine site. • Binding topping agent applied to the coal after it is loaded into the rail car. • Loaded rail car “profiled” at the mine site to minimize “windage” and potential for fugitive dust in transit • Empty coal cars sprayed prior to leaving the terminal on the return trip to the mine site. • Commitment from BNSF to establish and use a re-spray station at the mid-point between the mine and terminal sites. 	<ul style="list-style-type: none"> • Submission of an Operations Management Plan detailing how coal binding agent, barge water spraying, and rail car water washdown will be managed, to the satisfaction of VFPA.*
<p>Archaeological Materials</p>	<ul style="list-style-type: none"> • Conducted an Archaeological Overview Assessment (AOA) due to the excavation required, which indicated there was low potential for presence and impacts to archaeological resources. 	<ul style="list-style-type: none"> • Required an Archaeological Overview Assessment. • Chance Find Procedures to be submitted to PMV and adhered to in the case archaeological resources are encountered during construction.*
<p>Road Traffic</p>	<ul style="list-style-type: none"> • Proposal will not have impacts to road traffic beyond the construction phase, with the exception of up to 25 additional employees accessing the site. 	<ul style="list-style-type: none"> • PMV concluded that there is no significant road traffic generated by the proposed Project, and that the measures to manage construction and operational traffic are adequate to address concerns raised to date. • FSD can provide adequate on-site employee and visitor parking spaces to accommodate peak employment levels.
<p>Rail Traffic</p>	<ul style="list-style-type: none"> • BNSF unit trains servicing the site are to average 132 cars in length, and be no more than 135 cars in length. 	<ul style="list-style-type: none"> • Engines on trains connected to the indexer are not necessary for propulsion while on the terminal, and



	<ul style="list-style-type: none"> • Rail movement on site will be provided by an electrically operated indexer. • Engines servicing the terminal are to be equipped with anti-idling technology. • Traffic contemplated by this Project does not exceed rail traffic generated by this terminal at the height of historic throughput in 2007. 	<p>will be operated using anti-idling technology.</p> <ul style="list-style-type: none"> • Traffic contemplated by this Project does not exceed rail traffic generated by this terminal at the height of historic throughput in 2007.
Road/rail crossing risk & Emergency Response	<ul style="list-style-type: none"> • Submitted confirmation that protocols between Emergency Service Providers and BNSF exist and are recognized to be effective by affected municipalities. 	<ul style="list-style-type: none"> • PMV separately confirmed that existing emergency protocols with Delta and Surrey Emergency Service Providers are effective and in good standing. • Rail safety issues and concerns around crossing safety are not PMV responsibility, and may be addressed by Transport Canada.
Vessel Traffic & Safety	<ul style="list-style-type: none"> • Prepared a Marine Risk Assessment. • Use of compartmentalized barges. 	<ul style="list-style-type: none"> • Submit confirmation that the mitigation measures outlined in the Risk Assessment Study for Coal Barge Operation will be implemented during ongoing operations over the life of the Project.*
Spill Response	<ul style="list-style-type: none"> • Prepared a Spill Response Plan for both the terminal and barge operator detailing actions in case of any marine incident. 	<ul style="list-style-type: none"> • Maintain a current marine Spill Response Plan on behalf of the barge operator.*
Terminal Operation Noise	<ul style="list-style-type: none"> • Rail and unloading facilities are designed to minimize noise from daily operations. 	<ul style="list-style-type: none"> • Take appropriate steps to prevent adverse noise impacts to wildlife and the surrounding community during operation.*
Construction Noise	<ul style="list-style-type: none"> • Construction hours are limited to those regulated by City noise by-laws. • Construction to be conducted during daytime hours only, with no work on Sundays. 	<ul style="list-style-type: none"> • Construction hours and noise emissions will be restricted to meet the standard set out in the City of Surrey, Corporation of Delta, and City of new Westminster Noise Bylaws.* • Construction notices and communications shall be provided to nearby property owners and other stakeholders in accordance with the Construction Communications Plan.*
Scope of Public Consultation	<ul style="list-style-type: none"> • Conducted Public consultation in relation to the scope of the Project and as directed by PMV, including open houses, mail drops, maintenance of a website, and associated outreach to the public and neighbourhood 	<ul style="list-style-type: none"> • PMV conducts consultation and works with tenants to conduct consultation in relation to the size of the Project and the anticipated impacts of construction and operation. The consultation conducted was commensurate to the scope of the



	<p>associations. Several tours of the facility were hosted.</p> <ul style="list-style-type: none"> Prepared a Construction Communications Plan. 	<p>Project and consistent with best practice.</p>
Building Fire, Fire, & Life Safety	<ul style="list-style-type: none"> FSD will submit detailed fire protection drawings and plans for review by PMV's contract code consultants. FSD prepared and submitted a Fire Safety Plan as part of the application in 2012. FSD will install an automated dry active fire suppression system in the receiving building, pit, and conveyor tunnel. 	<ul style="list-style-type: none"> Submission of signed and sealed drawings and professional letters of assurance approved for construction by a professional engineer licensed to practice in the Province of British Columbia, and shall obtain a VFPA Building Permit, which includes review of fire protection elements as covered by the National Building Code.* FSD shall observe the Fire Safety Plan during operation of the facility.*
Light Pollution	<ul style="list-style-type: none"> No new high-mast lighting is proposed or required. Any additional yard lighting will be constructed in accordance within parameters set by Occupational Health & Safety standards. 	<ul style="list-style-type: none"> Any plans for additional exterior lighting must be included in engineer stamped design plans to the satisfaction of VFPA.* Take appropriate steps to prevent adverse off-site lighting impacts.*
Human Health	<ul style="list-style-type: none"> Submitted an Environmental Impact Assessment. Submitted a Human Health Risk Assessment. 	<ul style="list-style-type: none"> EIA and HHRA confirm that no negative impacts from Project emissions are anticipated to the environment or to human health. Dust and air emissions associated with the Project shall be managed to avoid adverse health and safety effects on and off site, as well as to prevent adverse effects on regional and local air quality.*
Marine Environment	<ul style="list-style-type: none"> Developed and submitted a Marine Spill Response Plan. 	<ul style="list-style-type: none"> Permit conditions relating to dewatering practices.* Permit condition requiring adherence to the Marine Spill Response Plan.* Several Permit conditions relate to limitations on impacts to the marine environment during construction.*
Wildlife	<ul style="list-style-type: none"> Construction to occur outside of bird nesting season, and in accordance with the BC Wildlife Act. 	<ul style="list-style-type: none"> Permit condition requiring the use of an environmental monitor and the regular submission of environmental monitoring reports.* Several Permit conditions relate to limitations on impacts to wildlife during construction.*
Stormwater Management	<ul style="list-style-type: none"> Submitted an Environmental Management Plan. 	<ul style="list-style-type: none"> Several Permit conditions relate to limitations on impacts to vegetation



		and surface water quality during construction.*
Fishing	<ul style="list-style-type: none"> Commitment to issue barge traffic related notifications during fisheries period, and to schedule barge traffic movements around fishing windows. 	<ul style="list-style-type: none"> n/a
Riparian Vegetation	<ul style="list-style-type: none"> Submitted an Environmental Management Plan. 	<ul style="list-style-type: none"> Several Permit conditions relate to limitations on impacts to vegetation during construction.*

7 CONCLUSION

Fraser Surrey Docks has satisfied all technical and consultation requirements as part of the Project Review Process. As part of the review requirements, FSD has made substantial changes to their Project scope to incorporate mitigation measures to the construction and operation of the proposed Direct Transfer Coal Facility. PMV has completed all technical reviews and consultation activities as part of the Project Review Process.

As part of the federal environmental review, PMV has reviewed and taken into account relevant information available on the proposed Project, has considered the information and proposed mitigations provided by FSD and other information including third party review by Golder Associates Ltd. of the human health and air quality components of the submissions, and concludes that with the implementation of proposed mitigation measures and conditions (included as Conditions of Approval in the Project Permit), the Project is not likely to cause significant adverse environmental effects.

As such, it is recommended that the Fraser Surrey Dock Direct Transfer Coal Facility be approved, subject to all conditions attached to the Project Permit.



8 [Appendix A](#) - Project Permit - FSD Direct Transfer Coal Facility - PP 2012-072



9 [Appendix B](#) – Environmental Review Decision Statement 2012-072 FSD Direct Transfer Coal Facility



10 [Appendix C](#) – Golder Associates FSD Direct Transfer Coal Facility - Third Party Review of Health Risk and Air Quality August 7, 2014

11 [Appendix D](#) – FSD Mitigation Summary Table