City of Richmond

Report to Committee

To:	General Purposes Committee	**Date:**	July 10, 2019
From:	Anthony Capuccinello Iraci City Solicitor	**File:**	10-6060-01/2019-Vol 01
	Milton Chan, P.Eng. Acting Director, Engineering		
Re:	**Vancouver Airport Fuel Delivery Project**		

Staff Recommendation

1. That the Chief Administrative Officer and the General Manager, Engineering & Public Works be authorized to execute, on behalf of the City, a Site Specific Municipal Access Agreement between the City and the Vancouver Airport Fuel Facilities Corporation containing the material terms and conditions as generally described in the staff report titled "Vancouver Airport Fuel Delivery Project", dated July 10, 2019, from the City Solicitor and the Acting Director, Engineering;

2. That the Manager, Engineering Planning be authorized to execute, on behalf of the City, a Servicing Agreement between the City and the Vancouver Airport Fuel Facilities Corporation, for the development of the Marine Terminal located at 15040 Williams Road, Richmond, BC, containing the material terms and conditions as generally described in the staff report titled "Vancouver Airport Fuel Delivery Project", dated July 10, 2019, from the City Solicitor and the Acting Director, Engineering; and

3. That the Chief Administrative Officer and the General Manager of Engineering & Public Works be authorized to approve both Vancouver Airport Fuel Facilities Corporation's reliance on the ALC Decision dated March 17, 2017 (ALC File: 55644) and Vancouver Airport Fuel Facilities Corporation making a replacement ALC application in the event reliance on the said ALC Decision becomes problematic for either the City or VAFFC.

Anthony Capuccinello Iraci
City Solicitor
(604-247-4636)
Att. 12

Milton Chan, P.Eng.
Acting Director, Engineering
(604-276-4377)

REPORT CONCURRENCE		
ROUTED TO:	**CONCURRENCE**	**CONCURRENCE OF GENERAL MANAGER**
Real Estate Services Sustainability Fire Rescue Transportation Risk Development Applications	☑ ☑ ☑ ☑ ☑ ☑	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	**INITIALS:** DW	**APPROVED BY CAO**

Staff Report

Origin

The Vancouver Airport Fuel Facilities Corporation ("**VAFFC**") is building a new aviation fuel delivery system to serve the airlines at Vancouver International Airport ("**YVR**"). The Vancouver Airport Fuel Delivery Project (the "**Project**") consists of the following key elements:

1. a deep water Marine Terminal on the south arm of the Fraser River, capable of receiving marine vessel shipments of aviation fuel, to be located on lands owned by the VAFFC at 15040 Williams Road (the "**Marine Terminal**");

2. an approximately 400 meter long transfer pipe connecting the Marine Terminal to the Fuel Receiving Facility (the "**Transfer Pipe**");

3. a Fuel Receiving Facility, consisting of 6 storage tanks, to be located on lands that are adjacent to the Marine Terminal at 15611 Williams Road (the "**Fuel Receiving Facility**"), which are leased to the VAFFC from the Port of Vancouver (the "**Port Authority**"); and

4. a 13km long delivery pipeline connecting the Fuel Receiving Facility to existing VAFFC storage systems at YVR (together with the Transfer Pipe, the "**Pipeline**").

In December 2013, VAFFC was issued an Environmental Assessment Certificate under the *Environmental Assessment Act,* approving the Project. In February 2016, the Port issued a project permit to VAFFC to begin construction activities on the Fuel Receiving Facility. In April 2017, the BC Oil and Gas Commission issued a permit to VAFFC to construct the Pipeline.

The proposed Pipeline alignment runs along provincially-owned roads and some City roads. The main segment of the proposed alignment runs along Highway 99, which is under Provincial jurisdiction. Multiple route options were approved in the Environmental Assessment Certificate for the southern portion of the Pipeline (all of which require the use of City roads/highways). VAFFC has elected to pursue a route that uses unopened portions of Francis Road, Savage Road and Williams Road (all owned by the City). **Attachment 2** is a map showing the Pipeline route VAFFC intends to use.

Although VAFFC has received a permit from the BC Oil and Gas Commission to build the Pipeline, pursuant to section 34(2)(b) of the *Oil and Gas Activities Act*, VAFFC must obtain authorization from the City in order to enter and use the City's roads/highways for the Project.

VAFFC has obtained all necessary federal and provincial regulatory approvals for this Project through extensive public processes over the last 10 years. The only outstanding approvals required by VAFFC are the approvals of the MAA and the Servicing Agreement and issuance of the ESA DP and related building permit, all by the City of Richmond and all of which are limited in scope to terms related to the occupation and use of the required City highway/road right of way and to the Marine Terminal site ESA.

Other considerations related to the Project have been dealt with in other approval processes or are the subject matter of legislation and are summarized in the report for background information purposes.

Background

YVR currently receives jet fuel from two sources: (a) 80% through the 40 km Kinder Morgan (Jet Fuel) Inc. pipeline that originates near the Burrard Inlet and crosses Burnaby and north Richmond (40% of which is supplied by the Chevron Refinery in Burnaby and 40% of which is shipped by barges to the Westridge Marine Terminal from the BP Cherry Point Refinery in Washington State); and (b) 20% via tanker truck deliveries from the BP Cherry Point Refinery in Washington State.

VAFFC has submitted that the Project is needed because the Kinder Morgan pipeline is at maximum capacity and cannot meet the airport's growing fuel demand. According to VAFFC the existing fuel delivery system must currently be supplemented by 70 fuel tanker truck deliveries per day to meet the airport's peak fuel demand (which if the airport was operating at peak fuel demand for a full month would amount to approximately 2,000 fuel tanker trucks per month). For a full summary of why the VAFFC claims the Project and Pipeline are needed, see **Attachment 3**.

A corporate profile and description of VAFFC's membership and structure has been provided by VAFFC (**Attachment 4**). Also, as noted by VAFFC, "…similar fuel facility corporations operate at all the major international airports across Canada – Vancouver, Edmonton, Calgary, Winnipeg, Ottawa, Hamilton, Toronto, Montreal and Halifax. The largest in Canada is Pearson International Fuel Facilities Corporation (PIFFC). VAFFC is the second largest…"

Regarding the existing jet fuel line that was constructed in 1969, the owner Kinder Morgan (Jet Fuel) Inc. ("**KMJF**") in current proceedings before the British Columbia Utilities Commission ("**BCUC**"), has submitted that once the VAFD Project commences operations the existing jet fuel line will become economically unviable. Consequently, KMJF is seeking orders from the BCUC approving abandonment cost estimates and the collection of an abandonment cost surcharge over the three year remaining economic life of the existing system (see excerpts taken from KMJF's application set out in **Attachment 7**.

Analysis

SECTION 1: Municipal Access Agreement

City staff have negotiated a Site-Specific Municipal Access Agreement ("**MAA**") with VAFFC, whereby the City would grant VAFFC a non-exclusive license to use those portions of Francis Road, Savage Road and Williams Road highlighted in purple on the map in **Attachment 2** (the "**Service Corridors**") to construct and operate portions of the Pipeline. The Service Corridors are, with the exception of a portion of Williams Road, all unopened roads.

The MAA is very favorable to the City and imposes minimal obligations on the City. A summary of some of the potential impacts of not entering into an MAA are set out in **Attachment 1.**

The key terms of the MAA are as follows:

Term	50 years (initial term of 30 years, with an automatic 20 year extension).
License Fee	VAFFC will pay the City: (a) a non-refundable license fee of $9,800,000 for the initial thirty year term, paid upfront; (b) $250,000 to reimburse the City for its costs associated with negotiating the MAA, paid upfront; and (c) if the term of the MAA is extended for the additional 20 year term, the greater of $12,706,000 or the fair market value of a 20 year license as determined by an appraiser at the time the extension term is about to commence.
Road Construction	The Pipeline must be installed in a manner that permits the City to build a road above it without requiring the Pipeline to be protected or relocated.
Relocation of Pipeline	If the Pipeline in any way interferes with the City's ability to undertake a municipal project, VAFFC is required, at its sole cost, to protect or relocate the Pipeline to accommodate the municipal project. VAFFC is also liable to pay the City all the City's project costs caused by the Pipeline (such as delay costs).
Route Alignment	Subject to the City granting VAFFC the right to use the City's roads/highways for the southern portion of the Pipeline (and approving the Servicing Agreement and Environmentally Sensitive Area Development Permit (the "**ESA DP**") for the Marine Terminal), VAFFC will use the Bridgeport Road option (which is under Provincial Jurisdiction) for the northern portion of the Pipeline, instead of City roads in north Richmond. This is better for the City as the Bridgeport Trail option and the River Road option for the northern pipeline alignment (as set out in **Attachment 5**), which were both approved in VAFFC's Environmental Assessment Certificate and were VAFFC's preferred alignment options, would have had significant negative impacts on the future development of North Richmond.
Limitation on Liability	The liability of the City is limited to claims or losses arising from the gross negligence or wilful misconduct of the City, or its employees or contractors.

Indemnification	VAFFC will indemnify the City from all losses and claims that are caused by the portion of the Pipeline located in the Service Corridors or VAFFC's operations in the Service Corridors (including environmental liabilities). The City is not providing any indemnity in favour of VAFFC.
Environmental and Fire Suppression	VAFFC agrees to provide an automated fire suppression system. The fire system would be designed so that, once the system detects a fire, foam will automatically be deployed without human intervention after a 5 min delay. This time delay will allow the operator on site enough time to abort the deployment of foam should it be a false alarm. If for whatever reason the operator on-site is incapacitated, the foam will deploy automatically after the 5 min delay. Furthermore, if the operator on site confirms the fire before the 5 min delay has passed, they will be able to deploy the foam immediately. Details regarding the system are set out in **Attachment 8.** VAFFC also agrees to a series of environmental monitoring and reporting requirements. VAFFC also agrees to incorporate certain additional fire suppression equipment and establish two command centres in connection with its operations at the Marine Terminal and Fuel Receiving Facility.
Remedies	If VAFFC is in breach of its obligations under the MAA, and it fails to fix that breach within 30 days of receipt of a notice from the City (or fails to commence to rectify the breach if it is not possible to remedy the breach in 30 days), then the City may either (a) take such actions as it determines are necessary to correct the breach (at VAFFC's cost), or (b) terminate the MAA. The City may also terminate the MAA if VAFFC (i) becomes bankrupt or (ii) ceases to have the authority to operate the Pipeline.
Removal of Pipeline	Within one (1) year from the date the MAA is terminated or expires, or the date VAFFC notifies the City that it no longer needs the Pipeline, VAFFC must, at its own cost, and at the City's option, either (1) remove all abandoned Pipeline in the Service Corridor, or (2) abandon the Pipeline in place in the Service Corridor in accordance with all applicable laws.

In addition to the above terms, there are also indirect benefits accruing to the City. The corresponding reduction of tanker trucks off City roads will eliminate the safety risks associated with transporting jet fuel in that manner. Also, the approved alignment ensures that the Pipeline will not be located in proximity to residential areas, as was previously considered by VAFFC.

A further potential benefit is the likely abandonment of the existing jet fuel line which was constructed in 1969 to the standards of construction at that time. Construction of the VAFD Project together with the likely abandonment of the existing KMJF pipeline system will result in effectively no appreciable net increase in jet fuel pipeline length in Richmond given that each line is approximately 13km in length within the City. For some properties abandonment will also boost land values and create development options that were otherwise not possible within 30

meters of the existing line due to the proximity and development restrictions set out in legislation and in the statutory right of ways registered against the encumbered private properties.

The upfront payment of $10,050,000 (for the initial license fee and reimbursement for costs) as well as an additional payment of at least $12,706,000 if the term of the MAA is extended beyond its initial 30 year term was based on the fair market value of the impacted area of the required City highways as determined by a third party accredited appraiser retained by the City.

The MAA includes a provision that the City will not unreasonably withhold the issuance of any other permits of the City that are necessary for the initial installation and construction of the Pipeline within the Service Corridors and of the Marine Terminal. This includes:

- Marine Terminal Building Permit
- Marine Terminal Environmentally Sensitive Area Development Permit
- Marine Terminal Servicing Agreement

VAFFC would still be required to apply for various permits and satisfy certain notification requirements for work within the Service Corridors, in a similar manner as that required for telecommunications carriers that have infrastructure in the City's roads.

While the MAA is still subject to Council approval, VAFFC have provided the City with a signed copy of the MAA, and have delivered full payment of the $9,800,000 license fee and the $250,000 for reimbursement of the City's professional costs in trust. If the City does not approve the MAA by August 1, 2019 (or such later dated agreed upon by VAFFC), then these funds will be returned to VAFFC.

SECTION 2: ALC Approval dated March 17, 2017

Included in this report is a recommendation that the City approve VAFFC's reliance on the ALC Decision dated March 17th, 2017 in respect of ALC File: 55644 (**Attachment 6**) that was inadvertently obtained without proper City authorization, and which staff only recently became aware of. The ALC Decision approves the Proposal to create two temporary workspaces, with a maximum combined area of 2.0 ha, for the purposes of constructing an underground pipeline within the existing Road Right of Way along Francis Road.

If the MAA is approved by Council, the approval of reliance on the ALC Decision should not be a concern to the City. It would be implicit in any approval of the MAA that the City supports the approvals granted in the ALC Decision. Moreover, VAFFC has recently confirmed that it will require only 10% of the approved temporary workspace on private property within the ALR and and ESA. In the event reliance on ALC Decision becomes problematic, this report further recommends that the City approves VAFFC making a properly authorized application for the necessary ALC approvals.

SECTION 3: Servicing Agreement

Various infrastructure upgrades and utility works would be required to support the Marine Terminal Facility, protect the public and enhance the City's infrastructure network. VAFFC would be required to enter into a Servicing Agreement for these works.

The key components of the SA are:

- Design and construct approximately 350 m of new dike through the subject site, complete with seismic protection;
- Register a 7.5 m wide SRW through the subject site for the purposes of dike access, construction and maintenance, with a minimum dike setback of 7.0 m;
- Design and construct bank protection works along the river, which are to be maintained by the Owner, with a legal agreement to be registered on Title, permitting the City to access and maintain these works if the Owner fails to do so, at the Owner's cost;
- Design and construct a 6 m wide park trail through the subject site;
- Register a 6 m wide Statutory Right of Way with Public Right-of-Passage for a publicly-accessible trail through the subject site;
- Design and construct off-site and on-site Environmentally Sensitive Area (ESA) and Riparian Management Area (RMA) landscaping enhancements, including a bench marsh on the river side of the dike;
- Design and construct utility and frontage works to provide services and access to the site, including water connections, culverts, and driveway modifications;
- Provide financial security for the City to complete any unfinished works;
- Complete works within a defined schedule; and
- Indemnify the City.

Entering into the Servicing Agreement will benefit the City by providing additional linkages in the public trail network and providing enhanced flood protection in the area through dike works. The dike works to be provided by the development are consistent with the City's Dike Master Plan Phase 3 approved by Council on March 25, 2019.

SECTION 4: Limited Scope of Outstanding Approvals Sought from the City of Richmond

VAFFC has obtained all necessary federal and provincial regulatory approvals for this Project through extensive public processes over the last 10 years. The only outstanding approvals required by VAFFC are the approvals of the MAA and the Servicing Agreement and issuance of the ESA DP and related building permit, all by the City of Richmond and all of which are limited in scope to terms related to the occupation and use of the required City highway/road right of way and to the Marine Terminal site ESA.

Other considerations related to the Project have been dealt with in other approval processes or are the subject matter of legislation and may be summarized as follows:

4(a) Environmental Assessment Process Approval dated December 11th, 2013

Issues related to impacts on the environment including, among other things, marine spill prevention, marine spill preparedness and response, spill liability, fire prevention and fire response at the Fuel Receiving Facility and Marine Terminal were all considered and decided as part of the environmental assessment process and are addressed in the conditions of approval of the Environmental Assessment (the "**EA**"). Attached collectively are copies of the Reasons for Ministers' Decision, the EA Certificate and the Conditions of EA Approval (**Attachment 9).**

In addition to staff's comments below, VAFFC has provided a summary outlining "VAFFC SPILL PREVENTION, PREPAREDNESS AND RESPONSE" and an outline of "OTHER FACTORS TO REDUCE RISK ON FRASER RIVER" as well as a description of the legislative federal and provincial regulatory regimes related to spill response and spill liability, all of which are collectively attached as **Attachment 10** to this report.

4(a)(i) Summary on waterside operational spill and disaster response requirements, procedures and capabilities

VAFFC's spill prevention, preparedness and response capabilities was a key issue discussed during the EA. The Vancouver Fraser Port Authority concluded that tanker traffic risks involving aviation fuel and other liquid bulk carriers in the Fraser River were acceptable in the spill scenarios modeled by VAFFC. The BC Ministry of Environment and Climate Change Strategy stated that the recommended conditions (outlined in VAFFC's EA Certificate) for spill prevention align with emerging policy and bolster the requirements contemplated in the Province's independent West Coast Spill Response Study (Volume 1 – Volume 3).

Construction Spill Prevention Measures

VAFFC has developed project Construction Environmental Management Plans that specifically mitigate environmental concerns including spills, while constructing the Marine Terminal, Pipeline and Receiving Fuel Facility. Each plan was prepared in accordance with the Project's stakeholder engagement, aligns with the conditions outlined in VAFFC's EA Certificate and further includes the addition of the following attachments:

a) Accidents or Malfunctions Management Plan;
b) Air Quality and Dust Control Management Plan;
c) Archaeological Management Plan;
d) Contaminated Sites Management Plan;
e) Fuels, Chemicals and Materials Storage and Handling Plan;
f) Noise Management Plan;
g) Spill Prevention and Emergency Response Plan;
h) Surface Water Quality/Fisheries Protection and Sediment Control Plan;
i) Vegetation and Wildlife Management Plan; and
j) Waste Management Plan.

Marine Spill Prevention Measures

VAFFC, in consultation with Western Canada Marine Response Corporation ("**WCMRC**"), has developed a robust spill prevention, preparedness and response plan and has committed to the following measures that will prevent spills in the Fraser River:

- Pre-screening of vessels through a tanker acceptance program;
- All vessels must be double-hulled;
- Berthing/escort tugs for vessels;
- Vessels must be under the expert control of Fraser River Pilots;
- Vessels will travel at slow speeds in the Fraser River;
- Fuel unloading will stop if weather conditions or river characteristics exceed pre-set operational limits;
- Automatic and manual shutdown of fuel unloading equipment;
- Leak-free manifold connections;
- Pre-arrival readiness checks at the marine terminal (personnel, tank space, monitoring
- Systems, emergency shut-down, dock readiness);
- Pre-transfer (from ship to shore) meeting of tanker and terminal personnel to discuss the fuel transfer process;
- A response vessel will accompany each fuel cargo vessel; and
- Pre-deployed, permanent spill containment booms will be deployed at the terminal and two response vessels will be on standby at all times.

Additional marine spill prevention measures include:

- Port Metro Vancouver escorts deep-sea vessels during inclement weather to assist with safe navigation;
- Communication is required between Fraser River Pilots and the Coast Guard's Vessel Traffic Services and the marine terminal while on the Fraser River;
- The Fraser River has a sandy river bottom, making grounding less likely and less hazardous; and
- The location of the marine terminal will reduce the time and distance that vessels travel along the BC coastline compared to using the Westridge Marine Terminal in Burnaby.

Fuel Receiving Facility Spill Prevention Measures

The Fuel Receiving Facility will be equipped with the following spill prevention measures:

- Constructed to current seismic design standards;
- Corrosion protection;
- Leak detection;
- Flow control systems;
- Automatic foam suppression system;
- Secondary containment to prevent the spread of spills outside the facility;
- 24/7 monitoring, including electronic video surveillance; and

- On-site control and monitoring by trained operations personnel during all offloading, fuel transfer and fuel handling activities.

Pipeline Spill Prevention Measures

The pipeline will be equipped with the following spill prevention measures:

- State-of the art corrosion protection and leak detection technologies;
- Monitoring by a control system that uses pressure sensors and automatic flow shut-off devices;
- Constructed to current seismic design standards;
- Be pressurized only during fuel transfer operations (not 24/7); and
- Be buried underground and well-marked, mapped and electronically located for reference by municipal and private contractors.

Marine Spill Preparedness and Response

Various pieces of federal legislation including the *Fisheries Act*, *Canada Shipping Act*, and *Canadian Environmental Protection Act* include provisions that restrict pollution and impose liability for damages resulting from spills. The *Canada Shipping Act* requires that VAFFC deploy equipment and resources to contain and control a spill within one hour of its discovery, and commence spill response within six hours. VAFFC's spill response measures will facilitate a response in less than six hours. VAFFC will have the following spill preparedness and response measures in place before fuel unloading begins to enable rapid spill response in the unlikely event of a spill:

- A final Oil Pollution Emergency Plan in place prior to operations;
- Pre-deployed, permanent booming protection of the fuel vessel at the marine terminal and at Ladner Reach (in Delta, BC);
- On-site spill response and containment infrastructure, including permanent deflection/containment structures, booms, sorbents, skimmers, temporary waste storage; spill response infrastructure at key locations in the Fraser River;
- Two dedicated spill response vessels; and
- The installation of spill response infrastructure for rapid deployment of spill response equipment in the event of a spill at Sea Reach, North Steveston Harbour, Canoe Passage and Lander Reach locations.

4(a)(ii) The status of WCMRC or others setting up a Fraser River asset

- WCMRC maintains a network of response bases, equipment and personnel across coastal B.C. WCMRC currently has five response bases (of varying capacities) in the South Coast and one response base on the North Coast. WCMRC is currently planning additional response bases on the South Coast, including one in Richmond at 23511 Dyke Rd, near Annacis Island. Staff have had preliminary discussions about the proposed facility, but no formal applications to construct the facility have been received to date.

Staff would work cooperatively with WCMRC to obtain any necessary City approvals in a timely manner.

- The Federal Government has also made a $1.5 billion pledge to support the national Oceans Protection Plan that includes: $278 million for improved emergency preparedness; $250 million to increase Coast Guard Capacity; $207 million for safer navigation and vessel tracking systems; and $103 million in increased marine research.
- Federal Agencies such as DFO and the Coast Guard have since been working with Agencies such as the Marine Environmental Observation Prediction & Response Network and Canadian Universities to build BC's capacity to anticipate and respond to marine risks. Staff have been involved in some of this work to date including spill modelling predictions.

4(a)(iii) Details on the capability of the proposed tank farm containment dike and structures

VAFFC has prepared a draft Oil Spill Emergency Plan in consultation with Western Canada Marine Response Corporation, particulars of which include:

- The terminal facilities include six aboveground tanks, with a total capacity of 500,000 barrels, located in a "diked" secondary containment area. The tanks are equipped with overfill alarms, tank vents, motorized tank valves and related piping and fittings;
- The secondary containment is sized, according to the National Fire Code, to hold the contents of one tank plus 10% of the aggregate of the other tanks in the tank farm. The tank farm secondary containment area precipitation accumulation is controlled via motor operated and hydrocarbon monitor controlled valve(s) that control the flow to an oil water separator for monitoring before the water is released to the Fraser River;
- Design Specifications that meet National Fire Code standards;
- Spill recovery techniques for land-based spills including land-based booms, sorbents and tank trucks and vacuum trucks (equipped with a manta ray skimmer) to recover any portions of the slick moving onsite and towards the shore;
- Operations for spill response will include 24/7 operations until the risk has been mitigated through the Incident Command System; and
- Waste management procedures including an operational Waste Plan that complies with all federal and provincial hazardous waste guidelines.

4(a)(iv) Seismic design standard for the tank farm

Mitigations for various environmental concerns including flooding, earth quakes and climate change are outlined in Chapter 21 of the EA. Section 21.5 relates to Seismic Activity specifically.

The Project will be designed, constructed, operated and managed in a manner that addresses the potential adverse effects of the environment including the following design requirements:

- Design all aboveground Project components to withstand a 1-in-50 year snow load event and an extreme rainfall event to a maximum of 8 millimetres precipitation over 15 minutes or 40 millimetres precipitation over 24 hours;
- Design all aboveground Project components to withstand a 1-in-100 year hourly wind pressure event;
- Design all Project components to withstand, at minimum a 1-in-200 year flood event;
- Design the marine terminal to withstand all physical river loads, including current velocity and direction and waves;
- Design all drainage systems to accommodate the rainfall flow generated from a 1-in -10 year rainstorm;
- Design the marine terminal to withstand a seismic event with an equivalent return period of 475 years, which corresponds to a 10% probability of exceedance in 50 years;
- Design the fuel receiving facility to withstand a seismic event with an equivalent return period of 2,475 years, which corresponds to a 2% probability of exceedance in 50 years;
- Design the pipeline river crossing to withstand a seismic event with an equivalent return period of 2,475 years, which corresponds to a 2% probability of exceedance in 50 years; and
- Design all other sections of the pipeline to maintain structural and pressure integrity under the seismic loading of, at minimum, a 1-in-475 year earthquake.

4(a)(v) Insurance

The requirement to carry adequate insurance coverage for spills is captured in Conditions 46 and 47 of the Environmental Assessment Certificate (**Attachment 9).**

In the Ministers' Reasons for Decision approving the issuance of the Environmental Assessment Certificate (**Attachment 9**), the Ministers noted on p. 4 of that decision under the heading "Spill Liability" that "...VAFFC and vessel owners will have $2 billion in insurance to cover the costs of spill response and compensation...".

VAFFC has additionally provided a summary of the policies that are currently in place and has agreed that the City of Richmond will be named as an additional insured to the insurance liability policies VAFFC has and is required to have in place for the VAFD Project.

4(b) Oil and Gas Commission Approval dated April 3, 2017 (amended April 10, 2017 and extended March 28, 2019)

In addition to conditions imposed under the EA process, the Oil and Gas Commission of BC (the "**OGC**") in issuing a permit under the *Oil and Gas Activities Act* has imposed conditions related to the technical specifications of the Pipeline and associated works as well conditions related to, among other things, the environment, clearing, water course crossings and works, all as set out in OGC permit and permit extension (**Attachment 11**) and applicable legislation cited therein.

Among the technical specifications are the operating pressure, pipeline diameter and requirement that the flow be uni-directional. The scope of the project design does not allow for fuel flow in both directions. Fuel can only flow towards YVR International Airport. Also, VAFFC's Environmental Assessment Certificate only allows for the unloading of jet fuel.

VAFFC has also confirmed that the Pipeline is extendable to points south and/or to Cherry Point in future.

4(c) Legislative Spill Response Regulatory Regime and Spill Compensation Regulatory Regime

In addition to the conditions of approval outlined above, a description of the legislative federal and provincial regulatory regimes related to spill response and spill liability has been provided by VAFFC and is attached (**Attachment 10**).

SECTION 5: Consequences of Not Approving a Municipal Access Agreement

If Council does not approve the MAA, VAFFC has several legal and legislative options available to proceed with the Pipeline without the City's consent. If this occurs then all the benefits and protections staff have negotiated in the MAA would be lost. Moreover, if successful in pursuing the legal and legislative options, the end result for the City would be a Pipeline in place, potentially in a less desirable alignment, without an agreement and without compensation payable to the City. In other words, the outcome would mirror that of the existing jet fuel line that is owned and operated by Kinder Morgan (Jet Fuel) Inc. for which the City does not have an agreement and for which the City does not receive any compensation or any of the other benefits and protections negotiated in the MAA.

Some of the key impacts of not entering into a MAA are set out in **Attachment 1**.

In addition, particulars of some of the key benefits that would be lost include:

- upfront payment of $10,050,000 (for the initial licence fee and reimbursement for costs) as well as the additional payment of at least $12,706,000 if the term is extended;
- the Pipeline must be installed in a manner that permits the City to build a road above it without requiring the Pipeline to be protected or relocated;
- if the Pipeline in any way interferes with the City's ability to undertake a municipal project, VAFFC is required, at its sole cost, to protect or relocate the Pipeline to accommodate the municipal project. VAFFC is also liable to pay the City all the City's project costs caused by the Pipeline (such as delay costs);
- liability of the City is limited to claims or losses arising from the gross negligence or wilful misconduct of the City, or its employees or contractors;
- VAFFC will indemnify the City from all losses and claims that are caused by the portion of the Pipeline located in the City's highways or by VAFFC's operations in the City's

highways (including environmental liabilities). The City is not providing any indemnity in favour of VAFFC;

- VAFFC's agreement to provide an automated fire suppression system. The fire system would be designed so that, once the system detects a fire, foam will automatically be deployed without human intervention after a 5 min delay. This time delay will allow the operator on site enough time to abort the deployment of foam should it be a false alarm. If for whatever reason the operator on-site is incapacitated, the foam will deploy automatically after the 5 min delay. Furthermore, if the operator on site confirms the fire before the 5 min delay has passed, they will be able to deploy the foam immediately;
- VAFFC's agreement to a series of environmental monitoring and reporting requirements and to incorporate certain additional fire suppression equipment and establish two command centres in connection with its operations at the Marine Terminal and Fuel Receiving Facility;
- Upon termination or expiry of the MAA, VAFFC must, at its own cost, and at the City's option, either (1) remove all abandoned Pipeline in the City's highways, or (2) abandon the Pipeline in place in the City's highways in accordance with all applicable laws; and
- VAFFC's agreement that the Pipeline will not be located in proximity to the residential and other areas of Richmond previously under consideration.

In addition, the public amenities and infrastructure improvements that VAFFC has committed to provide through the DP approval process would likely be unrealized. These include:

- Approximately 350 m of new foreshore dike;
- Design and construction of a 6 m wide park trail across 15040 Williams Road;
- Approximately 3,491 m^2 of new terrestrial habitat and 3,800 m^3 of new aquatic habitat;
- Three years of monitoring all ESA, RMA and trail vegetation installations (on and off-site) by a Qualified Environmental Professional (QEP);
- Creation of a new 200 m^2 intertidal bench marsh with monitoring for five years;
- Five years of adaptive management/detailed success monitoring by a (QEP);
- $204,210 cash-in-lieu for future construction of a recreational staging area east of Williams Road plus off-site trail enhancements to the east of the subject property;
- $6,480.00 to the City of Richmond, for an interpretive signage package for the pedestrian trail system; and
- Registration of a legal agreement on Title to require the owner to design and construct bank protection along the Fraser River to protect the new dike.

If Council does not approve the MAA, VAFFC would likely commence construction of those components of the Project that are not affected by the City's actions (such as the Fuel Receiving Facility and those portions of the Pipeline that use Provincially owned highways/roads) while it

pursues circumventing the City's refusal through the Courts or through other legislative means. VAFFC has already provided notice indicating that it will resume construction on the Fueling Receiving Facility this summer and expects to have a highway permit in hand from the Ministry of Transportation and Infrastructure by end of July, 2019 (**Attachment 12**).

Financial Impact

None

Conclusion

A Municipal Access Agreement between the City and VAFFC will allow the City to better manage the presence of the Pipeline within the City's Service Corridors. The terms and conditions of the proposed agreement provide fair market value for use of the corridor and protect the City's interests.

Anthony Capuccinello Iraci
City Solicitor
(604-247-4636)

Milton Chan
Acting Director, Engineering
(604-276-4377)

:bb

Att. 1: Some potential impacts of not entering into a MAA
Att. 2: Existing and Proposed Pipeline Route
Att. 3: Project Description
Att. 4: VAFFC Corporate Profile, Membership and Structure
Att. 5: Alternative North Route Alignment
Att. 6: ALC Decision
Att. 7: Excerpts from KMJF application to BCUC
Att. 8: Details Regarding Foam Suppression System
Att. 9: Reasons for Ministers' Decision, the EA Certificate and the Conditions of EA Approval
Att.10: Spill Response Regulatory Regime; Marine Oil Spill Regulatory Regime; Spill Prevention, Preparedness and Response; Other Factors to Reduce Risk on Fraser River
Att. 11: OGC Permit and Permit Extension
Att. 12: Letter regarding MOTI highway permit

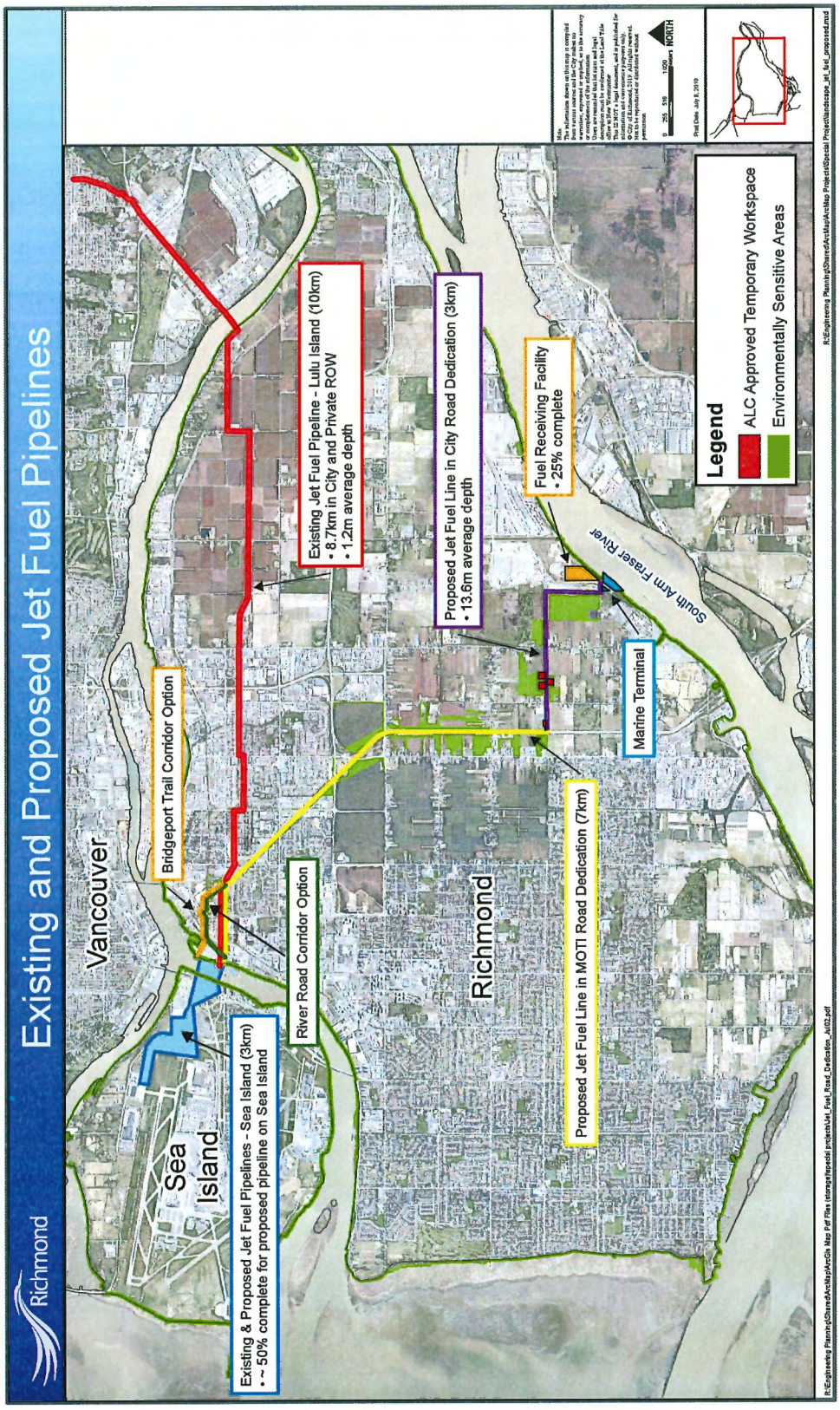
Attachment 1
Some potential impacts of not entering into a MAA

The following table summarizes some of the potential impacts of not entering into a Municipal Access Agreement or ESA DP with VAFFC:

With Municipal Access Agreement	No Municipal Access Agreement
VAFFC indemnifies the City from all losses and claims that are caused by the VAFFC in the City's highways, including environmental liabilities.	The City is not indemnified by VAFFC.
If the pipeline in any way interferes with the City's ability to undertake a municipal project, VAFFC is solely responsible to protect or relocate the pipeline at VAFFC's cost. VAFFC is also liable for any City project costs caused by the pipeline.	Costs are allocated per the provincial Pipeline Crossing Regulation.
Liability of the City to VAFFC is limited to gross negligence.	Liability of the City to VAFFC is based on common law rules of negligence, increasing risk to the City in the case of an incident involving the pipeline caused by the City or contractor.
The pipeline in City highway is installed using horizontal directional drilling, with the pipe being below the peat level except at the entry/exit pits.	VAFFC may opt to switch to a shallow excavation method, increasing impacts along the length of the pipeline including ESA areas.
In north Richmond between Highway 99 and Sea Island, the pipeline is installed in provincial land along Bridgeport Road.	VAFFC has the option to utilize alternate corridors approved under the Environmental Assessment Certificate. Both alternate options (Bridgeport Trail Corridor and River Road Corridor) result in additional pipeline being installed in City highway instead of Provincial highway.
Modified automatic fire suppression system to be installed at the Fuel Receiving Facility.	VAFFC may opt to revert to a fire suppression system that meets the minimum code requirements.
The City can require VAFFC to remove all abandoned pipeline at the end of the agreement period.	Decommissioning will be done in accordance with legislation, which may allow the pipe to be abandoned in place
Licence fee of $9.8 million for initial 30 year term, and a minimum extension licence fee of $12.7 million for 20 year extension. Reimbursement for professional costs in the amount of $250,000.	No licence fees and no reimbursement for professional costs.

With ESA DP	No ESA DP
Construction of 350m of new dike and registering a 7.5m Right of Way for dike access, construction and maintenance at the Marine Terminal site.	Any dike would be private. The City would not have the right to access and maintain this dike.
Provision of a 6m wide park trail through the site at the Marine Terminal Site along with cash contribution towards off-site trail enhancements in the area.	No public trail/amenities.
Design and construct off-site and on-site ESA and RMA habitat enhancements, including a bench marsh on the river side of the dike. Monitoring requirements associated with these enhancements will ensure these significant habitat improvements are maintained.	VAFFC may elect to reduce ESA and RMA compensation to the minimum amount required.

Attachment 2
Existing and Proposed Pipeline Route



Attachment 3
Project Description

From VAFFC website:

Project Overview

Vancouver Airport Fuel Facilities Corporation (VAFFC), a consortium owned by most of the major airlines serving Vancouver International Airport (YVR), is building an aviation fuel delivery system to serve YVR.

The new delivery system includes a Marine Terminal and Fuel Receiving Facility on the South Arm of the Fraser River and a 13-kilometre underground pipeline to YVR. The system will meet the fuel requirements of the airlines and airport for the next 60 to 100 years, and be constructed to modern building, seismic, fire, and environmental codes to achieve the highest level of safety and reliability.

Project Need

The project is needed because the existing fuel delivery system is at maximum capacity and cannot meet the airport's growing fuel demand. Currently, the existing fuel delivery system must be supplemented by 70 fuel tanker truck deliveries per day (2,000 per month) which are required to meet the airport's peak fuel demand. Without a new fuel delivery system, the expected growth in fuel demand at YVR will have to be supplied by tanker truck deliveries, which could result in an additional 500 trucks on the road each month. For example, one new daily flight from Asia would require an additional 80 tanker truck deliveries each month. Reliance on tanker trucks is not sustainable to meet the fuel demand at a major international airport. The project will allow for the safe, secure and reliable supply of fuel to YVR for the long term.

Project Benefits

With a secure and long-term competitive fuel supply, the project will help ensure that YVR remains a key economic generator and critical part of British Columbia's role as Canada's Pacific Gateway. The project will have a smaller environmental footprint than the existing fuel delivery system. The project's spill prevention and response strategies for the Fraser River are robust and go well beyond industry standards and best practices, and will enhance the response capability on the Fraser River to the benefit of all other users on the river. It will also significantly reduce the dependence on tanker truck deliveries.

Project Approval

VAFFC received environmental approval in December 2013 from the provincial and federal governments following more than a decade of comprehensive planning, research, review and consultation, including seven open houses and more than 80 meetings with stakeholders.

Construction of the new system is expected to resume in spring 2019, with the full project commencing operations by late 2021.

Marine Terminal

The new Marine Terminal will be located on the north shore of the south arm of the Fraser River, at one of the widest and deepest sections of the river. An upgrade of an existing wharf, in an area that is already zoned for heavy industrial use, will be based on best practice designs and incorporate state-of-the-art mooring and offloading technologies.

The marine terminal will be designed to handle small barge shipments and large overseas shipments. These will be short in duration and only a few times a month, based on projected YVR fuel demand. A barge could be expected to deliver fuel once every two weeks with an unloading time around 12 hours, while a Panamax class vessel could be expected 1-2 times per month with an unloading time of between 24 to 36 hours.

Marine transportation of aviation fuel and other petroleum products within the Lower Mainland is not new. This new terminal will be receiving the vessels that are currently making deliveries to the Westridge Marine Terminal in Burrard Inlet.

Safety

The marine terminal will be a designated Oil Handling Facility ("OHF") under Transport Canada and comply with the standards and requirements of the Canada Shipping Act. The Marine Terminal will have a comprehensive Oil Pollution Emergency Plan incorporating specific response strategies tailored to the river environment. Western Canada Marine Response Corporation is the designated Response Organization in western Canada and will provide marine spill response services for both the terminal and shipping companies calling the terminal.

Vessels:

- All vessels will be double-hulled for optimal safety
- All vessel movements will be guided by tugboats and government-certified marine pilots on the river and at the Marine Terminal
- All vessels calling on the terminal will be pre-screened and vetted through a tanker acceptance program
- All vessels will have Shipboard Oil Pollution Emergency Plan, and required to carry pollution liability insurance

Fuel transfer:

- Fuel will be transferred from vessels to shore using hydraulically-operated articulated unloading arms
- The unloading arms will be designed to have flexibility and move with the vessel as winds, tides and currents change and as the vessel rises higher in the water as the fuel is offloaded
- If the movement of the vessel exceeds the safe range, the fuel transfer process will be automatically stopped and the arms will be disconnected using leak-free emergency release couplings
- The terminal will be equipped with pre-deployed booming

On-site Spill Response:

- Spill response vessels will be deployed upon arrival of a vessel in the river, will accompany the vessel to the terminal
- Before a vessel is offloaded, booms and skimmers will be positioned around the vessel to contain a spill in the unlikely event of an accidental release of product onto water, and to recover the product as quickly as possible
- The response boats would be on standby to deploy containment and absorbent booms in the water if require

Fuel Receiving Facility

The Fuel Receiving Facility will be located on industrial zoned, Port Metro Vancouver land adjacent to the Marine Terminal. No agricultural land will be required.

The facility will include six steel above-ground storage tanks with a total capacity of about 80 million litres.

The tanks will be located on the landward side of the dike at the foot of Williams Road. They will be approximately 14 metres high compared to the surrounding land, and partially hidden behind a two- to three-metre high containment berm.

A new, 500 metre-long underground pipeline will transfer offloaded jet fuel from the marine terminal to the storage tanks.

The facility will:

- Comply with both federal and provincial storage tank regulations
- Be built to modern storage tank and seismic design requirements
- Provide secondary containment features for all fuel storage and handling areas
- Incorporate emissions control systems
- Incorporate modern corrosion protection, leak detection and flow control systems

- Be automated, monitored 24/7 and electronically safeguarded through eletronic video surveillance
- Be controlled and monitored by on-site operations personnel during all offloading, fuel transfer and fuel handling activities
- Supplementary to fire department services and fire water supply, the facility and public areas will also be protected from fire with a state-of-the-art detection system and suppression system including tank cooling water and foam injection

Pipeline

The new pipeline will be about 13 kilometres long and 355 millimetres (about 14 inches) in diameter. The pipeline will be buried approximately 10 metres underground for most of its route, and at least 2.5 metres underground along Bridgeport Road.

The pipeline will consist of specialty steel pipe manufactured in accordance with the American Society for Testing and Materials (ASTM) Standard A53 (Grade B) and will installed to the standards established by the Canadian Standards Association (CSA) Standard Z662-03 for Oil and Gas Pipeline Systems. The pipeline installation and operation will be regulated by the BC Oil and Gas Commission.

Construction will include extensive use of directional drilling (particularly for water body crossings and intersections) to mitigate potential environmental impacts and avoid disruption of vehicle and marine vessel traffic.

Prior to commissioning, the pipeline will be thoroughly tested and cleaned in accordance with construction and operational requirements, and clearly marked along its entire length. Similar to all other utility installation, location information will be provided to the City of Richmond and locator services.

Safety

Modern pipeline systems have the benefit of precise locating technologies, new materials and coatings, and high-tech installation techniques to reduce disturbances during construction.

The pipeline systems will:

- Be constructed with resilient materials to current seismic design standards
- Be controlled and monitored by operations personnel during all fuel transfer activities
- Be pressurized only during fuel transfer operations between the Fuel Receiving Facility and YVR (not 24/7)
- Include state-of-the-art corrosion protection and leak detection technologies
- Be buried underground and well-marked, mapped and electronically located for reference by municipal and private contractors
- Be monitored by a control system using pressure sensors and automatic flow shutoff devices

Attachment 4
VAFFC Corporate Profile, Membership and Structure

VAFFC – 9 July 2019

VANCOUVER AIRPORT FUEL FACILITIES CORPORATION

Corporate Profile, Membership and Structure

- Vancouver Airport Fuel Facilities Corporation (VAFFC) is a not-for-profit company owned by a consortium of international and domestic commercial airlines that operate at Vancouver International Airport (YVR), Canada's second largest airport. Currently, 34 airlines are VAFFC members. The main function of VAFFC is to provide efficient sharing of facilities, costs and risks between member airlines. VAFFC has over 30 years of experience in fuel handling activities at YVR.

- VAFFC owns, constructs, operates and maintains the aviation fuel storage and distribution facilities at YVR. Similar fuel facility corporations operate at all of the major international airports across Canada – Vancouver, Edmonton, Calgary, Winnipeg, Ottawa, Hamilton, Toronto, Montreal and Halifax. The largest in Canada is Pearson International Fuel Facilities Corporation (PIFFC). VAFFC is the second largest.

- VAFFC contracts the planning, management, construction and operation of its facilities to qualified organizations, and draws expertise from a network of experienced engineering and environmental consultants specializing in fuel infrastructure. FSM Management Group Inc. (FSM) is responsible for administrating the day-to-day finances for VAFFC, managing its construction projects, and overseeing operations at YVR. FSM specializes in the planning and management of fuel-related projects and infrastructure across Canada.

- The fuel facility structure has been a successful organizational model for many years, both operationally and commercially. The airline membership in VAFFC may vary from year-to-year, but VAFFC continues and offers a stable entity to serve the airlines who use YVR. VAFFC enjoys an A2 credit rating from Moody's.

- Each member airline purchases fuel for its own use and arranges delivery to the VAFFC fuel facilities at YVR, either through the existing delivery pipeline system or via tanker trucks. On behalf of its member airlines, VAFFC is responsible for:

    - Operating and maintaining its fuel facility system at YVR;
    - Working with Vancouver Airport Authority and Transport Canada to develop fuel demand forecasts and comply with regulations;
    - Directing new investment, maintaining insurance, and structuring debt;
    - Planning, constructing and operating safe, reliable and cost-effective fuel infrastructure to meet near and long-term demand projections; and
    - Obtaining regulatory permits, approvals and authorizations as they relate to fuel system operation and expansion, and new developments such as the Vancouver Airport Fuel Delivery Project (VAFDP).

Attachment 5
Alternative North Route Alignment

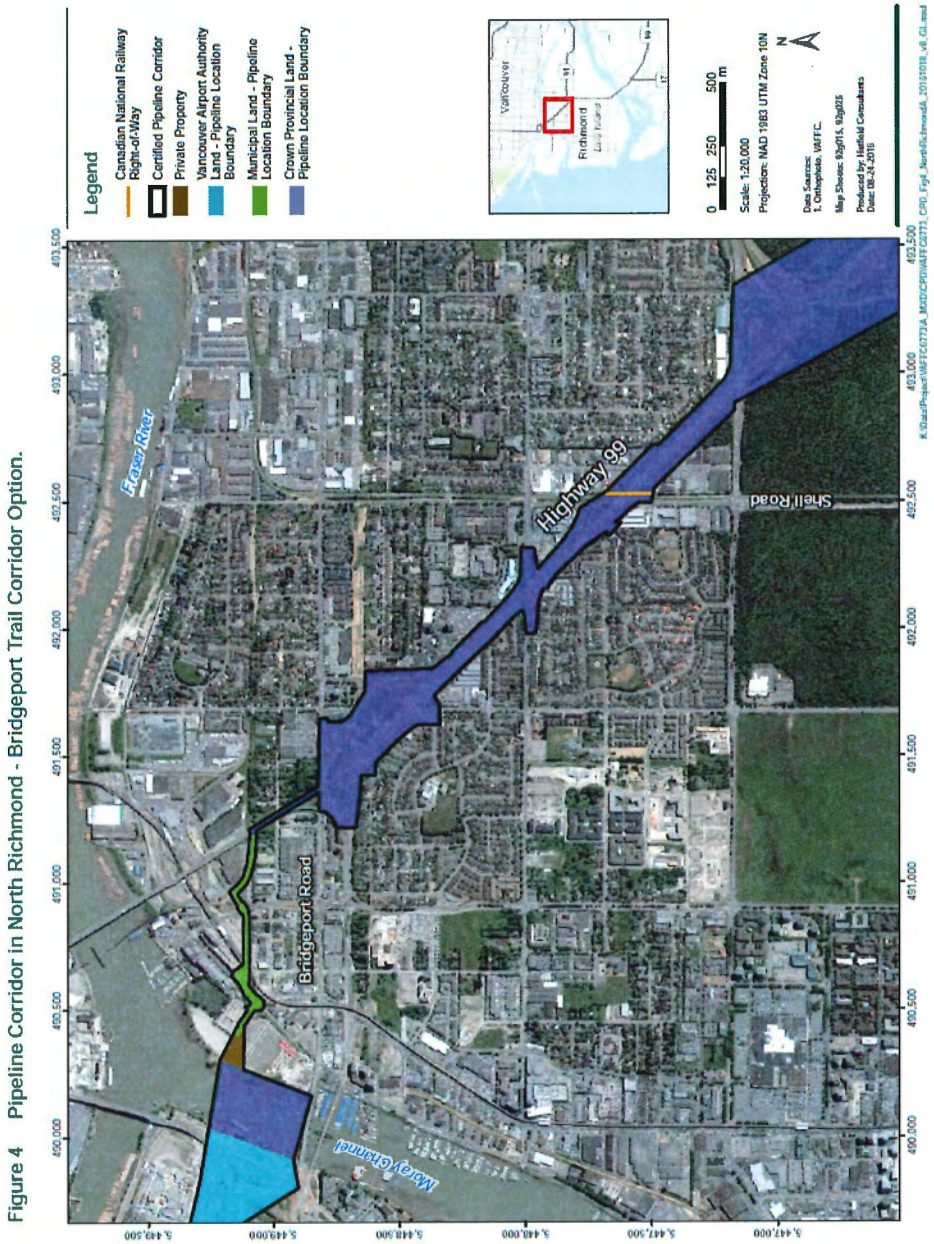


Figure 4 Pipeline Corridor in North Richmond - Bridgeport Trail Corridor Option.

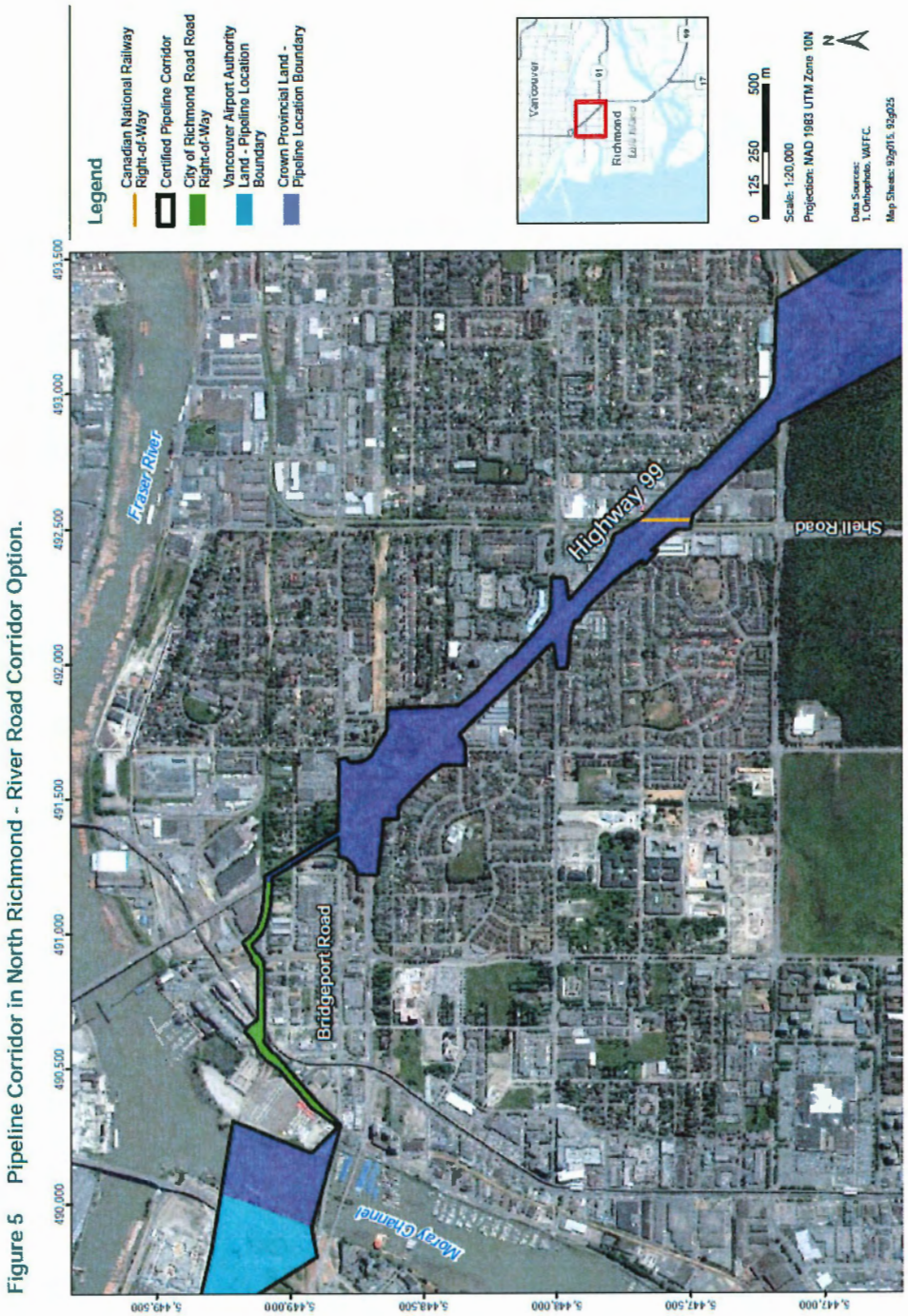


Figure 5 Pipeline Corridor in North Richmond - River Road Corridor Option.

Attachment 6
ALC Decision

Agricultural Land Commission
133–4940 Canada Way
Burnaby, British Columbia V5G 4K6
Tel: 604 660-7000
Fax: 604 660-7033
www.alc.gov.bc.ca

March 17, 2017 ALC File: 55644

RPS Group
Suite 700, 555 – 4th Avenue SW
Calgary, AB T2P 3E7

Attention Jerry Hagen:

Re: Application for a Utility Corridor the Agricultural Land Reserve (ALR)

Please find attached the Reasons for Decision of the South Coast Panel (Resolution #64/2017) as it relates to the above noted application. A sketch plan depicting the decision is also attached. As agent, it is your responsibility to notify the applicant accordingly.

Reconsideration of a Decision as Directed by the ALC Chair

Please note that pursuant to s. 33.1 of the *Agricultural Land Commission Act*, the Chair may direct the Executive Committee to reconsider any panel decision if, within 60 days from the date of this decision, he considers that the decision may not fulfill the purposes of the Commission as set out in s. 6, or does not adequately take into consideration s. 4.3.

You will be notified in writing if the Executive Committee is directed to reconsider your decision. The Commission advises you to take this 60 day period into consideration prior to proceeding with any actions upon this decision.

Reconsideration of a Decision by an Affected Person

We draw your attention to s. 33(1) of the *Agricultural Land Commission Act* which provides a person affected the opportunity to submit a request for reconsideration.

33(1) On the written request of a person affected or on the commission's own initiative, the commission may reconsider a decision of the commission under this Act and may confirm, reverse or vary it if the commission determines that:

(a) evidence not available at the time of the original decision has become available,
(b) all or part of the original decision was based on evidence that was in error or was false.

For further clarity, s. 33.1and s. 33(1) are separate and independent sections of the *Agricultural Land Commission Act*.

Further correspondence with respect to this application is to be directed to Kamelli Mark at (Kamelli.Mark@gov.bc.ca).

Yours truly,

PROVINCIAL AGRICULTURAL LAND COMMISSION

Kamelli Mark, Land Use Planner

Enclosures: Reasons for Decision (Resolution #64/2017)
Sketch plan

55844d1

AGRICULTURAL LAND COMMISSION FILE 55644

REASONS FOR DECISION OF THE SOUTH COAST PANEL

Application submitted pursuant to s. 6 of BC Regulation 171/2002 (ALR Use, Subdivision and Procedure Regulation)

Applicant:	**City of Richmond (the "Applicant")**
Agent:	**Jerry Hagen (the "Agent")**
Application before the South Coast Regional Panel:	**William Zylmans, Panel Chair** **Satwinder Bains**

THE APPLICATION

[1] The legal description of the properties involved in the application are:

Property 1
Parcel Identifier: 002-789-850
Parcel One (RD173314E) (Reference Plan 8809) of Lot 3, Section 19, Block 4, north Range 5 West, New Westminster District Plan 5239
Civic Address: 8871 Sidaway Road, Richmond, BC
Parcel Area: 6.4 ha
Area Affected: 0.6 ha

Property 2
Parcel Identifier: 011-007-427
Lot 5, Section 20, Block 4, North Range 5 West, New Westminster District Plan 3109
Civic Address: 8611 No. 6 Road, Richmond, BC
Parcel Area: 8.1 ha
Area Affected: 1.0 ha

Property 3
Parcel Identifier: 011-007-419
Lot 4, Section 20, Block 4, North Range 5 West, New Westminster District Plan 3109
Civic Address: 8611 No. 6 Road, Richmond, BC
Parcel Area: 8.1 ha
Area Affected: 1.0 ha

Property 4
Parcel Identifier: 004-021-908
Lot 1, Section 29, Block 4, North Range 5 West, New Westminster District, Plan 4691

Civic Address: 9111 No. 6 Road, Richmond, BC
Parcel Area: 8.5 ha
Area Affected: 0.83 ha

Property 5 (Right-of-Way)
Parcel Identifier: N/A
Government Road Allowance between Sec 21, Block 4N, Range 5W and Section 28, Block 4N, Range 5W
Civic Address: N/A
Parcel Area: 3.8 ha
Area Affected: 3.8 ha

(collectively, the "Properties")

[2] The Properties are located within a designated agricultural land reserve ("ALR") as defined in s. 1 of the *Agricultural Land Commission Act* (the "*ALCA*").

[3] The Properties are located within Zone 1 as defined in s. 4.2 of the *ALCA*.

[4] Pursuant to s. 6 of the BC Regulation 171/2002 (Agricultural Land Reserve Use, Subdivision and Procedure Regulation (the "Regulation"), the Applicants are applying to create two temporary workspaces, with a maximum combined area of 2.0 ha, for the purpose of constructing an underground pipeline (fuel delivery system for the Vancouver International Airport) within an existing Road Right of Way (ROW) along Francis Road (the "Proposal"). The Proposal along with supporting documentation is collectively the application (the "Application").

RELEVANT STATUTORY PROVISIONS

[5] The Application was made pursuant to s. 6 of the Regulation:

6 Unless permitted under sections 2 and 3, a person must file an application under section 34 (6) of the Act directly with the office of the commission and in a form acceptable to the commission for any of the following uses:

(a) widening of an existing road right of way;

(b) construction of a road within an existing right of way;

(c) dedication of a right of way or construction of any of the following:

(i) a new or existing road or railway;

(ii) a new or existing recreational trail;

(iii) a utility corridor use;

(iv) a sewer or water line other than for ancillary utility connections;

(v) a forest service road under the *Forest Act*;

(d) the new use of an existing right of way for a recreational trail.

[6] The Panel considered the Application within the context of s. 6 of the *ALCA*. The purposes of the Agricultural Land Commission (the "Commission") set out in s. 6 are as follows:

6 The following are the purposes of the commission:

(a) to preserve agricultural land;

(b) to encourage farming on agricultural land in collaboration with other communities of interest; and

(c) to encourage local governments, first nations, the government and its agents to enable and accommodate farm use of agricultural land and uses compatible with agriculture in their plans, bylaws and policies.

EVIDENTIARY RECORD BEFORE THE PANEL

[7] The Panel considered the following evidence:

1. The Application
2. Local government documents
3. Previous application history

4. Agricultural capability map, ALR context map and satellite imagery

All documentation noted above was disclosed to the Agent in advance of this decision.

[8] The Panel reviewed two previous applications involving Property 1 (there are no previous applications in ALC records involving Property 2, Property 3, Property 4, or Property 5):

Application ID: 11112 Legacy File: 719 (Penich, 1975)	To subdivide two 0.08 ha lots from Property 1 (6.4 ha) for residential uses. The Commission stated that the subject property has very good agricultural potential and that the construction of two additional homes on the property would remove too much land from production. The application was refused by Resolution #2226/75.
Application ID: 14404 Legacy File: 32842 (Senghera Farms Ltd., 1999)	To place approximately 1000 m^3 of gravel on an approximately 59 m x 100 m portion of Property 1 to a depth of approximately 0.2 to 0.3 m for the purpose of constructing a greenhouse. The application was approved by ALC Resolution #535/99.

SITE VISIT

[9] The Panel, in the circumstances of the Application, did not consider it necessary to conduct a site visit to the Property based on the evidentiary record associated with the Application.

FINDINGS

[10] In assessing agricultural capability, the Panel referred in part to agricultural capability mapping and ratings. The ratings are identified using the BC Land Inventory (BCLI), 'Land Capability Classification for Agriculture in B.C.' system. The improved agricultural capability ratings identified on BCLI map sheet 92G/03h for the mapping units encompassing the Properties are as follows:

- Property 1: Class 2 and Class 3, more specifically (7:2WD 3:3WD)
- Property 2: Class 3, more specifically (O3LWF)
- Property 3: Class 3, more specifically (O3LWF)
- Property 4: Class 3, more specifically (O3LWF)
- Property 5: Class 3, more specifically (O3LWF)

O - indicates organic soils.

Class 2 - land is capable of producing a wide range of crops. Minor restrictions of soil or climate may reduce capability but pose no major difficulties in management.

Class 3 - land is capable of producing a fairly wide range of crops under good management practices. Soil and/or climate limitations are somewhat restrictive.

The limiting subclasses associated with this parcel of land are L (degree of decomposition – permeability), W (excess water), F (low fertility), and D (erosion).

[11] The Panel reviewed the BCLI ratings and find that the Properties are capable of supporting agriculture.

[12] The Application identifies four potential locations for the two proposed temporary workspaces on Property 1, Property 2, Property 3, and Property 4. The temporary workspaces are to be used for a combination of staging and storage of vehicles, pipes, and equipment to facilitate construction of the pipeline. The Application states that no agriculture is currently taking place on the portions of the Properties proposed for temporary workspaces. According to the Application, the 3.8 ha area identified as a "pipeline easement" is located entirely within an existing City of Richmond ROW (Property 5) along Francis Road (currently undeveloped). The Panel has no objection to the proposed location of the pipeline as it is entirely contained within an existing ROW.

[13] While no farming is currently taking place on the portions of the four Properties proposed for the temporary workspaces, this is not indicative that the lands will not be utilized for agricultural purposes in future. The Panel appreciates that the locations within

the ALR were chosen to best facilitate the construction and staging needs for the pipeline along Francis Road; however, there is the potential for negative impacts to accrue on the subject Properties and on adjacent properties during construction. The Panel is amenable to the Applicant utilizing any two of the four proposed temporary workspaces, provided that the two chosen sites are successfully reclaimed following completion of construction along Francis Road; should the Applicant choose to clear Property 2 for use as a temporary workspace, reforestation of the site would not be required following completion of construction.

DECISION

[14] For the reasons given above, the Panel approves the Proposal to create two temporary workspaces, with a maximum combined area of 2.0 ha, for the purpose of constructing an underground pipeline (fuel delivery system for the Vancouver International Airport) within an existing Road Right of Way (ROW) along Francis Road.

[15] The Proposal is approved subject to the following conditions:

Pre-Construction Phase:

a. The Applicant shall submit a finalized plan confirming the selection of the two temporary workspaces prior to commencement of construction;
b. no more than two temporary workspaces shall be selected out of the four proposed options;
c. submission of a schedule outlining the projected start date and end date of construction within the Proposal area within 60 calendar days from release of this decision;
d. submission of a pre-site assessment for the two temporary workspaces prepared by a qualified registered professional for review and approval by the Commission prior to commencement of construction. Any pre-site assessment prepared for Property 4 must assess the parcel in its entirety;
e. submission of a reclamation plan for the two temporary workspaces prepared by a qualified registered professional for review and approval by the Commission prior to

commencement of construction. If Property 4 is selected for use as a temporary workspace, the reclamation plan must include reclamation measures for the portion of the property outlined on the attached Sketch Plan;

f. to ensure the successful reclamation of the project area and appropriate oversight should the Applicant cease to consult with a qualified registered professional, a financial security in the form of an Irrevocable Letter of Credit (the "ILOC") in the amount of $40,000 must be made payable to the Minister of Finance c/o the Agricultural Land Commission. The ILOC is to ensure the project is conducted in accordance with the information submitted with the Application and the conditions of this decision;

g. for greater clarity, some or all of the ILOC will be accessible to and used by the Commission upon the failure of the operator to comply with any or all aspects of the conditions of approval contained herein;

Construction Phase:

h. the construction and location of the pipeline and the two temporary workspaces shall be in substantial compliance with the plan submitted with the Application and the attached Sketch Plan;

i. under the direction of a professional agrologist, all existing topsoil must be salvaged for use during the reclamation of the project where appropriate:

   i. Stockpiled soils should be windrowed and located in an area where they will not be disturbed and will not impede site drainage;

   ii. Stockpiles should not exceed 3 metres in height and slopes should be no steeper than 3:1;

   iii. Stockpiles should be seeded and established with an appropriate plant cover, or other suitable soil erosion control measure must be applied to protect the stockpiles from wind, runoff and other removal process;

   iv. Stockpiled soil must not be removed from the Property without written permission from the Commission;

j. geotextile fabric must be placed under soil stockpiles to protect underlying soil and to ensure no foreign material is left on site following completion of construction;
k. swamp/rig mats must be installed over the temporary workspaces to protect underlying soil;
l. appropriate weed control must be practiced on all areas disturbed by the Proposal;
m. any fencing which is removed or damaged must be replaced, to the landowners satisfaction, by the Applicant at the time of construction;

Post-Construction Phase:

n. If Property 1, Property 2, or Property 3 are selected for use as temporary workspaces, upon completion of construction the temporary workspaces must be reclaimed to an agricultural capability equal to or better than existing conditions as per the pre-site assessment within 6 months of construction completion along Francis Road;
o. If Property 4 is selected for use as a temporary workspace, upon completion of construction the portion of the property outlined on the attached Sketch Plan must be reclaimed to an agricultural capability equal to or better than the BCLI improved capability ratings;
p. submission of a closure report prepared by a professional agrologist for review and approval by the Commission within 60 days following completion of the project, confirming that the Commission's conditions of approval have been met;
q. release of the ILOC will be dependent on receipt of evidence that the reclamation is completed to a standard deemed satisfactory by the Commission. In this regard, the Commission will consider the final report that must be prepared by a qualified registered professional and submitted to the Commission in fulfillment of condition "p" above; and,
r. the construction and reclamation being completed within three (3) calendar years from the date of release of this decision.

[16] This decision does not relieve the owner or occupier of the responsibility to comply with applicable Acts, regulations, bylaws of the local government, and decisions and orders of any person or body having jurisdiction over the land under an enactment.

[17] These are the unanimous reasons of the South Coast Panel of the Agricultural Land Commission.

[18] A decision of the Panel is a decision of the Commission pursuant to s. 11.1(5) of the *Agricultural Land Commission Act*.

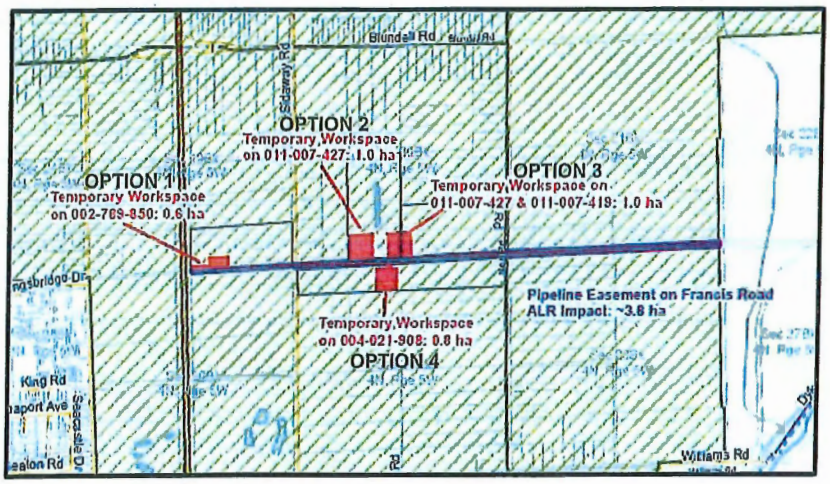
[19] This decision is recorded as Resolution #64/2017 and is released on March 17, 2017.

CERTIFICATION OF DECISION

William Zylmans, Panel Chair, on behalf of the South Coast Panel

END OF DOCUMENT

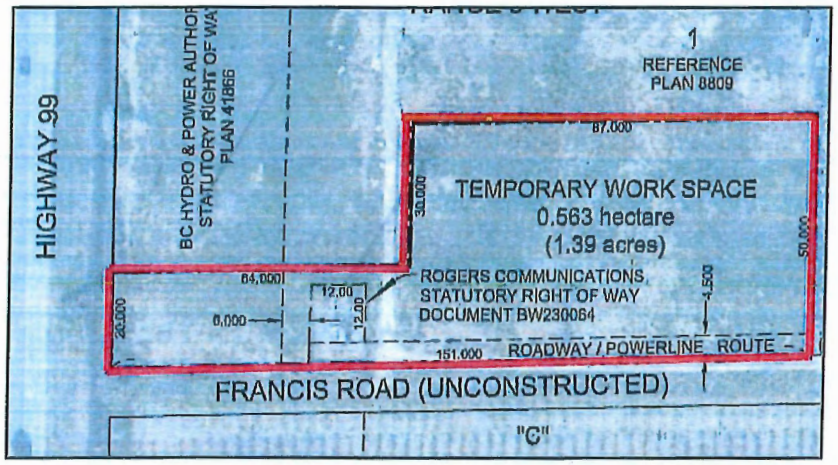
Agricultural Land Commission Decision Sketch Plan
ALC File 55644 (City of Richmond)
Conditionally Approved Utility Corridor Use
ALC Resolution #64/2017



= Conditionally Approved Utility Corridor Use (two temporary workspaces out of four options, with a maximum combined area of 2.0 ha)

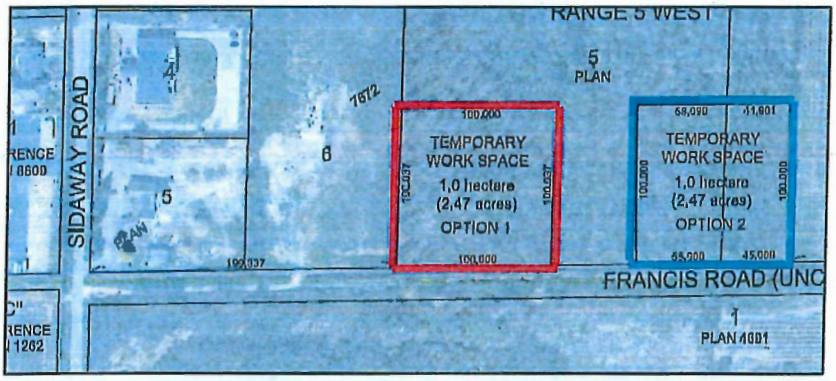
1 of 4

Agricultural Land Commission Decision Sketch Plan
ALC File 55644 (City of Richmond)
Conditionally Approved Utility Corridor Use
ALC Resolution #64/2017



= Conditionally Approved Utility Corridor Use (temporary workspace - Property 1, Option 1)

Agricultural Land Commission Decision Sketch Plan
ALC File 55644 (City of Richmond)
Conditionally Approved Utility Corridor Use
ALC Resolution #64/2017

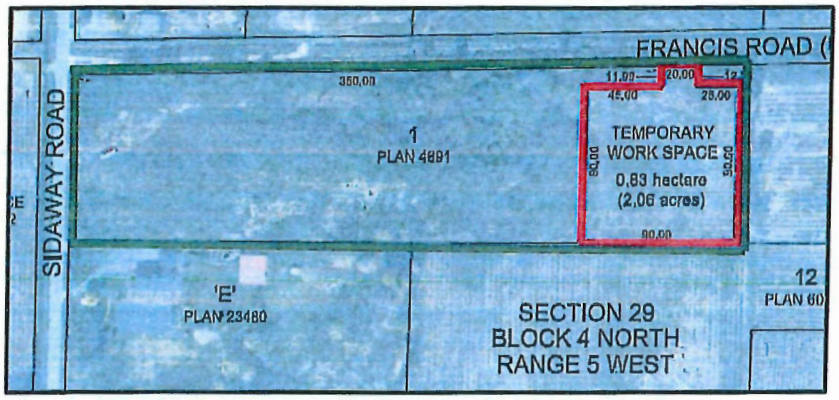


= Conditionally Approved Utility Corridor Use (temporary workspace - Property 2, Option 2)

= Conditionally Approved Utility Corridor Use (temporary workspace - Property 3, Option 3)

3 of 4

Agricultural Land Commission Decision Sketch Plan
ALC File 55644 (City of Richmond)
Conditionally Approved Utility Corridor Use
ALC Resolution #64/2017



= Conditionally Approved Utility Corridor Use (temporary workspace - Property 4, Option 4)

= Area to be reclaimed if Property 4, Option 4, is selected for use as temporary workspace

4 of 4

6231550

Attachment 7
Excerpts from Kinder Morgan Canada (Jet Fuel) Inc.'s Application

KINDER MORGAN CANADA (JET FUEL) INC.	
2019 TARIFF FILING	EXHIBIT B-8

REGULATORY
LAW CHAMBERS

Rosa Twyman
Ph: 403.930.7991
Rosa.Twyman@RLChambers.ca
Our matter #: 1081.001

June 7, 2019

VIA E-Filing

British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

Attention: Patrick Wruck, Commission Secretary

Dear Mr. Wruck,

Re: Project No. 1598984
British Columbia Utilities Commission ("BCUC")
Kinder Morgan Canada (Jet Fuel) Inc. ("KMJF") 2019 Tariff Filing
2019 Revenue Requirement and Final Tolls Application

In accordance with the process schedule set out in BCUC Order No. P-5-19, please find enclosed KMJF's 2019 Revenue Requirement and Final Tolls Application.

Yours truly,

<Submitted electronically>

Rosa Twyman
Regulatory Law Chambers
cc: Bruce Reed, Manager-Tariffs and Regulatory Affairs for KMJF
KMJF Shippers

BRITISH COLUMBIA UTILITIES COMMISSION

KINDER MORGAN CANADA (JET FUEL) INC.

2019 TARIFF FILING

Project No. 1598984

APPLICATION FOR REVENUE REQUIREMENT AND FINAL TOLLS FOR 2019-2021

June 7, 2019

00098368.7

Application for Tolls
Executive Summary

Kinder Morgan Canada (Jet Fuel) Inc.'s ("KMJF") pipeline system transports jet fuel from the Parkland refinery, Westridge terminal and distribution facilities in the Burnaby area to the Burnaby terminal and then to the Vancouver International Airport terminal. The 41-km pipeline system has been in operation since 1969. It includes five storage tanks at the Vancouver airport terminal.

KMJF requests approval of the 2019 Forecast Revenue Requirement that is calculated based on the continuation of the existing annual revenue requirement cost allocation tolling methodology approved by the Commission in Order P-5-09, issued December 16, 2009. KMJF further proposes that the 2019 Forecast Revenue Requirement is escalated 2.0 percent per year, which is 0.5 percent lower than the escalation factor used for the years 2011 through 2018. The 2019 Forecast Revenue Requirement reflects the cost of operation for the pipeline as well as the amortization of plant in service and other required costs over the expected remaining life of the pipeline. The expected remaining life of the pipeline is forecast to be three years, based on the Vancouver Airport Fuel Delivery's ("VAFD") stated construction timeline for its competing pipeline project. KMJF expects that, as a result, the KMJF pipeline system will become economically unviable once the VAFD project commences operations and bypasses the KMJF pipeline system. KMJF also requests approval for the annual amount of abandonment costs to be collected from shippers through a Collection Mechanism. For purposes of calculating the annual amount of abandonment costs to be collected through the Collection Mechanism, KMJF assumed a 3-year period, consistent with the expected remaining life of the pipeline. The following is a high-level summary of the key parameters contained in the following pages.

F. Forecasted Volumes After December 31, 2021 and Remaining Economic Life

24. Based on the foregoing, KMJF expects that the VAFD project (*i.e.,* VAFFC's bypass fuel delivery system) will be in service by late 2021. Once the VAFD project is operational, the Jet Fuel System will become uneconomical to maintain and operate.

25. Adrian Pollard, VAFFC's spokesman, was quoted as saying in an article in BIV, dated June 20, 2017, that the KMJF Jet Fuel System at that point will no longer be economical to maintain:[17]

> "The airlines are the end customer," Pollard said. "They're financing this project; naturally they're going to use it. And the capacity on that existing [Jet Fuel System] will decline to such a point where it's not really economical to maintain it." [Emphasis added.]

26. The article also states:[18]

> Once the VAFFC project is completed, the consortium [VAFFC] will be able to buy jet fuel on the open market. South Korea is one likely supplier, said Rob Smith, energy director for IHS Markit.
>
> He expects having access to new markets for jet fuel will drive prices down, which will affect both the refinery in Burnaby and Kinder Morgan.
>
> The new pipeline might mean that the days are numbered for the Kinder Morgan pipeline that now supplies YVR, because airlines will be able to supply all of their own fuel. [Emphasis added.]

27. Once the VAFD project enters service, the remaining shippers from the Parkland refinery and Shell rail facility, that currently represent about 40 percent of total volumes, would have to pay 100 percent of the Jet Fuel System revenue requirement. KMJF expects that, as a result, the Jet Fuel System will become economically unviable once the VAFD project commences operations and bypasses the Jet Fuel System.

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17 Nelson Bennett, "New $150 million jet fuel pipeline project underway: Days could be numbered for current Kinder Morgan pipeline that supplies YVR with jet fuel," Article Published by Business in Vancouver, dated June 20, 2017, available online at: <https://biv.com/article/2017/06/new-150-million-jet-fuel-pipeline-project-underway>. A copy of the article is attached hereto as Appendix D.

18 Nelson Bennett, "New $150 million jet fuel pipeline project underway: Days could be numbered for current Kinder Morgan pipeline that supplies YVR with jet fuel," Article Published by Business in Vancouver, dated June 20, 2017, available online at: <https://biv.com/article/2017/06/new-150-million-jet-fuel-pipeline-project-underway>. A copy of the article is attached hereto as Appendix D.

C. Rate Base

32. The plant portion of the rate base is calculated on the basis of a mid-year average. The opening balances for original cost and accumulated depreciation are based on actuals, and the closing balances for original cost and accumulated depreciation are forecast. The mid-year average balances provide the forecast of average net plant in service.

Table 4: Rate Base Summary[21]

Average Rate Base ($000)	2019 Forecast	Sch. No.
Average plant in service	18,819	6
Average accumulated depreciation of plant in service	13,878	6
Average net book value of plant in service	4,941	
December 31, 2018 deferred income tax balance	-111	
Average working capital requirement	159	10
Average Rate Base	4,989	

D. Depreciation Based on Three Year Remaining Economic Life of Jet Fuel System

33. As discussed above, KMJF expects that once the VAFD project commences operations, the Jet Fuel System will become economically unviable. For this reason, the expected economic life of the pipeline is forecast to be three years from January 1, 2019, based on an expectation that the VAFD project will commence operations by late 2021.

34. Depreciation expense is forecast by multiplying the plant account balances by the appropriate depreciation rate.[22] A separate depreciation rate is applied for each plant account or group of similar assets. The depreciation rates are based on an updated depreciation study that establishes deprecation rates effective January 1, 2019.[23]

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[21] Wetmore 2019 Cost of Service Study, Schedule 2.

[22] Wetmore 2019 Cost of Service Study, Schedule 4.

[23] The updated depreciation study is included in the Wetmore 2019 Cost of Service Study as Schedule 5.

35. KMJF's existing deprecation rates have been in effect since January 1, 2010. The 2019 Depreciation Study (Schedule 5 of the 2019 Cost of Service Study) presented below calculates revised depreciation rates as of January 1, 2019 based upon a three-year remaining depreciable life:

Table 5: 2019 Depreciation Study[24]

Account Number & Description		Original Cost 12/31/2018	Accumulated Depreciation 12/31/2018	Net Service Value 12/31/2018	2018 Depreciation Expense	Existing Depreciation Rates	Forecast Remaining Life	Proposed Recovery 3 Years w Exception		Revised Remaining Life
(a)		(b)	(c)	(d)	(e)	(f)	(g) = [d / e] [1/]	(h)	(i) = [h / b]	(j) = [d / h]
152	Land Rights	98,683.73	91,762.48	6,921.25	1,746.70	1.77%	4.0	2,307.08	2.34%	3.0
153	Line Pipe [2/]	6,107,724.24	3,558,941.50	2,548,782.74	282,472.58	4.66%	9.0	1,060,960.91	15.89%	[1/]
156	Buildings	480,479.33	341,743.90	138,735.43	19,219.18	4.00%	7.2	46,245.14	9.62%	3.0
158	Pumping Equipment	1,138,930.25	900,553.22	238,377.03	52,390.80	4.60%	4.5	79,459.01	6.98%	3.0
159	Station Lines	1,931,570.82	1,572,956.16	358,614.66	81,898.61	4.24%	4.4	119,538.22	6.19%	3.0
160	Other Station Equipment	2,760,133.99	1,989,824.62	770,309.37	153,627.16	5.73%	5.0	256,769.79	9.30%	3.0
160C	Central Pipeline Control	329,325.99	329,325.99	-	-	0.00%	na	-	0.00%	na
161	Storage Tanks	1,878,251.02	1,228,896.83	649,354.19	91,993.66	4.90%	7.1	216,451.40	11.52%	3.0
163	Communications	239,200.52	223,358.50	15,842.02	5,513.46	10.00%	2.9	5,280.67	2.21%	3.0
186WE	Work Equipment	51,974.45	47,999.11	3,975.34	1,325.12	20.00%	3.0	1,325.11	2.55%	3.0
186HW	Computer Hardware	3,789.43	3,789.43	-	-	20.00%	na	-	0.00%	na
186SW	Computer Software	8,825.11	8,825.11	-	-	20.00%	na	-	0.00%	na
189D	AFUDC (Interest)	149,198.01	132,468.61	16,731.40	4,819.10	3.23%	3.5	5,577.13	3.74%	3.0
189E	AFUDC (Equity)	160,050.56	136,072.52	23,978.04	5,425.72	3.39%	4.4	7,992.68	4.99%	3.0
190	Construction Overhead	3,252,311.99	2,773,177.53	479,134.46	130,417.68	4.01%	3.7	159,711.49	4.91%	3.0
BS	Cost of Removal	-	(404,795.28)	404,795.28	49,516.56	7.69%	8.2	134,931.76	33.33%	3.0
	Total	18,590,249.44	12,934,696.23	5,655,551.21	880,366.33		6.4	2,116,550.40		

Summary of Depreciation Rates	2018	2019
Depreciation Expense without Costs of Removal	830,849.77	1,981,618.64
Amortization of normal Costs of Removal	49,516.56	134,931.76
Total Provision for Pipeline	880,366.33	2,116,550.40

Notes:

[1/] Reflects depreciation and amortization effective as of January 1, 2010.

[2/] As shown on Schedule 6, a significant addition is forecast to be placed in service in 2019. Therefore, this 2019 forecast addition is factored into the depreciatoin rate calculation, as shown below.

	12/31/2018	Forecast Additions	Revised Amount	Proposed Recovery 3 Years	
Original Cost	6,107,724.24	694,100.00	6,801,824.24		15.89%
Net Service Value	2,548,782.74	694,100.00	3,242,882.74	1,060,960.91	

36. These revised depreciation rates are used in the calculation of forecast 2019 depreciation expense presented in Schedule 6 of the 2019 Cost of Service Study.

37. KMJF considers that its proposed depreciation method is reasonable and fair as it ensures that Parkland, Shell, and Air Canada, together with VAFFC, equitably share the costs of the utilization of the pipeline prior to it becoming underutilized and economically unviable. This is particularly fair, given that VAFFC is the entity with sole control of whether the KMJF Jet Fuel Line becomes significantly underutilized as a result of the bypass VAFD project.

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[24] Wetmore 2019 Cost of Service Study, Schedule 5.

IV. ABANDONMENT COSTS

A. BCUC Jurisdiction

43. It is in the public interest that regulated pipelines be abandoned safely and efficiently.[29] The BCUC has jurisdiction to establish conditions with respect to a common carrier in relation to abandonment of service. KMJF considers that this authority includes jurisdiction to consider and approve:

(a) an abandonment cost estimate for the Jet Fuel System, as a legitimate cost of KMJF providing service to be recovered from users of the system;

(b) a fair and transparent collection mechanism that allows the estimated abandonment costs to be collected over the remaining economic life of the Jet Fuel System; and

(c) a set-aside mechanism that ensures funds will be available to safely and effectively abandon the Jet Fuel System by the end of its anticipate economic life.

44. KMJF recognizes that prior to discontinuing service and commencing abandonment of the Jet Fuel System, it will be required to apply to the BCUC to cease providing service and to the BC Oil and Gas Commission ("**BCOGC**") for leave to physically abandon the system.

B. Abandonment Cost Estimate

45. KMJF retained Environmental Liability Management Inc. ("**ELM**") to provide an abandonment cost estimate for the Jet Fuel System (the "**2019 ELM Abandonment Cost Study**"). KMJF includes the ELM Abandonment Cost Study as Appendix E to this application.

46. ELM prepared the 2019 ELM Abandonment Cost Study based on the National Energy Board's guidelines regarding unit cost costs for abandonment activities.[30] ELM is in the process of completing an in-person inspection of the facilities and acquiring additional input from landowners, municipalities and regulators as to any specific removal

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[29] See National Energy Board Reasons for Decision MH-001-2013, p 114.

[30] See 2019 ELM Abandonment Cost Study, p 10.

requirements. ELM expects to complete this process by the end of July, 2019. ELM will, if required, update the 2019 ELM Abandonment Cost Study upon completion of these steps.

47. In National Energy Board Decision MH-001-2013, the National Energy Board also held that the timing of abandonment of a pipeline for the purpose of establishing future abandonment costs should be the shorter of the anticipated economic life or physical life.

V. RELIEF REQUESTED

54. Based on the foregoing, KMJF respectfully requests orders by the Commission granting the following:

(a) approval of the 2019 Forecast Revenue Requirement;

(b) approval of the 2020 and 2021 revenue requirements based on applying a 2% escalation factor to the revenue requirement approved for the preceding year;

(c) approval of tolls for the Tolling Period being determined based on the continuation of the existing annual revenue requirement cost allocation tolling methodology set out in Tariff No. 40;[34]

(d) approval of the Abandonment Cost Estimate;

(e) approval of KMJF's proposed Abandonment Cost Surcharge to collect from shippers the Abandonment Cost Estimate over the three-year remaining economic life of the Jet Fuel System;

(f) approval of KMJF's proposed abandonment cost set aside mechanism; and

(g) such further and other relief as the Commission may deem just.

All of which is respectfully submitted this 7th day of June 2019.

Original signed by

Rosa Twyman and John Gormley
Counsel for Kinder Morgan Canada (Jet Fuel) Inc.

---

[34] Ex. B-1, Proposed Tariff No. 40, Section 15, PDF p 7 of 14.

Attachment 8
Details Regarding Foam Suppression System

Capuccinello Iraci,Tony

From: David Bursey <BurseyD@bennettjones.com>
Sent: Wednesday, 10 July 2019 12:44
To: Capuccinello Iraci,Tony
Cc: Larry Sandrin; Charlotte Teal; 'Robert Iasenza'; Mark McCaskill
Subject: VAFFC - DP Permit and MAA review - further details on fire suppression system

Tony,

COR requested further details about the foam fire suppression system at the fuel receiving facility, as noted below. Here is VAFFC's response.

> **COR Question:** What is the name(s) of the foam suppression system manufacturer and installer.
>
> **VAFFC Response:** The fire suppression system is a project-specific design for the VAFDP type of facility, and is not a single source off the shelf system. The system components are sourced through multiple suppliers. The design of the system was a collaboration between fuel system engineering design professionals and fire system experts.
>
> VAFFC has not yet tendered the supply of the fire suppression system. VAFFC's engineering design team has specified a list of qualified installation companies that will be able to meet the stringent requirements for the supply and installation of the system components. Only these companies will be solicited.

Let me know if you have further questions.

David Bursey
***Partner,* Bennett Jones LLP**

2500 Park Place, 666 Burrard Street, Vancouver, B.C., V6C 2X8
T. 604 891 5128 | F. 604 891 5100
E. burseyd@bennettjones.com
BennettJones.com

Attachment 9
Reasons for Ministers' Decision, the EA Certificate and the Conditions of EA Approval

In the matter of the
ENVIRONMENTAL ASSESSMENT ACT
S.B.C. 2002, c. 43
(Act)

and

in the matter of an
Application
for an
Environmental Assessment Certificate
(Application)
by

Vancouver Airport Fuel Facilities Corporation
(VAFFC)

for the

Vancouver Airport Fuel Delivery Project
(Project)

Reasons for Ministers' Decision

On December 11, 2013, pursuant to Section 17(3)(c) of the Act, we, the Minister of Environment and the Minister of Natural Gas Development (Ministers), issued an environmental assessment (EA) certificate for the Project. This document provides a record of the factors that we considered, and the rationale for our decision.

1. NATURE AND SCOPE OF THE DECISION

Section 17(3) of the Act sets out the parameters for our decision. We:

- were required to consider Environmental Assessment Office's (EAO's) *Vancouver Airport Fuel Delivery Project Assessment Report* (Assessment Report) and accompanying Recommendations of the Executive Director; and
- considered any other matters we thought relevant to the public interest in making our decision on the Application.

We also needed to be satisfied that the Province had met its duty to consult, and if appropriate, accommodate First Nations with respect to potential impacts of the Project on their Aboriginal rights.

2. MINISTERS' CONSIDERATIONS

2.1. Assessment Report, Certified Project Description and Recommended Conditions

EAO, with advice from the project working group, reviewed the VAFFC's application for an EA certificate and documented its findings in the Assessment Report. EAO is satisfied that the 64 recommended conditions and project design aspects specified in the Certified Project Description will prevent or reduce potential adverse environmental, social, economic, heritage or health impacts of the Project, such that no significant residual adverse effects are expected.

EAO is satisfied that the Crown's duty to consult and accommodate First Nations has been discharged for the Project.

2.2. Recommendations of the Executive Director

The Executive Director of EAO considered the Assessment Report, the Certified Project Description, and the recommended conditions. The Executive Director recommended that an EA certificate be issued for the Project.

2.3. Key Considerations

The following issues were key considerations in our decision to issue an EA Certificate for the Project.

Marine Spill Prevention

The Vancouver Fraser Port Authority concluded that tanker traffic risks involving aviation fuel and other liquid bulk carriers in the Fraser River were acceptable presently and in future scenarios modeled.

The Ministry of Environment stated that the recommended conditions for spill prevention align with emerging policy and bolster the requirements contemplated in their *West Coast Spill Response Study*.

VAFFC is required to undertake the following measures to prevent spills:

- pre-screening of vessels through a tanker acceptance program;
- all vessels must be double-hulled;
- berthing/escort tugs for vessels;
- vessels under expert control of Fraser River Pilots;
- vessels will travel at slow speeds in the Fraser River;
- fuel unloading will stop if weather conditions or river characteristics exceed pre-set operational limits;
- automatic and manual shutdown of fuel unloading equipment; and
- leak-free manifold connections.

With these spill prevention measures, the probability of a medium or large sized spill would be rare and unlikely to occur during the Project's lifetime.

In addition to VAFFC's spill prevention measures:

- the Vancouver Fraser Port Authority escorts deep-sea vessels during inclement weather to assist with safe navigation;
- communication is required between Fraser River Pilots with Canada Coast Guard's Vessel Traffic Services and the marine terminal while on the Fraser River;
- the Fraser River has a sandy river bottom, making grounding less likely and less hazardous; and
- the location of the marine terminal will reduce the time and distance that vessels travel along the BC coastline compared to using the Westridge Marine Terminal in Burnaby.

Marine Spill Preparedness and Response

The Ministry of Environment stated that the recommended conditions for spill preparedness and response align with emerging policy and bolster the requirements contemplated in their *West Coast Spill Response Study*. The Project will result in a net increase in spill response capacity in the Fraser River.

The *Canada Shipping Act* requires that VAFFC deploy equipment and resources to contain and control a spill within one hour of its discovery, and commence spill response within six hours. VAFFC's spill response measures will facilitate a response in less than six hours.

In the unlikely event of a spill, VAFFC will have the following spill preparedness and response measures in place before fuel unloading begins to enable rapid spill response in the unlikely event of a spill:

- Oil Pollution Emergency Plan in place with Western Canada Marine Response Corporation;
- booming protection of the fuel vessel at the marine terminal and at Ladner Reach (in Delta, BC);
- on-site spill response and containment infrastructure, including permanent deflection/containment structures, booms, sorbents, skimmers, temporary waste storage;
- spill response infrastructure at key locations in the Fraser River; and
- two dedicated spill response vessels.

Spill Liability

Canadian law requires that the polluter pay if there is a spill. VAFFC and vessel owners will have $2 billion in insurance to cover the costs of spill response and compensation. VAFFC will be responsible for maintaining insurance, including:

- aviation legal liability (property damage or injury);
- environmental impairment liability (contamination or pollution); and
- marine liability (pollution into the marine environment).

Fire Prevention at the Fuel Receiving Facility and Marine Terminal

There is an existing legal framework for fire protection and response requirements in BC. VAFFC will construct the Project according to relevant legislation, codes and guidelines, such as the BC Fire Code.

The Project will contribute over $500,000 annually in property taxes, a portion of which will go toward supporting fire protection services.

VAFFC is required to have the following measures in place to prevent a fire at the fuel receiving facility and marine terminal:

- prepare and implement a Fire Safety Plan in consultation with City of Richmond Fire Rescue, Corporation of Delta Fire, and Provincial Emergency Services;
- test all fire prevention and response systems in accordance with applicable codes, guidelines, and best practices, and make tests results available to City of Richmond Fire Rescue, Corporation of Delta Fire, Provincial Emergency Services, and the BC Oil and Gas Commission;
- locate heat-generating equipment away from the storage tanks;
- ensure electrical equipment at the facility meets intrinsic or explosion-proof safety requirements;
- prohibit ignition sources such as open spark or flames, unless in a controlled environment or under a hot work permit;
- prohibit smoking on the marine terminal and fuel receiving facility properties; and
- keep sites free of combustible materials.

Fire Response at the Fuel Receiving Facility and Marine Terminal

VAFFC is required to have the following measures in place to respond to a fire at the fuel receiving facility and marine terminal:

- auxiliary firefighting equipment;
- automated fire detection systems;
- fire hydrant systems;
- high-expansion foam fire protection system at the fuel receiving facility;
- All fire equipment will be maintained in a constant state of readiness, with testing and drills and training of staff to ensure reliable operations.

Project Benefits

The Project provides a reliable fuel source for the Vancouver Airport (YVR), and will allow YVR to meet their projected future fuel demands. The Project will contribute economically to the region through taxes and employment.

There will be a net reduction of regional greenhouse gas emissions as a result of a shift from tanker trucks to fuel vessels. Project operations would result in removing 1000 tanker trucks per month from BC's roads, thereby eliminating the existing risks of fuel spills from those tanker trucks.

The Project will result in a $110 million investment, and 762 person years of direct, indirect, and induced construction jobs in BC. In addition to the approximately 26,700 existing jobs at YVR, a new daily international flight creates approximately 185 direct jobs, and approximately 465 more indirect and induced jobs. The Project contributes to YVR's role as a part of Canada's Pacific Gateway, and is aligned with the BC Jobs Plan.

3. CONCLUSION

We are confident that the prevention measures included in the EA will effectively contribute to the prevention of an accidental fire or spill. After consideration of the findings of the Assessment Report, Project design and the recommended conditions, the Recommendations of the Executive Director, and the key considerations as outlined in section 2 of these Reasons for Ministers' Decision, and having regard to our responsibilities under the Act, we issued a conditional EA certificate for the Project. We note that the Project will be subject to applicable permits and authorizations before the Project can proceed.

Honourable Mary Polak
Minister of Environment

Honourable Rich Coleman
Minister of Natural Gas Development

Signed this 11th day of December, 2013

In the matter of the
ENVIRONMENTAL ASSESSMENT ACT
S.B.C. 2002, c. 43
(Act)

and

in the matter of an
Application
for an
Environmental Assessment Certificate
(Application)

by

VANCOUVER AIRPORT FUEL FACILITIES CORPORATION
(Proponent)

for the

VANCOUVER AIRPORT FUEL DELIVERY PROJECT

ENVIRONMENTAL ASSESSMENT CERTIFICATE # E13-02

Whereas:

A. The Proponent proposes to develop the project described in Schedule A to this certificate (the "Project");

B. On February 10, 2009, the Executive Director of the Environmental Assessment Office issued an Order under section 7(3)(a) of the Act designating the Project as reviewable under the Act;

C. On February 23, 2009, a Project Lead of the Environmental Assessment Office issued an Order under section 10(1)(c) of the Act stating that an environmental assessment certificate was required for the Project and that the Proponent could not proceed with the Project in the absence of an assessment;

D. A screening-level federal environmental assessment was initiated under the *Canada Port Authority Environmental Assessment Regulations* under the *Canadian Environmental Assessment Act,* 1992. The Environmental Assessment Office and the Vancouver Fraser Port Authority conducted a coordinated environmental assessment in accordance with the *Canada-British Columbia Agreement for Environmental Assessment Cooperation* (2004);

E. On November 18, 2009, a Project Lead of the Environmental Assessment Office issued an Order under section 11 of the Act outlining the scope, procedures and methods of the EA for the Project;

F. On December 15, 2009, a Project Lead of the Environmental Assessment Office issued an Order under section 13 of the Act clarifying the scope of the Project and including the spill management control and emergency response in the scope of the EA as described in the section 11 Order;

G. The assessment of the Project was conducted from February 19, 2010 to December 14, 2012, and included consultations with First Nations and the public respecting the Application;

H. On April 8, 2011, a Project Lead of the Environmental Assessment Office issued an Order under section 13 of the Act modifying the section 11 Order to include how Tsleil-Waututh Nation would be consulted during the EA;

I. On April 28, 2011, a Project Lead of the Environmental Assessment Office issued an Order under section 24(2) of the Act to suspend the time limit of the application review stage to allow time for the Proponent to complete an assessment of an alternate pipeline route (Highway 99) and prepare a report on the alternate route for the working group to review; this suspension was lifted on January 4, 2012;

J. On March 7, 2012, a Project Lead of the Environmental Assessment Office issued an Order under section 24(2) of the Act to suspend the time limit of the application review stage to allow time for the Proponent to complete additional biofilm studies and prepare a report for relevant agencies to review; this suspension was lifted on November 19, 2012;

K. On December 14, 2012, pursuant to section 17 of the Act, the Executive Director referred the Application, the Assessment Report, and his recommendations to the undersigned;

L. On January 25, 2013, the Minister issued an Order under section 24(4) of the Act to extend the time limit for a decision under section 17 by 30 days;

M. On February 25, 2013, the Minister issued Orders under section 24(4) and section 30 of the Act suspending the assessment pending the receipt of an Interim Report on the Ministry of Environment's Land-Based Spill Process and the Ministry of Environment's West Coast Spill Response Study (Reports), and extending the time limit for making a decision under section 17 by 75 days following the receipt of the Reports;

N. On October 10, 2013, the Environmental Assessment Office received the Reports and conducted the assessment of the proposed Project in consideration of the Reports from October 10, 2013 to November 18, 2013, including consultation with the working group, First Nations, and the Proponent;

O. On November 18, 2013, the Executive Director referred amended recommendations to the undersigned;

P. Compliance with this Certificate, including its conditions, will be monitored by the staff of the Environmental Assessment Office, and others who have been appointed as inspectors under the Act;

Q. The undersigned have considered the Application, the Assessment Report, and the recommendations of the Executive Director.

Now Therefore,

We issue this Environmental Assessment Certificate to the Proponent for the Project, subject to the following conditions, the description of the Project set out in Schedule A, and the conditions set out in Schedule B.

Conditions

1. The Holder must submit a report to the Executive Director on the status of compliance with the Conditions of this Certificate, and the conditions in Schedule B, at the following times:
   a. one month prior to substantially starting construction of any of the Project facilities;
   b. one month prior to operations;
   c. on or before December 31 in each year during which the Project is being constructed or operated;
   d. one month prior to the start of decommissioning; and
   e. one month after the completion of decommissioning.

   The Executive Director may adjust or extend this reporting requirement by providing written notice to the Holder.

2. (1) Except as provided below, neither this Certificate nor any interest in it may be transferred to any person.

   (2) The Holder may transfer this Certificate if the Holder and proposed holder

   a. obtain consent for the transfer from the Executive Director, and
   b. apply under section 19 of the Act for such amendments to this Certificate, if any, as the Executive Director deems necessary to ensure compliance with and enforceability of this Certificate and to otherwise reflect the proposed transfer.

   (3) An interest in this Certificate may be transferred by way of a grant of security to lenders or financers without consent.

   (4) A transfer to a trustee in bankruptcy, by a receiver or a trustee in bankruptcy pursuant to a court approved sale or as part of a court approved arrangement under the *Company Creditors Arrangement Act* may occur without consent.

   (5) If this Certificate is transferred without consent, the new and former holder must notify the Executive Director within 30 days of the transfer and apply within the time specified by the Executive Director for any amendments to this Certificate that the Executive Director deems necessary to ensure compliance with and enforceability of this Certificate and to otherwise reflect the proposed transfer.

3. (1) Except in connection with the granting of security to Project lenders or financers, prior to the Holder transferring a significant interest in the Project, the Holder and proposed transferee must

   a. obtain consent for the transfer from the Executive Director and
   b. apply under section 19 of the Act for such amendments to this Certificate, if any, as the Executive Director deems necessary to ensure compliance with and enforceability of this Certificate and to otherwise reflect the proposed transfer.

(2) A transfer to a trustee in bankruptcy, by a receiver or a trustee in bankruptcy pursuant to a court approved sale or as part of a court approved arrangement under the *Company Creditors Arrangement Act* may occur without consent.

(3) If a significant interest in the Project is transferred without consent, the Holder must notify the Executive Director within 30 days of the transfer and apply within the time specified by the Executive Director for any amendments to this Certificate that the Executive Director deems necessary to ensure compliance with and enforceability of this Certificate and to otherwise reflect the proposed transfer.

Duration of Certificate

4. For the purpose of section 18(1) of the Act, the deadline is 5 years from the date set out below.

Honourable Mary Polak
Minister of Environment

Honourable Rich Coleman
Minister of Natural Gas Development

Issued this 11th day of December, 2013

VANCOUVER AIRPORT FUEL DELIVERY PROJECT (PROJECT)

SCHEDULE A

CERTIFIED PROJECT DESCRIPTION
For
AN ENVIRONMENTAL ASSESSMENT CERTIFICATE

Table of Contents

1 INTRODUCTION

Project Location: Richmond, British Columbia (see **Figure 1**).

The Project is composed of the following infrastructure, as described further below:

- Upgrades to an existing marine terminal wharf;
- Facilities at the marine terminal to unload aviation fuel;
- A new fuel receiving facility, consisting of storage tanks, filtration, and pumping systems;
- A new pipeline to transfer aviation fuel from the marine terminal to the new fuel receiving facility (transfer pipeline); and
- A new pipeline to deliver aviation fuel from the fuel receiving facility to facilities at Vancouver International Airport (YVR) (delivery pipeline).

2 MARINE TERMINAL

2.1 Location

The Vancouver Airport Fuel Facilities Corporation (Proponent)) owns a waterfront property with an existing marine terminal wharf [1] located on the north shore of the South Arm of the Fraser River at the foot of Williams Road, City of Richmond, BC, 2.2 kilometres upriver of the George Massey Tunnel (see **Figure 1**). The civic address for this property is 15040 Williams Road, Richmond, BC.

The existing marine terminal property boundary and the approximate area of Water lot DL-924 (Water Lot) are shown on **Figure 2**. Water Lot DL-924 will be expanded outward in the Fraser River to accommodate larger vessels and Project works. This expansion will be included in Vancouver Fraser Port Authority (VFPA) permitting. With the exception of dredging activities for operational navigation, all permanent structures and construction dredging activities associated with the marine terminal upgrades must be situated within the terminal property boundary or within the area of the expanded Water Lot.

[1] 15040 Williams Road. Latitude: 49°08.36' North, Longitude: 123°03.33' West. Legal Description: Section 34, Block 4 North, Range 5 West Except: Part (1.41 acres) shown coloured pink on Plan 4933; Secondly: Parcel A (Plan with Bylaw filed A32824); Thirdly: Parcel B (Plan with Bylaw filed A32824) New Westminster District.

2.2 Characteristics and Components

The marine terminal upgrades that are part of the Project are:

- Upgrading of the marine terminal to meet current seismic design criteria;
- Improving the structural capacity to accommodate aviation fuel vessels;
- Constructing fuel unloading and transfer facilities;
- Structural strengthening and replacement of existing fill material and/or bulkhead perimeter wall;
- Strengthening of existing structures and ground in adjacent upland areas of the marine terminal property;
- Constructing new pipe-pile supported mooring structures as necessary to safely secure vessels, located in upland areas of the marine terminal property;
- Constructing new pipe-pile supported breasting dolphins[2] and mooring structures as necessary to safely secure vessels, located in-water adjacent to the existing berth face;
- Constructing a new pipe-pile supported unloading platform located in-water and immediately off of or adjacent to the existing berth face;
- Dredging and scour protection works at the base of the existing pipe pile structure and the base of mooring and berthing structures;
- Constructing new pipe-pile structures to support containment boom reels and containment boom anchor points. These works must be located in-water or on the terminal property, immediately upriver and downriver of the berth face;
- Constructing a new pipe-pile supported or floating emergency/utility boat launch facility located in-water adjacent to the property shoreline or on the terminal property; and
- Related ancillary work in support of the primary work listed above.

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[2] An isolated marine structure for berthing and mooring of vessels, and to:
a) assist in berthing of vessels by taking up some berthing loads;
b) keep vessels from pressing against the wharf structure; and
c) serve as mooring points to restrict the longitudinal movement of the berthing vessel.

Other marine terminal site works that are part of the Project include:

- Initial and ongoing maintenance dredging programs to maintain vessel draft and access to the marine terminal from the Fraser River navigation channel; and,
- Constructing a new pedestrian/bicycle trail along the perimeter of the marine terminal property.

The transfer pipeline (see **Section 4**) components situated within the marine terminal property boundary or within the area of the Water Lot, as expanded, are:

- Mechanical articulating unloading arms with leak-free connection points;
- Connection piping crossing the marine terminal property's existing dike right-of-way either above grade or through an encasement, then connecting to a valve station and fuel testing facility situated on the marine terminal property; and,
- Piping located on above-ground pipe racks with the exception of the dike crossing and beginning of transfer pipeline to the fuel receiving facility.

Other general features to be constructed on the marine terminal property are:

- An operations building,
- Spill response equipment caches and deployment system,
- Fire detection and response systems,
- Drainage system with separator system,
- Staff parking area,
- Perimeter security fencing,
- Closed-circuit television cameras, and
- Lighting towers.

3 FUEL RECEIVING FACILITY

3.1 Location

The new fuel receiving facility must be located on approximately 12 acres of VFPA industrial zoned land, situated in the southwest corner of the larger parcel of VFPA lands identified as "Lot #1, Plan 74529"[3] (**Figure 2**). The specific boundary of the leased area will be determined by the VFPA Project Permit

Fuel must be received into the tanks of the fuel receiving facility from a transfer pipeline connecting the marine terminal (see **Section 4**). Fuel must be stored in the tanks and then delivered to YVR by a delivery pipeline (see **Section 4**).

3.2 Characteristics and Components

The facility must be designed to receive, store, and deliver aviation kerosene fuel.

The components of the new fuel receiving facility are:

- A maximum of eight aboveground storage tanks, each up to a maximum height of 15 metres from the foundation base. Total combined storage capacity of the facility must not exceed 80 million litres;
- Containment dike surrounding all tanks or groups of tanks;
- Operations building;
- Inbound fuel filtration system;
- Outbound pumping system;
- Outbound fuel filtration system;
- Waste fuel collection and storage system;
- Controlled storm drainage and oil/water separator system;
- Electrical power generation and distribution equipment, including transformers, switchgear, multiple voltage distribution, emergency generator and uninterruptible power supply systems;
- Potable and fire water systems;
- Fixed foam distribution system;

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[3] Latitude: 49°08.32' North, Longitude: 123°03.18' West.

- Sanitary sewer connection;
- Diesel fuel storage for emergency back-up generator systems;
- Staff parking area;
- Fuel quality control and sample building;
- Perimeter security fencing and closed-circuit television cameras;
- Lighting towers; and
- An access road following the inner perimeter of the fenced area with space set aside for vehicle parking.

4 FUEL PIPELINES

The Project includes two fuel pipelines:

1. A transfer pipeline with a maximum length of 0.6 kilometres and a maximum diameter of 600 millimetres; and
2. A delivery pipeline with a maximum length of 16 kilometres and a maximum diameter of 300 millimetres.

4.1 Location

4.1.1 Transfer Pipeline

The transfer pipeline must be located on the Proponent's marine terminal and on property owned by the VFPA, with the exception of an underground crossing of Williams Road. The property boundaries within which the transfer pipeline corridor must be located are shown on **Figure 2**.

4.1.2 Delivery Pipeline

The delivery pipeline must be located within the boundaries of property owned by VFPA, the BC Ministry of Transportation and Infrastructure, the Vancouver Airport Authority, or the City of Richmond as shown on **Figures 2** to **7**.

The delivery pipeline corridor route is described below:

- North from the new fuel receiving facility to the Francis Road right-of-way, crossing a Canadian National Railway right-of-way to reach Francis Road;
- West along the Francis Road right-of-way to Highway 99. The pipeline corridor width required for locating and constructing the pipeline is up to 10 metres either side of the right-of-way centreline;
- North along Highway 99 to Bridgeport Trail. The corridor width required for locating and constructing the pipeline is the Highway 99 right-of-way;

- West and then northwest along Bridgeport Trail to Van Horne Way. The pipeline corridor width required for locating and constructing the pipeline is up to 12 metres either side of the trail and road centreline;
- Southwest along Van Horne Way to Charles Street. The corridor width required for locating and constructing the pipeline is the Van Horne Way right-of-way;
- West along Charles Street to River Road. The corridor width required for locating and constructing the pipeline is the Charles Street right-of-way;
- Southwest along River Road to No. 3 Road. The corridor width required for locating and constructing the pipeline is the River Road right-of-way;
- Northwest along No. 3 Road to the pipeline crossing under Moray Channel. The corridor width required for locating and constructing the pipeline is the No. 3 Road right-of-way. For approximately 150 metres before the pipeline crosses under the Moray Channel, the corridor width required for locating and constructing the pipeline is up to 200 metres;
- Crossing under Moray Channel to Grauer Road;
- West along Grauer Road to the airside perimeter service road (North Perimeter Road). The corridor width required for locating and constructing the pipeline is up to 50 metres to the south of the road centreline. The northern boundary of the pipeline corridor width is defined by:
    - The Grauer Road right-of-way along the section of road that runs northwest;
    - The south property boundary of Sea Island Conservation Area lands along the section of road that runs west and turns north onto North Perimeter Road; and,
- North/northwest along North Perimeter Road to the existing fuel storage and handling facilities. The corridor width required for locating and constructing the pipeline is up to 50 metres either side of the road centreline. The pipeline will terminate on airport land leased by VAFFC.

A complete delivery pipeline corridor route is shown in **Figure 7**.

4.2 Characteristics and Components

Permanent facilities related to the pipelines are:

- "Pig" launching/receiving assemblies at either end of each pipeline[4];
- Emergency shutdown valves at the following locations:
    - marine terminal;
    - new fuel receiving facility (at the exit point of the fuel transfer pipeline and the entry point of the fuel delivery pipeline);
    - either side of the Moray Channel, one on Lulu Island and one on Sea Island; and
    - fuel storage and handling facility at YVR.

[4] 'Pigging' refers to the use of inspection gauges or 'pigs' to perform various maintenance operations on a pipeline, including cleaning and inspection. This is accomplished by inserting the 'pig' into a 'pig launcher' (or 'launching station'). The launcher / launching station is then closed and the pressure-driven flow of the product in the pipeline is used to push the 'pig' along the pipe.

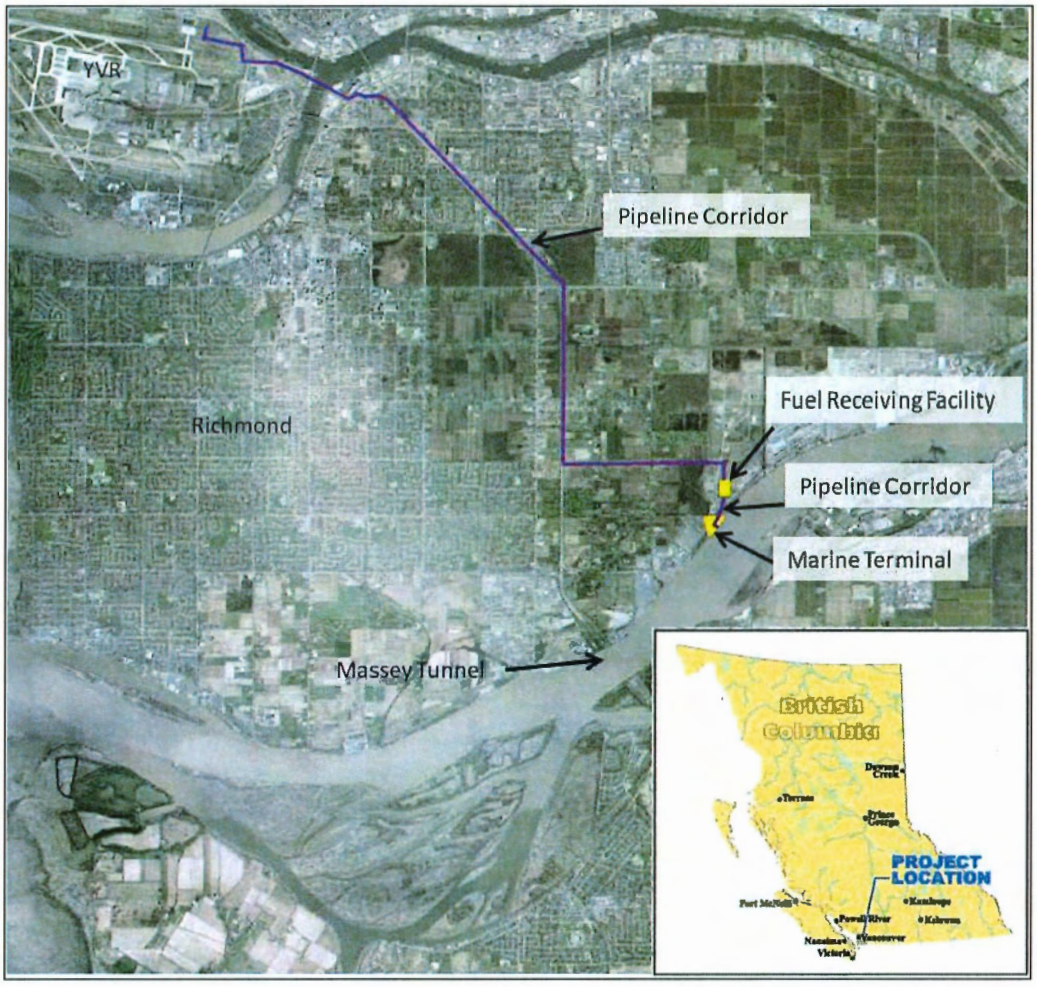


Figure 1 General Location of Project Components

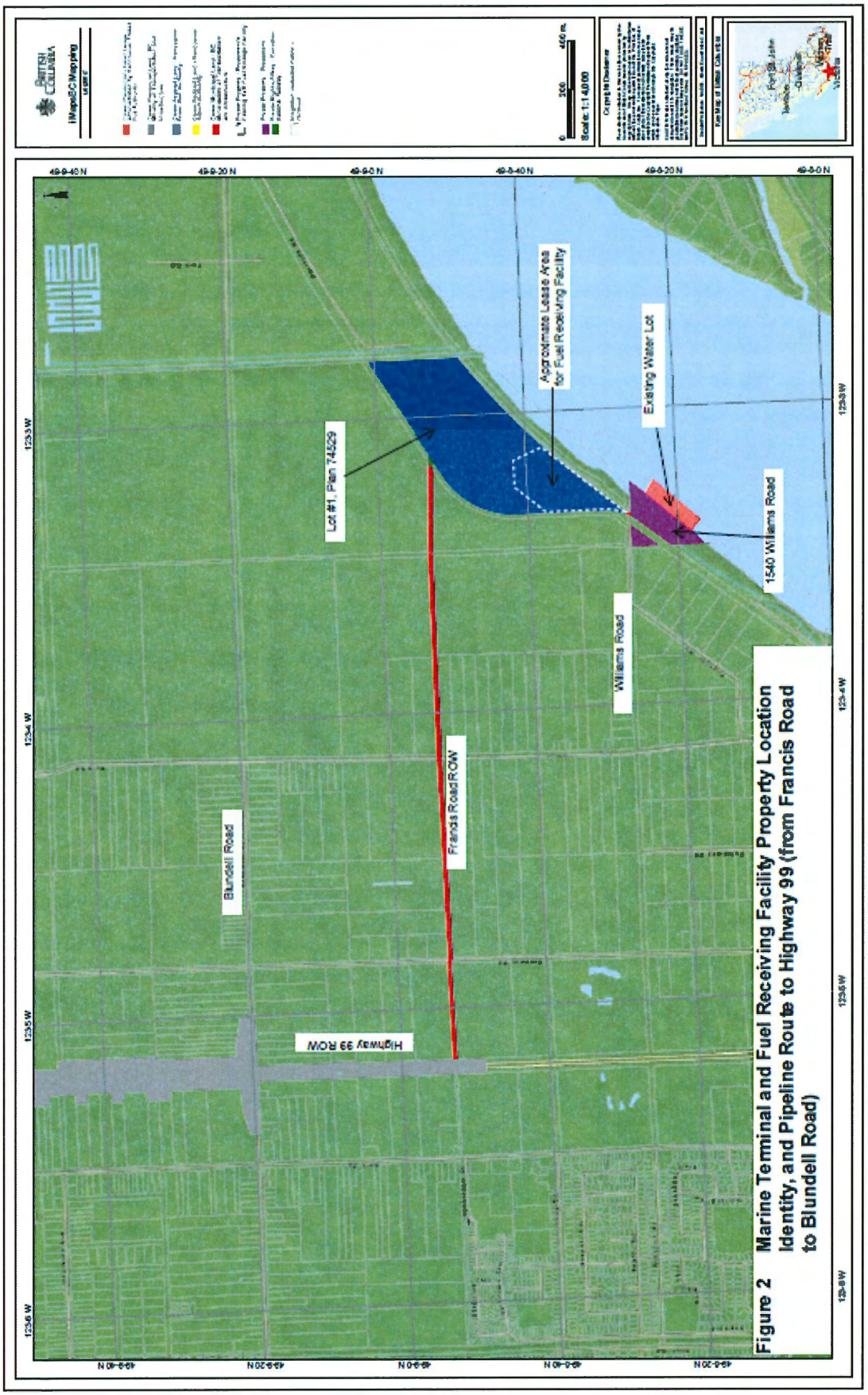

Approximate Lease Area for Fuel Receiving Facility
Existing Water Lot
Lot #1, Plan 74529
1540 Williams Road
Williams Road
Francis Road ROW
Blundell Road
Highway 99 ROW
Figure 2 Marine Terminal and Fuel Receiving Facility Property Location Identity, and Pipeline Route to Highway 99 (from Francis Road to Blundell Road)

Figure 3 Pipeline Route within Highway 99 Right-of-Way from Blundell Road to Westminster Highway

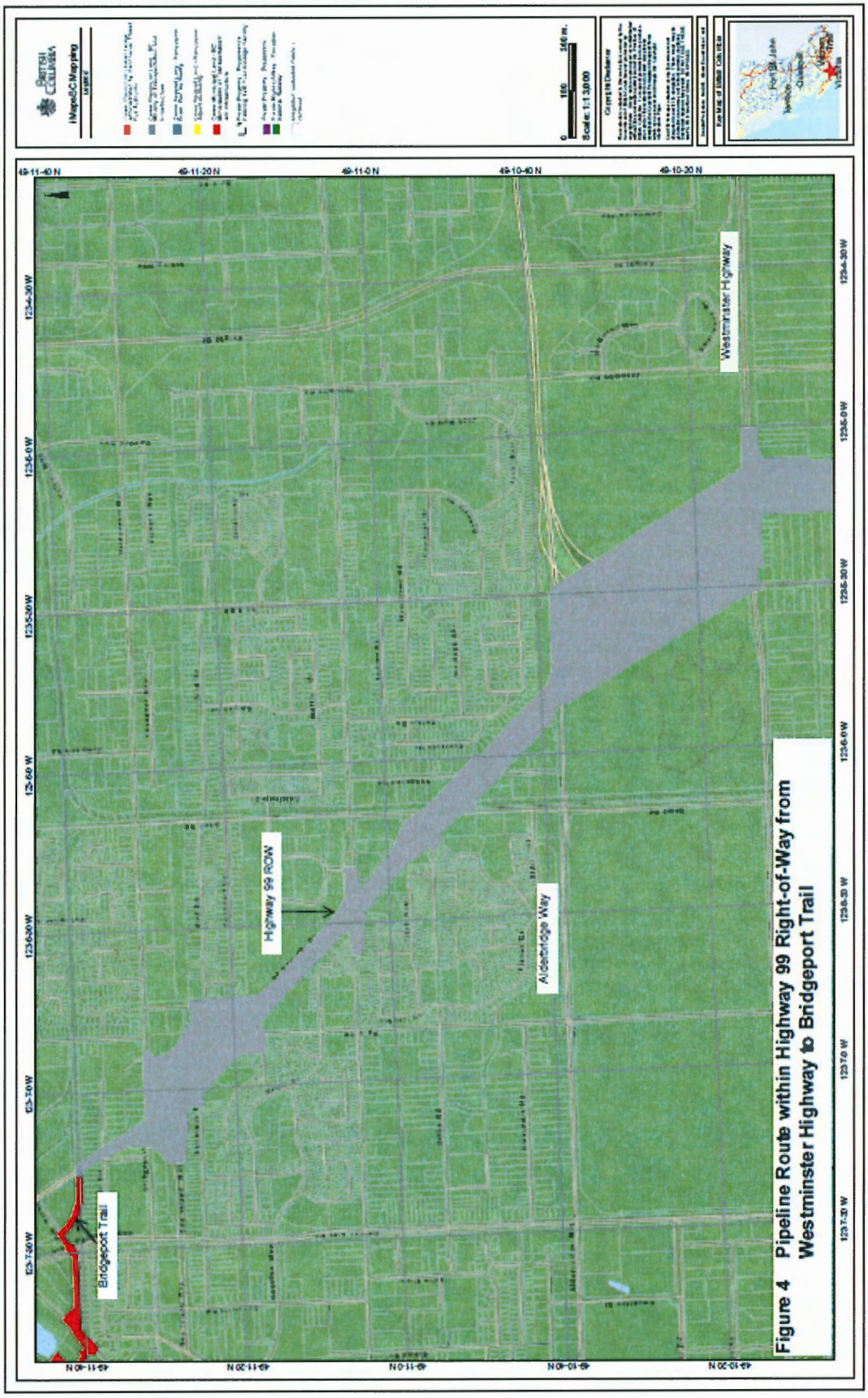
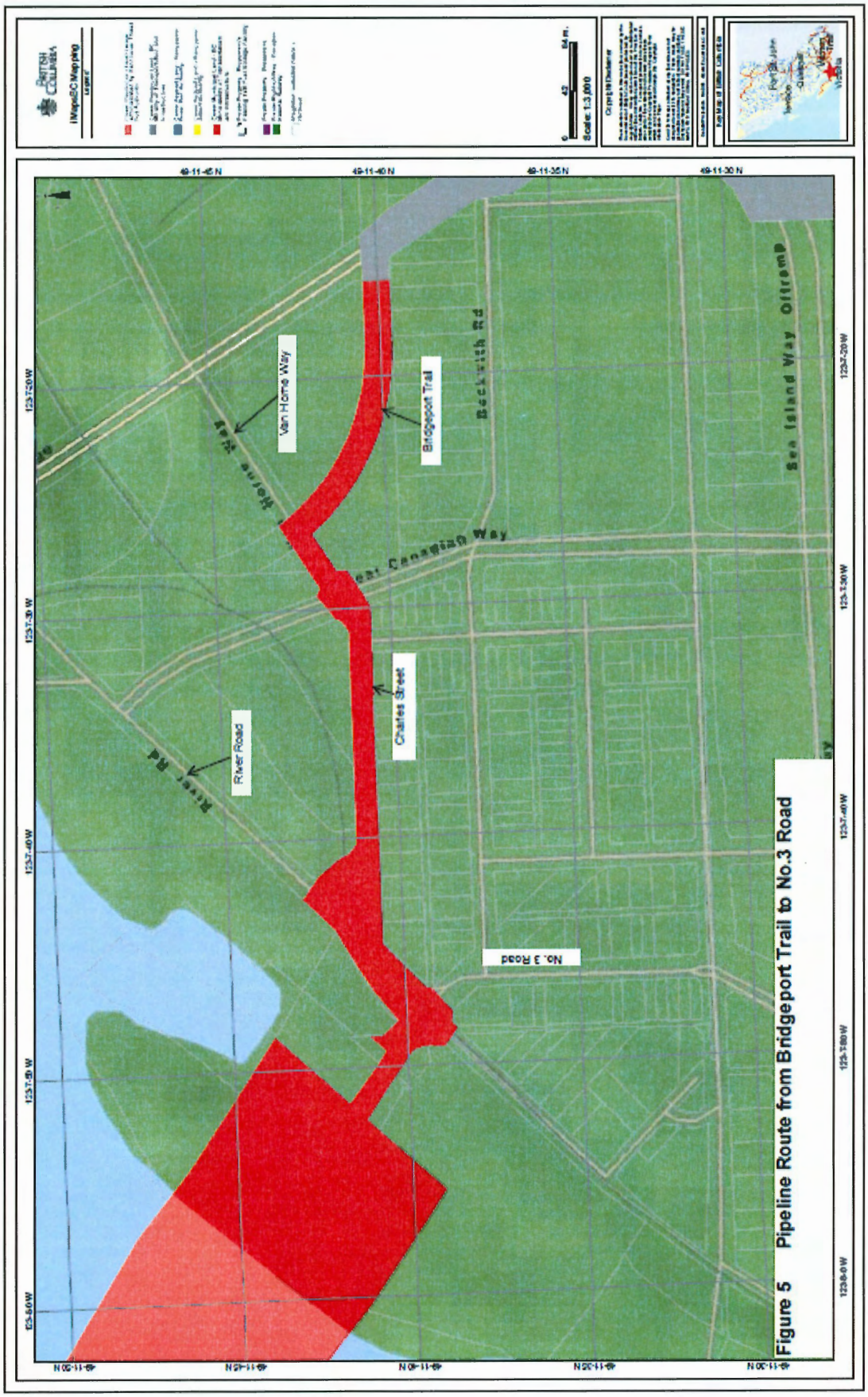
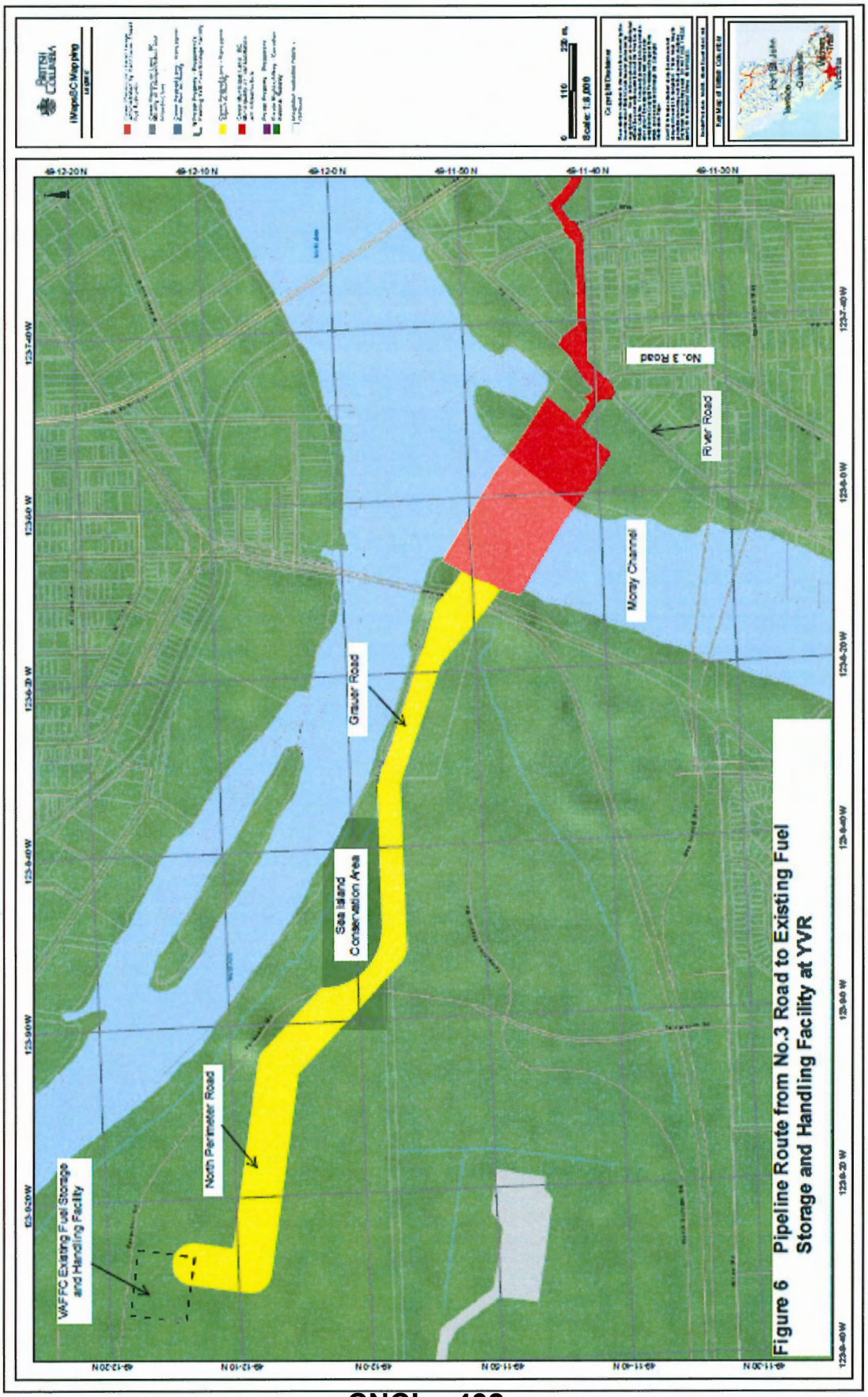
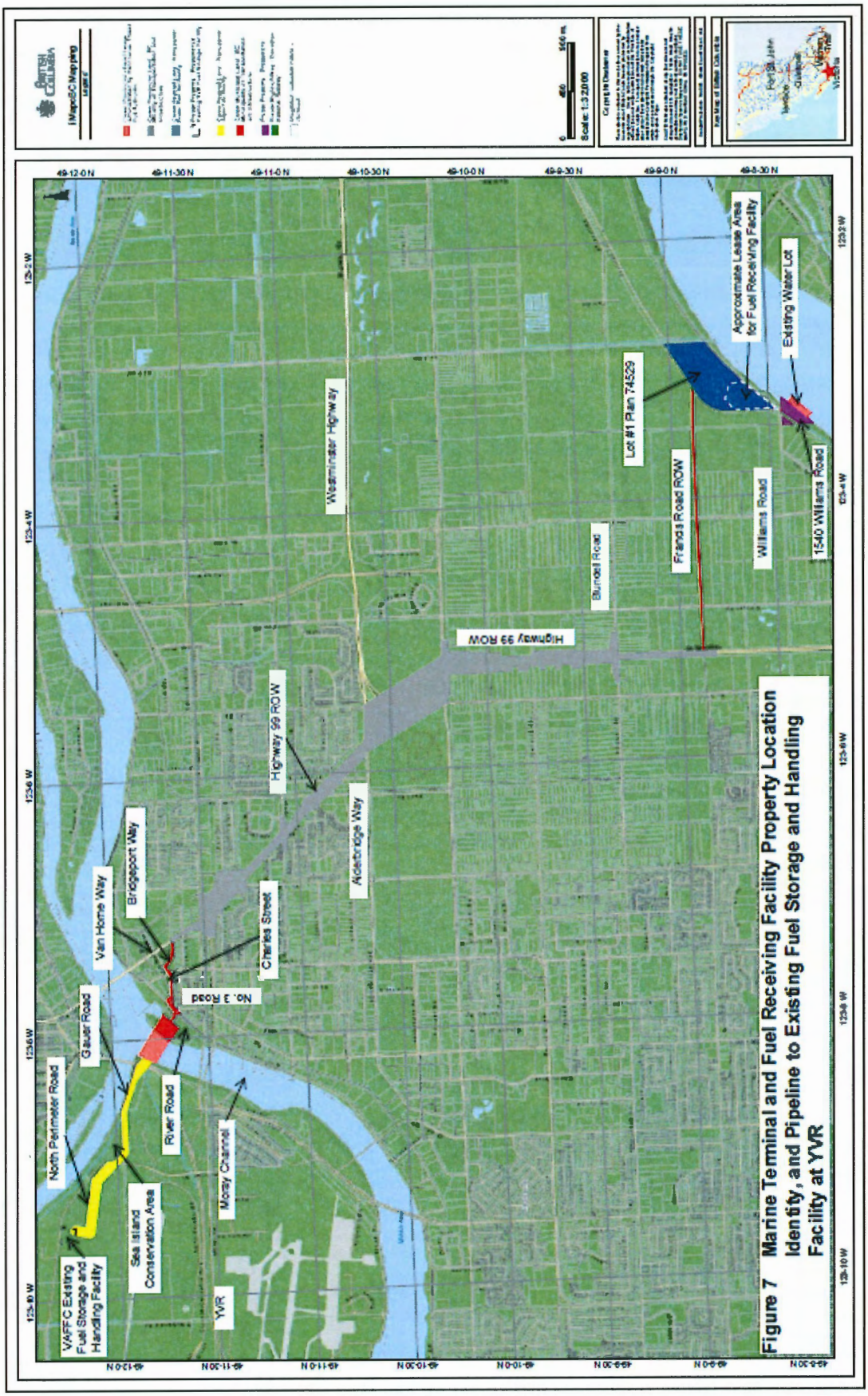


Figure 4 Pipeline Route within Highway 99 Right-of-Way from Westminster Highway to Bridgeport Trail


Van Horne Way
Bridgeport Trail
Beckwith Rd
Sea Island Way Offramp
Charles Street
River Road
No. 3 Road
Figure 5 Pipeline Route from Bridgeport Trail to No.3 Road


No. 3 Road
River Road
Gravel Road
Sea Island Conservation Area
North Perimeter Road
VAFFC Existing Fuel Storage and Handling Facility
Figure 6 Pipeline Route from No.3 Road to Existing Fuel Storage and Handling Facility at YVR


Approximate Lease Area for Fuel Receiving Facility
Existing Water Lot
Lot #1 Plan 74529
Francis Road ROW
Williams Road
1540 Williams Road
Westminster Highway
Burrard Road
Highway 99 ROW
Highway 99 ROW
Aldebridge Way
Charles Street
Bridgeport Way
Van Horne Way
No. 3 Road
Gauer Road
North Perimeter Road
River Road
Sea Island Conservation Area
Moray Channel
YVR
YVR Existing Fuel Storage and Handling Facility
Figure 7 Marine Terminal and Fuel Receiving Facility Property Location Identity, and Pipeline to Existing Fuel Storage and Handling Facility at YVR

SCHEDULE B

TABLE OF CONDITIONS

This table lists the conditions that the Holder of an Environmental Assessment Certificate (EAC) for the Vancouver Airport Fuel Delivery Project (Project) must fulfill following receipt of the Project's EAC. Although the Holder is responsible for conditions at all times, the Holder may retain 'contractors' or 'operators' to assist with the performance of certain conditions.

In this Schedule:

'authorization' includes a permit, license, approval or other authorization issued by a government allowing a person to carry out an activity that would otherwise be contrary to law;

'contractor' means a person contracted by the Holder to undertake work associated with the construction of Project components;

'operator' means a person contracted by the Holder to manage the operation of the Project components; and

'subcontractor' means a person working on the Project under contract with the contractor, including a person working on the Project under contract with a subcontractor.

A reference to a standard, code, or enactment in these conditions is a reference to that standard, code, or enactment as amended from time to time, and, if the standard, code, or enactment is superseded or replaced by a standard, code, or enactment published or enacted by the same organization as the original, is a reference to the subsequent standard, code, or practice.

Note: The Project has been assessed under the *Environmental Assessment Act,* S.B.C. 2002, c. 43, and a screening level environmental assessment of the Project was commenced under the *Canadian Environmental Assessment Act,* S.C. 1992, c. 37, and completed under the *Canadian Environmental Assessment Act, 2012,* S.C. 2012, c. 19, as if the earlier Act had not been repealed. To avoid uncertainty and duplication, the BC Environmental Assessment Office and Vancouver Fraser Port Authority, as federal authority in relation to the Project, undertook a coordinated environmental assessment.

Vancouver Airport Fuel Delivery Project
Table of Conditions

Number	Condition	Timing	Source	Responsible Agency for Compliance
Responsible Environmental Management – Construction				
1	The Holder must develop and implement a Construction Environmental Management Plan (CEMP) in accordance with Chapter 9 of the Application. The CEMP must include the following: a. Accidents or Malfunctions Management Plan; b. Air Quality and Dust Control Management Plan; c. Archaeological Management Plan; d. Contaminated Sites Management Plan; e. Fuels, Chemicals and Materials Storage and Handling Plan; f. Noise Management Plan; g. Spill Prevention and Emergency Response Plan; h. Surface Water Quality/Fisheries Protection and Sediment Control Plan; i. Vegetation and Wildlife Management Plan; and j. Waste Management Plan. The Holder may implement two CEMPs. One for early or advance pre-construction works including geotechnical investigations, site preparation and preloading, if required, and one for major construction works. The CEMP must describe measures to verify that construction activities will comply with the EAC, regulatory approvals, applicable legislation and applicable industry best management practices. The Holder must obtain approval of the final CEMP from Environmental Assessment Office (EAO) before commencement of construction of the Project. Municipalities, government agencies, and First Nations involved in the environmental assessment for the Project must be provided copies of the draft and final CEMP plans, unless they indicate otherwise.	Pre-Construction - prepared 60 days before construction starts (30 days for any pre-construction early works) Construction - implemented throughout	Application - Chapter 9	EAO/FLNR/MoE
2	The Holder must develop and implement a Traffic Management Plan (TMP) in accordance with Chapter 9 of the Application. The TMP must: a. Follow the "Traffic Control Manual for Work on Roadways" (Ministry of Transportation and Infrastructure (MOTI) 1999) where Project activities occur on arterial highways as defined by the	Pre-Construction - prepared 60 days before construction starts Construction - implemented throughout	Application - Chapter 9	EAO

Number	Condition	Timing	Source	Responsible Agency for Compliance
	Transportation and Infrastructure Act and the City of Richmond's General Traffic Control Guidelines for City of Richmond Roadways where Project activities occur on roads within the City of Richmond's jurisdiction; and b. Include a communications strategy to inform stakeholders, including the public and government agencies, about construction progress and identify methods for providing feedback on issues and concerns. The TMP must describe measures to verify that construction activities will comply with the EAC, regulatory approvals, applicable legislation and applicable industry best management practices. The draft TMP must be provided to EAO, the Vancouver Fraser Port Authority, the Ministry of Transportation and Infrastructure, and the City of Richmond for review and comment. The Holder must obtain approval of the final TMP from EAO before commencement of construction of the Project.			
3	The Holder must require that each contractor deliver an environmental orientation training session to all of their construction site personnel and sub-contractor site personnel as a pre-requisite to on-site work. The training session must include: a. An overview of the CEMP; b. Roles and responsibilities of Project personnel and relevant contact information; c. Site-specific environmental issues, regulatory requirements, environmental protection and mitigation measures; d. The applicable Workplace Hazardous Materials Information System; and e. Responsibilities, protocols, and relevant contact information in response to an accidental spill or other type of environmental emergency, including information specified by relevant standards, codes, or enactments.	Pre-Construction and Construction - delivered before construction starts and to personnel hired during construction	Application - Chapter 9	EAO
Number	**Condition**	**Timing**	**Source**	**Responsible Agency for Compliance**
4	The Holder must require each contractor to retain the services of an Environmental Monitor, with demonstrated experience and knowledge of environmental monitoring for construction projects in BC,	Pre-Construction - hired before construction starts	Application - Chapter 9	EAO

Number	Condition	Timing	Source	Responsible Agency for Compliance
	throughout the construction phase. The Environmental Monitor must be given authority to stop work, and be responsible for ensuring compliance with: a. The terms and conditions of the EAC; b. The avoidance or protection measures described in the CEMP permits, or c. Any authorizations or other regulatory requirements.	Construction - implemented throughout		
5	The Environmental Monitor must report on contractors' and subcontractors' compliance with the terms and conditions of the EAC, the avoidance or protection measures described in the CEMP, any authorizations and other regulatory requirements. Monitoring reports must be submitted to the Holder or Environmental Manager.	Construction - implemented throughout Reports provided monthly	Application - Chapter 9	EAO
6	The Holder must retain the services of an experienced and qualified Environmental Manager with demonstrated experience and knowledge of environmental monitoring for construction projects in BC to oversee the implementation of the CEMP and contractors' and subcontractor's environmental performance as described in Chapter 9 of the Application. The Environmental Manager must perform the following tasks: a. Review monitoring reports submitted by the contractors' Environmental Monitors; and b. Complete monthly on-site audits and reports, as a minimum, with more frequent audits and reports scheduled depending on the work activity, consistent with the CEMP.	Construction Reports compiled monthly	Application - Chapter 9	EAO
7	The Holder must produce reports summarizing: a. Surveys referred to in Conditions 19, 21, 22, and 23; b. Archeological Impact Assessment referred to in condition 39; and c. Updates to the Richmond Heritage Inventory and Register and the Holder's assessment of whether these impact the Project. The summary reports must provide a reasonably detailed overview of the work or survey. The Holder must provide copies of the summary report to EAO and any interested government agencies or First Nations, on request.	Construction - implemented throughout Reports available on request.	Application - Chapter 9	EAO
Responsible Environmental Management – Operations				

Number	Condition	Timing	Source	Responsible Agency for Compliance
8	The Holder must develop and implement an Operations Environmental Management Plan (OEMP) in accordance with Chapter 9 of the Application. The Holder must review and update the OEMP annually. The OEMP must include the following: a. Accidents or Malfunctions Plan; b. Air Quality Management Plan; c. Waste Management Plan; d. Noise and Nuisance Management Plan; and e. Surface Water Quality Monitoring Plan. The OEMP must verify that operations will comply with the EAC, regulatory approvals, applicable legislation and applicable industry best management practices. The Holder must obtain approval of the final OEMP from EAO prior to commencing operations. Municipalities, government agencies and First Nations involved in the environmental assessment for the Project must be provided copies of the draft and final plans, unless they indicate otherwise.	Pre-Operations - prepared 60 days before operations start Operations – annual reports and implemented throughout	Application - Chapter 9	EAO/FLNR/MoE
Fisheries, Aquatics and Surface Water Quality				
9	The Holder must: a. Include a water sampling program in their CEMP Surface Water Quality / Fisheries Protection and Sediment Control Plan, designed in consultation with BC Ministry of Environment, that is consistent with BC Approved Water Quality Guidelines, *A Compendium of Working Water Quality Guidelines for British Columbia* (Ministry of Environment, 2006) and *Water Quality Assessment and Objectives for the Fraser River from Hope to Sturgeon and Roberts Banks* (Ministry of Environment), that identifies procedures for collecting and analyzing water samples, before and during construction, from surface water drainage ditches that have potential to be adversely affected by construction activities; b. Measure for pH, temperature, and biochemical oxygen demand, as well as relevant contaminants, including, but not necessarily limited to, total petroleum hydrocarbons, polycyclic aromatic hydrocarbons, total suspended solids, and dissolved and total metals concentrations; and c. Control the discharge water and surface run-off from the work area so it meets the applicable provincial and/or federal water quality guidelines or requirements. If these applicable guidelines or	Pre-Construction – water sampling plan to be prepared 60 days before construction starts Pre-Construction – sampling and implementation to begin before starting any work in and around the Fraser River and surface drainage ditches Construction: Implementation of plan and continued sampling and measurement throughout construction	Application - Section 5.2 Agency/First Nations Comments	EAO/OGC/FLNR/MoE

Number	Condition	Timing	Source	Responsible Agency for Compliance
	requirements are exceeded, the cause must be investigated and water control measures must be adjusted as necessary to correct the cause of the exceedance.			
10	Unless an authorization under section 8 or a permit under section 25 of the *Oil and Gas Activities Act* specifically exempts the Holder from this condition and establishes alternate equivalent or better standards, the Holder must adhere to the "Best Management Practices for Pile Driving and Related Operations" (BC Marine and Pile Driving Contractors Association 2003).	Construction - for activities and equipment related to pile-driving	Application - Section 5.2	EAO
11	The Holder must monitor underwater sound pressure levels generated by pile driving equipment. If the measured sound pressure levels exceed 30 kilopascals, at a distance of one metre (1 m) from the pile, or if the Environmental Monitor observes direct evidence of distressed, injured or dead fish associated with pile-driving activity, the Environmental Monitor must immediately suspend all in-river work generating high sound pressure levels, notify Fisheries and Oceans Canada (DFO), develop and obtain DFO approval for mitigation measures, and implement those measures when restarting the activity.	Construction - for activities and equipment related to underwater pile-driving	Application - Section 5.2	EAO/DFO
12	If cast-in-place rather than precast construction methods are used at the marine terminal, the Holder must use concrete-tight forms to isolate the concrete from the receiving river environment, and must take appropriate steps to ensure that uncured concrete, concrete fines or water that has been in contact with uncured concrete do not enter the receiving river environment.	Construction - implemented throughout terminal construction	Application - Section 5.2	EAO/FLNR/DFO
13	The Holder must adhere to the "Fraser River Estuary Management Program (FREMP) Dredge Management Guidelines" (FREMP 2005).	Construction and Operations – for activities associated with dredging	Application - Section 5.2	EAO/FLNR/DFO
14	All in-water river construction works must either be carried out from equipment located onshore and above the high water mark or from a barge that is spud-anchored or moored at the terminal berth so as to prevent grounding, or other disturbance, on the intertidal foreshore or sub tidal river bed.	Pre-Construction - before starting any in-water works	Application - Section 5.2	EAO/FLNR/DFO
15	The Holder must conduct all work in and around the Fraser River and surface water drainage ditches on Lulu Island according to the relevant BC Ministry of Environment Guidebook Chapters on Best Management Practices for Instream Works and the "Land Development Guidelines for the Protection of Aquatic Habitat" (Fisheries and Oceans Canada and Ministry of Environment, Lands and Parks 1992), unless an authorization under section 8 or a permit under section 25 of *the Oil and Gas Activities Act*	Pre-Construction - before starting any work in and around the Fraser River and surface drainage ditches	Application - Section 5.2	EAO/FLNR/DFO/OGC

Number	Condition	Timing	Source	Responsible Agency for Compliance
	specifically exempts the Holder from this condition and establishes alternate equivalent or better standards The Holder must conduct all work in and around surface water drainage ditches on Sea Island according to the "Environmental Construction Standards" from the Vancouver Airport Authority (1998).			
16	The Holder must develop and implement site-specific management plans for directional drilling of pipelines consistent with the guidelines in the "Planning Horizontal Directional Drilling for Pipeline Construction" (Canadian Association of Petroleum Producers 2004).	Pre-Construction - prepared 60 days before construction starts Pre-Construction - before starting any directional drilling works Construction	Application - Section 5.2	EAO/OGC
Fuels, Chemicals and Materials Storage and Handling				
17	The Fuels, Chemicals and Materials Storage and Handling Plan must adhere to relevant guidance in "A Field Guide to Fuel Handling, Transportation and Storage" (Ministry of Water, Land and Air Protection 2002). The Plan must apply to all construction activities and identify best management practices for: a. Equipment refuelling; b. Concrete materials use; and c. Painting, staining and chemical applications.	Pre-Construction - prepared 60 days before construction starts Construction - implemented throughout	Application - Section 9.4	EAO/MoE
Vegetation and Wildlife				
18	The Vegetation and Wildlife Management Plan must adhere to the following standards: a. "2012 Standard Specifications for Highway Construction" (MOTI 2011) for Project components located within provincial rights-of-way; b. "Master Municipal Construction Documents" for Project components located on property owned by the City of Richmond; and c. Vancouver Airport Authority's vegetation standards for Project components located on property under Airport jurisdiction.	Pre-Construction - prepared 60 days before construction starts Construction - implemented throughout	Application - Section 5.3	EAO/FLNR
19	The Holder must complete site-specific rare/at-risk plant surveys, to be conducted by a suitably qualified professional, according to the University of British Columbia's E-Flora BC rare plant survey protocols. If	Pre-Construction - before starting any clearing and	Application - Section 5.3	EAO/FLNR

Vancouver Airport Fuel Delivery Project
Table of Conditions

Number	Condition	Timing	Source	Responsible Agency for Compliance
	avoidance of rare or at-risk plants is not practical, plants must be salvaged and relocated according to the "Guidelines for Translocation of Plant Species at Risk in British Columbia" (Ministry of Environment 2009).	grubbing activities in existing natural corridors		
20	The Holder must follow the "Best Management Practices Guidelines for Pacific Water Shrew in Urban and Rural Areas (Working Draft)" (Ministry of Environment 2010).	Pre-Construction - before starting any work in and around surface drainage ditches Construction	Agency/First Nations Comments	EAO/FLNR
21	The Holder must complete a bird nest survey, to be conducted by a suitably qualified professional, to verify that the Project complies with the *BC Wildlife Act* and Migratory Birds Regulations pursuant to the *Migratory Birds Convention Act*, 1994. The Holder must conduct vegetation clearing outside the general bird nesting season from April 1 to July 31 (or to September 15 where fledglings are still on the nest) unless otherwise specifically approved by the Ministry of Forests, Lands and Natural Resource Operations, or in a permit issued under section 25 of the *Oil and Gas Activities Act*. The Holder must report on the nest survey in their summary report(s).	Pre-Construction - survey to be completed before starting clearing work if clearing is required during nesting season	Agency/First Nations Comments	EAO/OGC/FLNR/MoE/ CWS
22	The Holder must complete a raptor nest survey, to be conducted by a suitably qualified professional, to update the status of raptor nests and unless an authorization under section 8 or a permit under section 25 of the *Oil and Gas Activities Act* specifically exempts the Holder from this condition and establishes alternate equivalent or better standards, conduct construction activities in accordance with the "Best Management Practices for Raptor Conservation during Urban and Rural Land Development in British Columbia" (Ministry of Environment 2005). The Holder must report on the raptor nest survey in their summary report(s).	Pre-Construction – survey to be completed before starting construction in areas in which suitable habitat for raptors may occur. Construction – raptor monitoring as required	Agency/First Nations Comments	EAO/OGC/FLNR/MoE/ CWS
23	The Holder must complete an amphibian egg mass and/or adult field survey for northern red-legged frog and western toad, to be conducted by a suitably qualified professional. The amphibian survey must follow the "Best Management Practices for Amphibians and Reptiles in Urban and Rural Environments in British Columbia" (Ministry of Water Land and Air Protection 2004). The Holder must report on the amphibian egg mass and/or adult field survey for northern red-legged frog and western toad in their summary report(s)	Pre-Construction – before starting construction in areas in which suitable habitat for northern red-legged frog and western toad may occur	Agency/First Nations Comments	EAO/FLNR

Number	Condition	Timing	Source	Responsible Agency for Compliance
Air Quality				
24	The Air Quality and Dust Control Management Plan must be based on the "Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities" (Cheminfo Services Inc. 2005).	Pre-Construction - prepared 60 days before construction starts Construction - implemented throughout	Application - Section 5.4	EAO/MoE/OGC
25	The Holder must include as part of the contractual terms that contractors and subcontractors use non-road diesel engines for construction equipment that meet Tier 2 emissions standards, as defined by the U.S. Environmental Protection Agency (EPA). Preference must be given to proposals where at least 50 percent of non-road diesel engines employed by the person submitting the proposal and their team of potential subcontractors on the Project will meet Tier 4 emission standards.	Construction - Procurement stage for construction contractors	Application - Section 5.4	EAO
26	The Holder must identify and implement measures to reduce common air contaminants and greenhouse gas emissions at the marine terminal consistent with the "Northwest Ports Clean Air Strategy" (Port of Seattle, Port of Tacoma, and Port Metro Vancouver 2007) and subsequent updates to that strategy.	Operations - throughout	Application - Section 5.4	EAO
27	The Holder must design and construct the marine terminal to include infrastructure to facilitate the future use of shore power (i.e. power conduits).	Pre-Construction - during detailed design Construction	Agency/First Nations comments	EAO
28	The Holder must incorporate a pressure/vacuum venting system to control emissions from the fuel receiving tanks unless internal floating pans are used in the tanks.	Pre-Construction –design Construction Operations	Application - Chapter 17	EAO
Noise				
29	The Noise Management Plan must describe, and the Holder must implement, best management practices to mitigate the noise from construction and operation of equipment and vehicles. The Noise Management Plan must include measures to coordinate the timing of pile driving at the marine facility with activities Fraser Wharves Ltd to avoid exceedance of the City of Richmond's Noise Regulation Bylaw No. 8856.	Pre-Construction - prepared 60 days before construction starts Construction - implemented throughout	Application - Section 5.5	EAO/OGC/Local Bylaw Officers
30	The Holder must identify and implement procedures and timelines for providing advance notice to	Pre-Construction - prepared 60	Application -	EAO/OGC

Vancouver Airport Fuel Delivery Project
Table of Conditions

Number	Condition	Timing	Source	Responsible Agency for Compliance
	potentially affected residences and businesses about pile-driving activities and responding to noise complaints.	days before construction starts Construction - implemented throughout	Section 5.5	
31	The Noise and Nuisance Management Plan must identify, and the Holder must implement, procedures for receiving and responding to noise complaints related to the operation of the marine terminal and the fuel receiving facility, including records management, which must be kept for a minimum of six months.	Pre-Operations - prepared 60 days before operations start Operations - implemented throughout	Agency/First Nations comments	EAO
Solid and Hazardous Waste				
32	The Holder must identify and implement strategies to minimize and manage construction waste in their Waste Management Plan in accordance with Metro Vancouver's code of practice for the building industry.	Pre-Construction - prepared 60 days before construction starts Construction - implemented throughout	Application - Section 9.4	EAO/MoE/FLNR
Contaminated Sites				
33	The Holder must write the Contaminated Sites Management Plan to be consistent with the BC Ministry of Environment's Technical and Administrative Guidance documents for contaminated sites.	Pre-Construction - prepared 60 days before construction starts Construction - implemented throughout for areas identified in the screening assessment as having medium to high risk of encountering contamination.	Application - Section 5.6	EAO
Social and Economic				
34	The Vegetation and Wildlife Management Plan must identify measures to protect street and trail trees.	Pre-Construction - prepared 60 days before construction starts Construction - implemented throughout	Application - Chapter 6	EAO

Number	Condition	Timing	Source	Responsible Agency for Compliance
35	If the City of Richmond develops the dike trail sections upstream and downstream of the marine terminal property, the Holder must work with the City of Richmond and adjacent landowners to provide a link to those upstream and downstream sections of the dike trail system that is compatible with the use of the site for marine terminal operations.	Pre-Construction - trail connectivity designed Pre-Operations - trail connectivity completed Operations – access to trail provided.	Agency/First Nations comments	EAO
36	With the exception of emergency lighting or spot lighting for vessels, the Holder must design area lighting for normal marine terminal and fuel receiving facility operations in a manner, such as directional or angled downward, which must minimize stray light outside of property boundaries.	Construction - Operations	Agency/First Nations comments	EAO/TC
37	The Holder must install visual screens on the east and south side of the fuel receiving facility before the start of operations, to reduce street level visual impacts from the fuel receiving facility.	Pre-Operations	Agency comments	EAO
Archaeological and Heritage				
38	The Archaeological Management Plan must be prepared and implemented by a BC Registered Professional Archaeologist.	Pre-Construction - prepared 60 days before construction starts Construction - implemented throughout	Application - Chapter 7	EAO/FLNR
39	The Holder must: a. Conduct an Archaeological Impact Assessment for the fuel receiving facility located on Vancouver Fraser Port Authority land, the pipeline exit point on Sea Island, and pipeline crossings of old slough channels; and b. Monitor site preparation and construction activities that will enter into native soils (i.e. non-fill) in locations rated as having high or moderate archaeological potential in the Holder's previously completed Archaeological Overview Assessment. The monitoring procedures must adhere to those identified in the "British Columbia Archaeological Resource Management Handbook" and the "Archaeological Impact Assessment Guidelines" issued by the Ministry of Forests, Lands and Natural Resources Operations.	Construction - before starting ground disturbance works in these areas and in areas identified in the overview assessment as having high or moderate archaeological potential Construction – monitor construction activities	Application - Chapter 7	EAO/FLNR/OGC

Vancouver Airport Fuel Delivery Project
Table of Conditions

Number	Condition	Timing	Source	Responsible Agency for Compliance
	The Holder must invite relevant First Nations to participate in the Archaeological Impact Assessment at least four weeks before commencing the Archaeological Impact Assessment.			
40	The Holder must monitor updates to the Richmond Heritage Inventory and Register during construction.	Construction – monthly throughout	Application - Chapter 7	EAO
Accidents or Malfunctions				
41	The Holder must describe measures in the Accidents or Malfunctions Management Plan to restrict access to all construction sites.	Pre-Construction - prepared 60 days before construction starts Construction - implemented throughout	Application - Chapter 15	EAO/FLNR/OGC/MoE
Spill Prevention, Preparedness, and Emergency Response				
42	The Holder must include the following components in the design, construction, and operation of the marine terminal: a. Hydraulically-assisted and articulated fuel unloading arms with audible and visual emergency alarms, and automated and manual emergency shut-down capability; b. Real-time aviation fuel unloading monitoring; c. A rapid-deployment boat launch facility and boat (this vessel is in addition to the spill response vessel required under conditions 48 and 50); d. A structure immediately upriver (northeast) and downriver (southwest) of the terminal dock to protect berthed vessels from river debris, facilitate spill containment and recovery, and to locate booms; e. Reel-mounted river boom; f. Two skimmers ready for deployment; g. Drainage control system that includes an oil/water separator system, emergency valves, and oil-stop valves; and h. Secondary containment measures for all fuel handling areas.	Pre-Operations - during detailed design Construction Operations	Application - Chapter 17 Agency/First Nations comments	EAO/FLNR/DFO/MoE
43	The Holder must develop and implement an Oil Pollution Emergency Plan (OPEP). The OPEP must describe: a. Measures to contact First Nations, neighbouring properties, and stakeholders that may be potentially affected by spills;	Pre-Operations - consult and prepare 60 days before operations start Operations - implemented	Agency/First Nations Comments Application -	EAO//FLNR/DFO/ Corporation of Delta/ City of Richmond

Number	Condition	Timing	Source	Responsible Agency for Compliance
	b. Measures to coordinate planning and response with First Nations and municipal, provincial, and federal agencies; and c. Environmentally sensitive areas that could potentially be affected in the event of a spill and describe the response measures that will be implemented to prevent and reduce the potential for spill contact. During development of the final OPEP, the Holder must consult the Corporation of Delta and City of Richmond fire and emergency departments to finalize notification requirements in the event of a spill in the river (e.g., immediate notification to the Irrigation Foreman) that could reach irrigation intake systems and include notification requirements in the OPEP acceptable to Delta and Richmond fire and emergency departments.	throughout and updated annually	Chapters 16 and 17	
44	The Holder must: a. Equip the fuel receiving facility and marine terminal with emergency spill response equipment as described in the final OPEP; b. Consult with Western Canada Marine Response Corporation (WCMRC) to identify any additional emergency spill response equipment to be stored at the marine terminal in addition to the Holder's requirements under the OPEP and *Canada Shipping Act*; and c. Annually inspect emergency response equipment to verify that it is in good working order.	Pre-Operations - in place before operations start Operations - implemented throughout and inspected annually	Application - Chapter 17 Agency/First Nations Comments	EAO
45	The Holder must maintain a real-time weather station at the marine terminal as part of an early warning system for operations staff to shut-down the cargo transfer and disconnect cargo unloading arms. The Holder must annually inspect the system to verify that it is in good working order.	Pre-Operations - in place before operations start Operations - implemented throughout and inspected annually	Application - Chapter 17 Agency/First Nations Comments	EAO
46	Through its terminal vessel acceptance program, the Holder must specify that all aviation fuel delivery vessels using the facility are: a. Double-hulled; and b. Insured for pollution liability at the prevailing industry standard coverage limits sufficient to insure the potential liability of the vessel owner and operator according to the applicable law for emergency spill response, clean-up, and environmental remediation and to compensate for loss by aboriginal food.	Pre-Operations - in place before operations start Operations - implemented throughout	Application - Chapter 17 Agency/First Nations Comments	EAO

Number	Condition	Timing	Source	Responsible Agency for Compliance
	social, and ceremonial fishers licensed under the *Fisheries Act* caused by a spill of aviation fuel from the vessel.			
47	The Holder must maintain insurance coverage for liability of itself, its contractors, subcontractors, and operators during construction and operation of its facilities in accordance with the "Holder's Insurance Policy Summary (27 November 2012)". Without limiting the generality of the foregoing, the Holder must maintain pollution liability insurance that meets or exceeds the prevailing industry standard coverage limits sufficient to insure its potential liability, according to the applicable law, to compensate for emergency spill response, clean-up and environmental remediation and for loss by aboriginal food, social and ceremonial fishers licensed under the *Fisheries Act* caused by a spill of aviation fuel from the Holder's construction sites or operational facilities.	Construction Pre-Operations - in place before operations start Operations - implemented throughout	Agency/First Nations Comments	EAO
48	The Holder must arrange to have two dedicated spill response vessels available at or near the marine terminal during tanker arrival, berthing, and for the duration of aviation fuel unloading.	Operations - implemented throughout	Agency/First Nations Comments	EAO
49	The Holder must require all vessels berthed at the marine terminal to be surrounded by Kepner booming, or other booming that provides equal or better protection in relation to spills, before, and for the duration of, aviation fuel unloading. Booms must be inspected annually.	Pre-Operations - in place before operations start Operations - implemented throughout and inspected annually	Agency/First Nations Comments	EAO
50	The Holder must require a response vessel be deployed to Ladner Reach for pre-deployment of booming before aviation fuel unloading starts. The vessel, which is one of the two vessels described in condition 48, must remain on standby in Ladner Reach, or near the marine terminal, for the duration of aviation fuel unloading.	Operations - implemented throughout	Agency/First Nations Comments	EAO
51	The Holder must install spill response infrastructure (piles, anchor points, etc.) at the following locations on the Fraser River, in accordance with WCMRC recommendations, for rapid deployment of spill response equipment in the event of a spill: a. Sea Reach;	Pre-Operations - in place before operations start Operations - implemented throughout and inspected	Agency/First Nations Comments	EAO

Vancouver Airport Fuel Delivery Project
Table of Conditions

Number	Condition	Timing	Source	Responsible Agency for Compliance
	b. North Steveston Harbour; c. Canoe Passage; and d. Ladner Reach.	annually		
52	The Holder must design, construct, and maintain the fuel receiving facility and pipeline system to provide for: a. In-line inspection and cleaning; b. A flow monitoring system; c. Pressure sensors; and d. Automatic motorized valves to control the receiving and dispensing of product and designed to close when commanded by the automated emergency shut-down system and fire detection equipment.	Pre-Construction –design Construction Operations	Application - Chapter 17	EAO/OGC
53	The Holder must design, construct, and maintain the fuel receiving facility and pipeline system to provide for: a. An automatic leak detection system for the transfer and delivery pipelines; and b. A cathodic protection system, or equivalent or better system, to inhibit corrosion of tank bottoms. Design of these elements must be approved by a suitably qualified professional.	Pre-Construction –design Construction Operations	Application - Chapter 17	EAO/OGC
54	The Holder must design, equip, and maintain the fuel receiving facility with oil-stop valves, lift stations, or other control valves to provide protection against accidental fuel releases occurring within the tank containment area and all other fuel handling area from overwhelming the oil/water separator and entering the surrounding drainage ditches and waterways. Design must be certified by a suitably qualified professional	Pre-Construction –design Construction Operations	Application - Chapter 17	EAO
Fire Prevention, Preparedness and Emergency Response				
55	The Holder must prepare and implement a Fire Safety Plan in consultation with the City of Richmond Fire Rescue, the Corporation of Delta Fire, Provincial Emergency Services, and the BC Oil and Gas Commission.	Pre-Operations - consult and prepare 60 days before operations start Operations - implemented throughout and updated annually	Application - Chapter 18	EAO/OGC

Number	Condition	Timing	Source	Responsible Agency for Compliance
56	The Holder must install, maintain and inspect firefighting systems at the fuel receiving facility sufficient to protect aviation fuel transfer areas and storage tanks, including: a. A high-expansion foam fire protection system connected to a fixed foam storage and dispensing unit; b. Auxiliary firefighting equipment; c. Automated fire detection systems; and d. A perimeter fire hydrant system to provide access to water for tank deluge and firefighting.	Construction Operations - inspect and maintain annually	Application - Chapter 18	EAO
57	The Holder must install, maintain and inspect firefighting systems at the marine terminal sufficient to protect aviation fuel transfer areas, including: a. Auxiliary firefighting equipment; b. Automated fire detection systems; and c. A fire hydrant system to provide access to water for firefighting.	Construction Operations - inspect and maintain annually	Application - Chapter 18	EAO
58	The Holder must test all fire prevention and response systems in accordance with applicable codes, guidelines, and best practices, and report the test results to the City of Richmond Fire Rescue, the Corporation of Delta Fire, Provincial Emergency Services, and the BC Oil and Gas Commission, upon request.	Pre-Operations - testing Operations - test, inspect and maintain annually	Application - Chapter 18	EAO/OGC
Miscellaneous Conditions				
59	During Project operations, the Holder must notify affected First Nations of the arrival and departure of a vessel delivering aviation fuel to the marine terminal at least 24 hours before the scheduled arrival and departure of that vessel in the South Arm of the Fraser River. The notice time may be reduced, from time to time, to the extent necessary to adjust to circumstances beyond the reasonable control of the Proponent related to the vessel's movement, but not reduced below 12 hours. For the purpose of this condition, an affected First Nation is one which had been consulted during the environmental assessment of the Project and to which DFO has issued a communal fishing license, Tsawwassen Harvest Documents, or other aboriginal community-based authorizations or commercial fishing license allowing members of an aboriginal community to fish on the South Arm of the Fraser River on the day of the arriving vessel. Specifics for notification procedures must be determined before the start of Project operations.	Pre-Operations – determine specifics for notification procedures Operations – implemented throughout	First Nations Comments	EAO
60	In the design of the terminal facilities, the Holder must follow the "Climate Change Adaptation Guidelines	Pre-Construction	Application -	EAO

Number	Condition	Timing	Source	Responsible Agency for Compliance
	for Sea Dikes and Coastal Flood Hazard Land Use: Sea Dike Guidelines" (Ministry of Environment 2011) to account for potential increases in water levels due to global sea level rise and potential flooding during extreme freshet conditions.		Chapter 21 Agency/First Nations Comments	
61	The Holder must use the Project facilities only to unload, store, and deliver aviation kerosene fuel.	Operations	Application - Chapter 2 Agency/First Nations Comments	EAO
62	Before the start of Project operations, the Holder must complete an additional study to respond to information gaps identified by Environment Canada in its submission to the BC EAO dated November 13, 2012, to supplement the previous study by the Holder on the effects of a jet fuel spill on biofilm in the Fraser River Estuary (see VAFFC's Fraser River Delta Biofilm Sensitivity to Jet A Fuel Spill - Summary Report submitted to EAO on September 3, 2012). The Holder must consult Environment Canada and Vancouver Fraser Port Authority on the terms of reference for the additional study. Once the terms of reference are settled, the Holder must complete the additional study to the satisfaction of the Vancouver Fraser Port Authority.	Pre-Operations – complete additional study	Agency Comments	EAO/Vancouver Fraser Port Authority
63	The Holder must require that at least one escort tug accompany each aviation fuel cargo barge and at least two tugs accompany each aviation fuel tanker to the marine terminal from Sand Heads, or from the point at which River Pilots board the vessels, subject to any applicable requirements imposed by the Vancouver Fraser Port Authority on the Fraser River related to navigational assistance for tanker vessels on the Fraser River.	Operations	First Nations Comments	EAO
64	The Holder must retain copies of all plans, reports, and other records required by these conditions and any records relating to any surveys, studies, or assessments required by these conditions for at least five years from their production. The Holder must, on request, make such plans and records available to EAO, persons designated as inspectors under the *Environmental Assessment Act*, or the Vancouver Fraser Port Authority.	Throughout Construction and Operations		EAO/OGC/FLNR/ Vancouver Fraser Port Authority

Attachment 10

VAFFC - 10 July 2019

SPILL RESPONSE REGULATORY REGIME

1. Primary Response – Marine Terminal and Vessel

- The *Canada Shipping Act* requires each Oil Handling Facility to have an Oil Pollution Emergency Plan (OPEP).
    - An oil handling facility must be able to deploy equipment and resources to:
        - contain and control any spill within one hour after discovery of a spill, and
        - recover and clean up within six hours.
- VAFFC has filed an OPEP that far exceeds these standards.
    - The emergency response is based on the Incident Command System, which is the international standard for emergency response and the approach followed by Western Canada Marine Response Corporation (WCMRC) and regional government response agencies
    - Response measures have been studied and field tested
    - Equipment and resources will be stored on the Marine Terminal site, so VAFFC can respond immediately if there is a spill at the Marine Terminal
    - Containment and sensitive area protection will be deployed in advance of and during vessel berthing, so these response measures will already be place if a spill occurs
    - Berthing/escort tugs will escort fuel cargo vessels up the river. EAC Condition #63 outlines the requirements:

      > The Holder must require that at least one escort tug accompany each aviation fuel cargo barge and at least two tugs accompany each aviation fuel tanker to the marine terminal from Sand Heads, or from the point at which River Pilots board the vessels, subject to any applicable requirements imposed by the Vancouver Fraser Port Authority on the Fraser River related to navigational assistance for tanker vessels on the Fraser River.

    - VAFFC/RO response vessel accompanies vessel up the river. EAC Condition #49 outlines the requirements:

      > The Holder must arrange to have two dedicated spill response vessels available at or near the marine terminal during tanker arrival, berthing, and for the duration of aviation fuel unloading.

    - VAFFC will contract with WCMRC to implement the OPEP, which links the primary response directly with the secondary response

- The VAFFC OPEP also includes an Oil Pollution Prevention Plan (OPPP), to meet best practice.

- The *Canada Shipping Act* requires vessels to have their own response plan – a Ship Oil Pollution Emergency Plan (SOPEP).

2. Secondary Responses – Response Organization and Government Agencies

(a) WCMRC Response

- WCMRC is the Transport Canada certified Response Organization (RO) under the *Canada Shipping Act.*

- *Canada Shipping Act* requires vessels and marine terminals that handle oil to contract with the RO to be available to respond to spills.

- The Act requires the response organization to be able to commence a response within six hours in this area.

- VAFFC will contract with WCMRC for emergency response and to assist with response planning and to reduce that response time. VAFFC proposes that response measures be deployed with each delivery.

(b) Government Response

- VAFFC will notify the federal and provincial regulatory agencies, if there is a spill.

- The Coast Guard coordinates the government response. Many agencies are involved in this effort, as well as First Nations. (see Chapter 5 of the OPEP for the details of the Incident Command System and Regional Environmental Emergency Team.)

- The Coast Guard may assume control of the clean-up operation if the vessel owner or the marine terminal does not take control or perform effectively.

- The Coast Guard can recover clean-up and response costs from a polluter.

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MARINE OIL SPILL REGULATORY REGIME

1. General Legal Regime

- Federal and provincial legislation govern pollution and establish liability for harm to third parties. The statutory measures overlay the common law, which also imposes liability on polluters.
- The basic principles are
  - the polluter pays
  - the polluter is held to a strict liability standard
  - the polluter must compensate government for the cost of clean up
  - the polluter must compensate third parties who suffer loss caused by the spill
  - the person who suffers loss must take reasonable steps to mitigate the loss

2. Statutory Regime

- Federal and provincial legislation impose restrictions on pollution and impose liability for clean-up and third party damage resulting from the escape of contaminants.
- The key federal statutes are:
  - *Fisheries Act*
    - protection of fish and fish habitat
    - liability to the government for remediation
    - liability for damage to third parties
  - *Canada Shipping Act*
    - establishes an oil spill emergency response regime
    - requirements for plans and preparedness
    - liability for clean up
  - *Canadian Environmental Protection Act*
    - requirements for pollution prevention plans and environmental emergency plans
    - spill reporting requirements
    - obligation to cleanup any spill

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- allows recovery of costs and expenses incurred by government during clean up or environmental remediation
- defines civil liability for a spill

o *Marine Liability Act*

- liability for oil pollution damage, the costs of clean up, and environmental reinstatement
- sources of compensation
  a) Ship owner
  b) Ship-Source Oil Pollution Fund

o *Migratory Birds Convention Act*

- prohibits the deposit oil, oily waste or other substances harmful to migratory birds into water inhabited by migratory birds

o *Transportation of Dangerous Goods Act*

- the shipment must be properly identified on the vessel and in the manifest
- requires an emergency response plan
- requires spill reporting and clean up by the person with the charge, management and control of the goods at the time of the spill

- The key provincial statute is the *Environmental Management Act*.

3. Common Law

- The common law imposes liability for harm caused by a polluter under several different
- causes of action, including negligence and nuisance.

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VAFFC SPILL PREVENTION, PREPAREDNESS AND RESPONSE

MARINE TERMINAL AND PIPELINE

MARINE-BASED

With the assistance of Western Canada Marine Response Corporation (WCMRC), VAFFC prepared a robust Spill Prevention, Preparedness and Response Plan for the Vancouver Airport Fuel Delivery Project. VAFFC filed the draft plan with the Environmental Assessment Office in January 2012.

About the Plan

- The development and maintenance of the plan is required under the *Canada Shipping Act* for a marine terminal handling oil products.
- WCMRC prepared the Oil Pollution Emergency Plan (OPEP), and VAFFC filed the proposed plan with Environmental Assessment Office in January 2012. The Act only requires the OPEP to be in place before the terminal goes into operation, but VAFFC commissioned the plan as part of the EAO review to respond to the interest in spill response.
- As required by the Act, VAFFC will update and finalize the OPEP with WCMRC, as needed, before the marine terminal goes into operation.
- VAFFC's proposed response equipment and resources for the marine terminal exceed the requirements of the *Canada Shipping Act.*
- VAFFC will engage WCMRC to respond to any marine fuel spills.
- WCMRC will provide the response resources required to contain, control and recover any spilled fuel.
- The Act requires a response organization to have the minimum ability to respond to a spill of 10,000 tonnes, but WCMRC actually has the capability to respond to a spill of 25,000 tonnes.
- WCMRC is also planning to construct an additional response base on the Fraser River, which will add to the response capability and shorten the response time.
- The VAFFC marine terminal will also have dedicated equipment on site to allow for immediate response capability. This dedicated equipment is incremental to the WCMRC response capability. (See the description of equipment that follows)
- Includes details on initial responses, sources of response equipment and personnel, response action detail, interaction with other plans and contact notification checklists for individuals and organizations.
- All terminal operational personnel and those involved with responding to marine terminal spills must have full knowledge and understanding of the OPEP.
- VAFFC must update the OPEP annually and after any spill incident or exercise.

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Spill Response Modelling

- In June 2011, WCMRC conducted an assessment of spill response techniques for protection of sensitive areas on the Fraser River to inform the development of the VAFFC OPEP.
- As a result of the assessment, WCMRC concluded that the spill response safety measures outlined in the plan will ensure WCMRC has a superior capability to respond to a spill at the VAFFC marine terminal and will also improve the response capability of all users of the Fraser River.
- The combination of industry best practices for terminal design, dock operations, dock spill preventative measures and tanker preventative measures coupled with a solid response readiness plan reduces the risk of a spill ever happening.
- In the unlikely event of a spill all of the safety measures will ensure a rapid response to minimize any adverse effects.

About the VAFFC Marine Terminal

Fuel will be transferred from vessels to shore using hydraulically-operated articulated unloading arms.

- The unloading arms will be designed to have flexibility and move with the vessel as winds, tides and currents change and as the vessel rises higher in the water as the fuel is offloaded.
- If the movement of any vessel exceeds the safe range, the fuel transfer process will stop automatically, and the arms will be disconnected using leak-free emergency release couplings.
- The terminal will be equipped with pre-deployed permanent booming complete with a pile deflection/protection system and skimmers to collect any if fuel spills.

On-site Spill Response Equipment & Supplies

- The following spill response equipment will be available at the VAFFC marine terminal:
    - Two response boats complete with boom and skimmers during vessel arrival and offloading, two boom reels with over 600 metres of self-inflating boom, fast-current skimmers, one boom reel with over 300 metres of river boom, temporary storage for recovered fuel, sorbents and an array of related parts such as anchors and towing vanes
- Before a vessel is offloaded, the boom and skimmers will be positioned around the vessel to contain a spill in the unlikely event of an accidental release of product onto water, and to recover the product as quickly as possible (see the figure below).
- The two response boats will be on standby to deploy boom in the open river if required.
- The sorbents will be used to absorb any spilled fuel.

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Spill Reporting:

- In the event of a spill, VAFFC has the responsibility to ensure the Canadian Coast Guard and federal and provincial authorities are promptly notified.

Properties of Jet A Fuel:

- Aviation fuel is a refined product and if spilled on water, the fuel will spread on the surface and rapidly evaporate.
- The rate of evaporation will be influenced by air temperature, water temperature, wind and wave conditions.

LAND-BASED

VAFFC will follow best practices for all components of the project. The land-based risks associated with the project will be managed to insignificant levels with currently available and well understood technology and expertise.

Fuel Receiving Facility

The fuel receiving facility will include six above ground steel storage tanks, and it will:

- Be regulated by the BC Oil and Gas Commission
- Be built to modern storage tank and seismic design requirements
- Provide secondary containment features for all fuel storage and handling areas
- Incorporate emissions control systems
- Incorporate modern corrosion protection, leak detection and flow control systems
- Be automated, monitored 24/7 and electronically safeguarded through electronic video surveillance
- Be controlled and monitored by on-site operations personnel during all offloading, fuel transfer and fuel handling activities

Pipeline

Modern pipeline systems have the benefit of precise locating technologies, new materials and coatings, and high-tech installation techniques to reduce disturbances during construction.

The pipeline system will:

- Be regulated by the BC Oil and Gas Commission
- Be constructed with resilient materials to current seismic design standards
- Be controlled and monitored by operations personnel during all fuel transfer activities

- Be pressurized only during fuel transfer operations (not 24/7)
- Include state-of-the-art corrosion protection and leak detection technologies
- Be buried underground and well-marked, mapped and electronically located for reference by municipal and private contractors
- Be monitored by a control system using pressure sensors and automatic flow shutoff devices

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OTHER FACTORS TO REDUCE RISK ON FRASER RIVER

1. Before the Vessels Arrival

(a) Tankers / Barges

- Vetting by Shipping Company, VAFFC and Canadian Government.
- Double hulled requirement
- Ship Oil Pollution Emergency Plans (SOPEP)
- Agreement with Response Organization (WCMRC)
- Communication with Vessel Traffic
- Communication with the terminal
- Vessels under control of BC Coast Pilots

(b) Terminal

- Equipment and procedures that represent industry best practices
- Oil Pollution Emergency Plans (OPEP)
- Oil Pollution Prevention Plan (OPPP)
- Agreement with Response Organization (WCMRC)

(c) Response Capability

- Response Organization (WCMRC) will have equipment and response readiness in the Fraser River
- Canadian Coast Guard – base in Richmond

2. On the River

- Vessels under control of Fraser River Pilots – with real time knowledge of river depths and other obstacles
- Sandy river bottom making grounding less likely and less hazardous
- Berthing/escort tugs will escort fuel cargo vessels up the river. EAC Condition #63 outlines the requirements:

> The Holder must require that at least one escort tug accompany each aviation fuel cargo barge and at least two tugs accompany each aviation fuel tanker to the marine terminal from Sand Heads, or from the point at which River Pilots board the vessels, subject to any applicable

requirements imposed by the Vancouver Fraser Port Authority on the Fraser River related to navigational assistance for tanker vessels on the Fraser River.

- VAFFC/RO response vessel accompanies vessel up the river. EAC Condition #49 outlines the requirements:

  The Holder must arrange to have two dedicated spill response vessels available at or near the marine terminal during tanker arrival, berthing, and for the duration of aviation fuel unloading.

- Communication with the terminal
- Tankers travel at slow speeds in the river
- Vessels are capable of selective ballasting to relocate cargo away from damaged compartments in event of an incident
- Fisherman Oil Spill Emergency Response Team (FOSET) will assist

3. At the Terminal

- Berthing tugs assist the vessels into the berth
- Vessels are securely moored using quick release couplings
- Response vessels deploy the containment boom and skimmers
- Pre-arrival readiness checks (personnel, tank space, monitoring systems, emergency shut-down, dock readiness)
- Pre-transfer (Ship to Shore) meeting of tanker and terminal and agree on process
- Leak-free articulating unloading arms used to connect to ship manifold
- On ship and on shore containment for piping and connections
- Response vessels deploy booming at Ladner Reach
- Response vessels tend boom at Ladner Reach
- Tanker and terminal continuously monitor unloading

4. Enhancement during normal operation

- As a result of VAFFC's Project, spill response capability on the South Arm of the Fraser River will be enhanced, which reduces risks associated with all oil and other liquid transports.

Attachment 11
OCG Permit and Permit Extension

BC Oil & Gas COMMISSION

April 10, 2017

Vancouver Airport Fuel Facilities Corporation
Unit 108- 12300 Horseshoe Way
Richmond, BC, V7A 4Z1

Attention: Vancouver Airport Fuel Facilities Corporation

RE: Commission Initiated Amendment of a Pipeline Permit

Application Determination Number: 100100195
Issuance Date: April 10, 2017

The BC Oil and Gas Commission (the Commission), under section 26(1)(d) of the Oil and Gas Activities Act, proposed amending Vancouver Airport Fuel Facilities Corporation's permit to replace a permit condition. After offering an oral opportunity to be heard, it was indicated by Vancouver Airport Fuel Facilities Corporation that the permit holder has no concerns with the proposed amendment. The Commission hereby amends the Permit and any associated authorizations referenced therein, subject to the original permit, any subsequent amendments and any additional or revised conditions as set out herein:

CONDITIONS

Notification

The Permit is amended to remove condition 12 stating:

> *The Permit Holder must notify Tsleil-Waututh Nation of any in-stream works at the marine terminal site a minimum of five (5) working days prior to commencement of activities.*

to be replaced with the following:

> *The Permit Holder must notify any First Nations who may have aboriginal interests identified, as per the BC First Nations Consultative Areas Database, of any in-stream works at the marine terminal site a minimum of five (5) working days prior to commencement of activities.*

This amendment forms an integral part of your permit(s) and should be attached thereto.

James O'Hanley
Vice President
Permitting & Authorizations

Date: March 22, 2017
Application Determination Number: 100101863

Commission Delegated Decision Maker

Copied to:

Land Agent: CCI Solutions
First Nations: Seabird Island First Nation, Squamish Nation, Katzie First Nation, Stz'uminus First Nation, Tsleil-Waututh Nation, Penelakut Tribe, Cowichan Tribes, Lyackson First Nation, Musqueam Indian Band, Semiahmoo First Nation, Lake Cowichan First Nation, Halalt First Nation, Tsawwassen First Nation, People Of The River Referrals Office, Sto:lo Nation, Sto:lo Tribal Council, Soowahlie First Nation, Skawahlook First Nation, Shxw'ow'hamel First Nation, Hwlitsum

BC Oil & Gas COMMISSION

April 3, 2017

Vancouver Airport Fuel Facilities Corporation
Unit 108- 12300 Horseshoe Way
Richmond, BC, V7A 4Z1

Attention: Vancouver Airport Fuel Facilities Corporation

RE: Determination of Application Area Number 100100195

Permit Holder: Vancouver Airport Fuel Facilities Corporation
Date of Issuance: April 3, 2017
Effective Date: April 3, 2017
Application Submitted Date: February 15, 2017
Application Determination Number: 100100195
Approved Disturbance Footprint: 17.127 ha

ACTIVITIES APPROVED

Pipeline Project No.: 000024381	**Segment No.:** 1, 2, 3, 4, 5
Associated Oil & Gas Activity No.: 00156632 to 00156652	**Type:** Workspace
Changes In and About a Stream: 0003774	

TECHNICAL SPECIFICATIONS

Seg No.: 001	**From:** d-65-H/92-G-3 **To:** a-75-H/92-G-03
Flow Direction: Uni-Directional **Product:** Jet Fuel **Pipe Outer Diameter (mm):** 609.6	**Maximum Operating Pressure (kpa):** 1035 **Installation Number(s):** 1, 2
Seg No.: 002	**From:** a-75-H/92-G-03 **To:** d-65-H/92-G-3
Flow Direction: Uni-Directional **Product:** Jet Fuel **Pipe Outer Diameter (mm):** 355.6	**Maximum Operating Pressure (kpa):** 3102 **Installation Number(s):** 3, 4
Seg No.: 003	**From:** d-65-H/92-G-3 **To:** a-43-J/92-G-03
Flow Direction: Uni-Directional **Product:** Jet Fuel **Pipe Outer Diameter (mm):** 355.6	**Maximum Operating Pressure (kpa):** 3102 **Installation Number(s):** 5, 6, 7, 8, 9
Seg No.: 004	**From:** d-65-H/92-G-3 **To:** a-75-H/92-G-03

Permit Holder: Vancouver Airport Fuel Facilities Corporation
Application Determination number: 100100195

Application Submission Date: February 15, 2017
Date Issued: April 3, 2017

Flow Direction: Uni-Directional **Product:** Jet Fuel **Pipe Outer Diameter (mm):** 609.6	**Maximum Operating Pressure (kpa):** 1035 **Installation Number(s):** 10, 11
Seg No.: 005	**From:** a-75-H/92-G-03 **To:** a-43-J/92-G-03
Flow Direction: Uni-Directional **Product:** Jet Fuel **Pipe Outer Diameter (mm):** 355.6	**Maximum Operating Pressure (kpa):** 3102 **Installation Number(s):** 12, 13, 14

Technical Pipeline Permissions

Segment 1: Liquid Hydrocarbons, MOP: 1035 kPa, Unidirectional
Segment 2: Liquid Hydrocarbons, MOP: 3102 kPa, Unidirectional
Segment 3: Liquid Hydrocarbons, MOP: 3102 kPa, Unidirectional
Segment 4: Liquid Hydrocarbons, MOP: 1035 kPa, Unidirectional
Segment 5: Liquid Hydrocarbons, MOP: 3102 kPa, Unidirectional

Piping & Instrumentation Diagram(s), MS-601 Revision B, dated January 16, 2017, MS-610 Revision B, dated January 16, 2017, MS-611 Revision B, dated January 16, 2017, MS-612 Revision B, dated January 16, 2017, MS-620 Revision B, dated January 16, 2017, MS-630 Revision B, dated January 16, 2017, MS-672 Revision A, dated August 31, 2016, MS-690 Revision A, dated August 31, 2016, submitted by Vancouver Airport Fuel Facilities Corporation.

GENERAL PERMISSIONS, AUTHORIZATIONS and CONDITIONS

PERMISSIONS

Oil and Gas Activities Act

1. The BC Oil and Gas Commission, under section 25 (1) of the *Oil and Gas Activities Act*, hereby permits the Permit Holder referenced above to carry out the following activities subject to the conditions contained herein, any applicable exemptions and authorizations to construct and operate a pipeline to transmit jet fuel, as detailed in the Technical Specification Details table above.
2. The permissions and authorizations granted under this permit are limited to the area identified in the spatial data submitted to the Commission in the permit application as identified and dated above; herein after referred to as the 'activity area'.
3. In the area where two route options are proposed, the permit holder is authorized to construct the pipeline within one of the route options, but not both.

Petroleum and Natural Gas Act

4. Pursuant to section 138(1) of the *Petroleum and Natural Gas Act*, the Permit Holder is permitted to enter, occupy and use any unoccupied Crown land located within the activity area to carry out the oil and gas activities and related activities permitted, or authorized herein.
   a) The permission to occupy and use Crown land does not entitle the Permit Holder to exclusive possession of the area.
   b) The total disturbance within the activity area must not exceed the total approved disturbance footprint as referenced above.

Permit Holder: Vancouver Airport Fuel Facilities Corporation
Application Submission Date: February 15, 2017
Application Determination number: 100100195
Date Issued: April 3, 2017

AUTHORIZATIONS

Forest Act

5. The Commission, pursuant to section 47.4 of the *Forest Act*, hereby authorizes the removal of Crown timber from the activity area under the cutting permits associated with the Master Licence(s) as follows:

   Master Licence to Cut No.: M02416

   Cutting Permit No.: 1

   Timber Mark No.: MTB969

   Total New Cut: 3.4 ha.

   Forest District: (DCK) Chilliwack Natural Resource District

   Region: Coastal

6. The cutting permits are deemed spent upon the submission of the post-construction plan or upon either the cancellation or expiry of the activities authorized under the permit.

CONDITIONS

Notification

7. A notice of construction start must be submitted prior to the commencement of activities under this permit 48 hours before or as per the relevant legislation if longer than 48 hours. Notification must be submitted via Kermit for pipelines and facilities.
8. Within 60 days of the completion of construction activities under this permit, the Permit Holder must submit to the Commission a post-construction plan as a shapefile and PDF plan accurately identifying the location of the total area actually disturbed under this permit. The shapefile and plan must be submitted via eSubmission.
9. At least ten (10) working days prior to the commencement of any changes in or about a stream associated with maintenance activities, the Permit Holder must provide a notice of works to any First Nation(s) who may have Aboriginal Interests identified, as per the BC First Nations Consultative Areas Database, within the area in which the works are to occur.
10. A notice of maintenance activities must be submitted, as per the relevant Commission process at the time of submission, at least two (2) working days prior to the commencement of any changes in or about a stream associated with maintenance activities.
11. The Permit Holder must notify any First Nations who may have aboriginal interests identified, as per the BC First Nations Consultative Areas Database, a minimum of five (5) working days prior to commencement of construction.
12. The Permit Holder must notify Tsleil-Waututh Nation of any in-stream works at the marine terminal site a minimum of five (5) working days prior to commencement of activities.

General

13. The rights granted by this permit in relation to unoccupied Crown land are subject to all subsisting grants to or rights of any person made or acquired under the *Coal Act, Forest Act, Land Act, Mineral Tenure Act, Petroleum and Natural Gas Act, Range Act, Water Sustainability Act* or *Wildlife Act*, or any extension or renewal of the same.
14. The Permit Holder must not assign, sublicense or permit any person other than its employees, contractors or representatives, to use or occupy any Crown land within the activity area without the Commission's written consent.
15. The Permit Holder must ensure that any Crown land within the activity area is maintained in a condition so as to minimize hazards, including but not limited to hazards associated with storage of materials and equipment.

16. The Permit Holder must ensure that any Crown land within the activity area is maintained free of garbage, debris and unused equipment.
17. The Permit Holder must prepare a Security Management Plan before the commencement of activities, and must make a copy of the Security Management Plan available upon the request of the Commission.
18. The Permit Holder must keep a copy of the Security Management Plan on the activity area, and ensure that the security management measures identified in the Security Management Plan are implemented during activities.

Environmental

19. Construction activities must not result in rutting, compaction or erosion of soils that cannot be reasonably rehabilitated to similar levels of soil productivity that existed on the activity area prior to the construction activities taking place.
20. Any temporary access must be constructed and maintained in a manner that provides for proper surface drainage, prevents pooling on the surface, and maintains slope integrity.
21. The Permit Holder must make reasonable efforts to prevent establishment of invasive plants on the activity area set out in the Authorized Activities table above resulting from the carrying out of activities authorized under this permit.
22. Following completion of construction associated with the associated activities set out in the Activities Approved table above, the Permit Holder must, as soon as practicable:
    a) decompact any soils compacted by the activity;
    b) if natural surface drainage pattern was altered by the carrying out of the activity, the Permit Holder must restore, to the extent practicable, to the drainage pattern and its condition before the alteration; and
    c) re-vegetate any exposed soil on the activity area including, where necessary, using seed or vegetative propagules of an ecologically suitable species that:
        (i) promote the restoration of the wildlife habitat that existed on the area before the oil and gas activity was begun; and
        (ii) stabilize the soil if it is highly susceptible to erosion.
    d) Following completion of construction activities authorized under this permit, any retrievable surface soils removed from the activity area must be redistributed so that the soil structure is restored, to the extent practicable, to its condition before the activity was begun.

Clearing

23. The Permit Holder is permitted to fell any trees located on Crown land within 1.5 tree lengths of the activity area that are considered to be a safety hazard according to *Workers Compensation Act* regulations and must be felled in order to eliminate the hazard. Trees or portions of these trees that can be accessed from the activity area without causing damage to standing timber may be harvested.
24. The holder of the cutting permit must pay to the government, stumpage and any waste billing determined in accordance with the terms of this authorization.
25. The authorized cutting permit does not grant the Permit Holder the exclusive right to harvest Crown timber from the activity area. Authority to harvest some or all of the timber may be granted to other persons. The Permit Holder's right to harvest timber applies to any timber found on the site at the time they undertake harvesting activities.
26. All harvested Crown Timber must be marked with the cutting permit's associated Timber Mark.
27. Stumpage for cutting Permits falling within the Coast Area, as defined in the Coast Appraisal Manual (Manual) will be calculated in accordance with the Manual (volume based).
28. Any waste assessments applied under the Master Licence to Cut are subject to the merchantability specifications and monetary waste billing requirements in the Provincial Logging Residue and Waste Manual specific to the region associated with the Cutting Permit authorization.

Water Course Crossings and Works

29. Stream, lake and wetland crossings must be constructed in accordance with the methods and any mitigations, as specified in the application.

30. In-stream activities within a fish bearing stream, lake or wetland must occur:

    a) during the applicable reduced risk work windows as specified in the Guidelines for Reduced Risk Instream Work Windows Ministry of Environment, Lower Mainland Region (March, 2006);

    b) in accordance with alternative timing and associated mitigation recommended by a Qualified Professional and accepted by the Commission; or

    c) in accordance with an authorization or letter of advice from Fisheries and Oceans Canada that is provided to the Commission.

31. At any time, the Commission may suspend instream works authorized under this permit. Suspensions on instream works will remain in place until such time as the Commission notifies permit holders that works may resume. Reasons for suspension of works may include, but are not limited to, drought conditions and increased environmental or public safety risks

32. Following initial construction, stream, lake and wetlands crossings are authorized for necessary pipeline maintenance activities on the activity area except for:

    a) stream bank or stream bed revetment works in a stream classified as S1, S2, S3, S4 or S5;

    b) pipe replacement within the stream channel where the original application specified a trenchless crossing method and the planned works involve a trenched crossing method;

    c) permanent alteration of a stream bank;

33. The Permit Holder must ensure any instream works related to pipeline maintenance are planned and overseen by a qualified professional. This individual must assess and determine whether planned works pose a risk to any of the features listed below, and is responsible for developing and implementing mitigation measures to reduce any potential impacts on these features, as required:

    a) Fish or important fisheries habitat;

    b) Species identified as special concern, threatened, or endangered under the federal *Species at Risk Act*; or

    c) Species identified by Order as a species at risk under the *Forest and Range Practices Act* or the *Oil and Gas Activities Act*.

    This assessment must be provided to the Commission upon request.

34. Open cut crossings and works within streams, lakes or wetlands must be planned and conducted in accordance with the following requirements:

    a) An open cut of a stream classified as S1, S2, S3 or S4 must not occur, unless the stream is frozen to its bed or is completely dry with no evidence of subsurface flow;

    b) Unless otherwise authorized by Fisheries and Oceans Canada, spawning gravels must not be disturbed when redds that contain eggs or alevins are present. The authorization must be provided to the Commission; and

    c) Channels, banks and beds of streams, including any disturbed stable natural material must be restored, to the extent practicable, to the structure and conditions that existed before the crossing construction was initiated.

35. Flow isolation crossings and works must be planned and conducted in accordance with (b) and (c) of the previous condition and the following additional requirements:

    a) Construction of the crossing or works, including the location and operation of any equipment, must be isolated from water flowing in the stream;

    b) Water from flumes, pump-arounds, diversions, or other methods must be released to downstream areas in an manner that avoids erosion or sediment release;

c) Pump intakes must not disturb beds of fish bearing streams, except as necessary to ensure safe installation and operation of equipment, and must be screened with maximum mesh sizes and approach velocities in accordance with the Fisheries and Oceans Canada Freshwater Intake End-of-Pipe Fish Screen Guideline; and

d) Water flows downstream of in-stream construction sites must be maintained at volume and discharge consistent with upstream flows.

36. Mechanical stream crossings for temporary access along pipeline right of way, must be constructed, maintained and deactivated according to the following requirements, as applicable:

a) Only bridges and culverts, may be constructed at stream crossings;

b) The Permit Holder must ensure that permanent bridges are designed and fabricated in compliance with:

(i) the Canadian Standards Association Canadian Bridge Design Code, CAN/CSA-S6; and

(ii) soil property standards, as they apply to bridge piers and abutments; set out in the Canadian Foundation of Engineering Manual.

c) Except with leave of the Commission, the Permit Holder must ensure that:

(i) culverts are designed and fabricated in compliance with the applicable:

(a) Canadian Standards Association CSA G401,Corrugated Steel Pipe Products; or

(b) Canadian Standards Association Standard CSA B1800, Section B182.2, Plastic Non-pressure Pipe Compendium; or

(ii) Any pipe installed in lieu of a culvert is of at least equivalent standard and strength as any culvert as specified above.

d) Except with leave of the Commission, the Permit Holder must ensure that bridges or culverts meet the criteria set out in (i), (ii) or (iii) below:

(i) the bridge or culvert is designed to pass the highest peak flow of the stream that can reasonably be expected within the return periods set out in column 2 the table below for the period the Permit Holder anticipates the structure will remain on site, as set out in column 1 of the table below:

Column 1 Anticipated period crossing structure will remain on site	Column 2 Peak flow period
Bridge or culvert, 3 years or less	10 years
Bridge other than a bridge within a community watershed, more than 3 years but less than 15	50 years
Bridge within a community watershed, more than 3 years	100 years
Bridge, 15 years or more	100 years
Culvert, more than 3 years	100 years

(ii) The bridge, or any component of the bridge:

(a) is designed to pass expected flows during the period the bridge is anticipated to remain on the site;

(b) is constructed, installed and used only in a period of low flow; and

(c) is removed before any period of high flow begins.

(iii) The culvert:

(a) is a temporary installation, and the Permit Holder does not expect to subsequently install a replacement culvert at that location;

(b) is not installed in a stream, when the stream contains fish;

(c) is sufficient to pass flows that occur during the period the culvert remains on the site;

(d) is installed during a period of low flow, and

(e) is removed before any period of high flow begins.

e) Bridge or culvert abutments, footings and associated scour protection must be located outside the natural stream channel and must not constrict the channel width;

f) Wetland crossings must be constructed, maintained and removed in accordance with the following:

(i) Organic cover within and adjacent to the wetland must be retained;

(ii) Minimize erosion or release of sediment within the wetland;

(iii) Any padding materials must be placed on the wetland surface only and must not be used for infilling;

(iv) Any padding materials must be removed as soon as practicable following construction, considering weather and ground conditions; and

(v) The wetland, including banks and bed, must be restored, to the extent practicable, to the condition that existed before the crossing was initiated.

Archaeology

37. An Archaeological Impact Assessment (AIA) is required for the proposed development area prior to any development activities taking place.

An AIA report must be submitted to the Commission as soon as practicable.

If artifacts, features, materials or things protected under section 13(2) of the Heritage Conservation Act are identified the permit holder must, unless the permit holder holds a permit under section 12 of the Heritage Conservation Act issued by the Commission in respect of that artifact, feature, material or thing:

a. immediately cease all work in the vicinity of the artifacts, features, materials or things;

b. immediately notify the Commission and the Archaeology Branch of the Ministry of Forests, Lands and Natural Resource Operations; and

c. refrain from resuming work in the vicinity of the artifacts, features, materials or things except in accordance with an appropriate mitigation plan that has been prepared in accordance with the Heritage Conservation Act and approved by the Archaeology Branch of the Ministry of Forests, Lands and Natural Resource Operations.

ACTIVITY SPECIFIC DETAILS PERMISSIONS, and CONDITIONS

PIPELINES

Land Area Number: 100003118
Pipeline Project Number: 000024381

All permissions for this activity are subject to the following conditions:

Pipeline Conditions

38. Changes must not be made to pigging design, and to above ground valves and piping, unless:

a. the changes do not affect direct connections to pipelines and facilities;

b. there are no changes to approved pressure protection, H2S protection or isolation;
c. there is no substantive impact to any aspect of the project that was included in the consultation; and
d. the design and operation of the pipeline continues to meet all regulatory requirements and the requirements of CSA Z662.

39. At least 14 days prior to the start-up of the marine terminal, the permit holder must contact the Commission by email (OGCPipelines.Facilities@bcogc.ca, referencing the application area number) to coordinate and complete an inspection.

40. The permit holder must complete and submit a noise survey for the marine terminal, as directed in the BC Noise Control Best Practices Guideline, to the Commission (OGCPipelines.Facilities@bcogc.ca, referencing the application area number) within 6 months of commencement of operations. The Commission may require additional sound monitoring surveys or noise impact assessments to be completed at any time once the facility is in operation.

41. Prior to commencement of operations at the marine terminal, the permit holder must provide to the Commission (OGCPipelines.Facilities@bcogc.ca, referencing the application area number) a copy of the facility Emergency Shutdown Systems Logic Chart stamped by a Professional Engineer indicating that the shutdown systems have been inspected and tested.

42. The permit holder must submit the post HAZOP Issued for Construction (IFC) Piping and Instrumentation Drawings (P&IDs),and a list documenting any design differences between IFC P&IDs and the P&IDs submitted to the Commission for the issuance of this permit, to the Commission (OGCPipelines.Facilities@bcogc.ca, referencing the application area number) at least 2 weeks prior to the commencement of any field construction of process equipment and piping at the marine terminal.

43. Except with leave of the Commission, within 12 months of commencement of liquid hydrocarbons transmission to Tank Farm 2 at YVR Airport, the permit holder must submit to the Commission the results and interpretation of a high resolution in-line inspection tool run to establish an accurate position of the pipeline (GEOPIG) and to detect pipe deformation and defects.

44. The permit holder must contact the Commission via email at OGCPipelines.Facilities@bcogc.ca (referencing the application area number) at least 48 hours in advance of the start of construction of the pipeline. A Commission representative may coordinate an inspection prior to or during construction of the pipeline.

45. Prior to start of construction of the marine terminal, the Geotechnical report, stamped by a Professional Engineer registered in BC, must be submitted to the Commission (OGCPipelines.Facilities@bcogc.ca, referencing the application area number).

46. The permit holder must conduct a facility start up meeting prior to commencing operations to review the Emergency Response Plan with all potential permit holder emergency responders. The BCOGC must be notified in writing at least 30 days prior to the meeting by submitting the, "OGC Notification of Facility/Producing Well Start-up Modification Meeting" form found at: http://www.bcogc.ca/industry-zone/documentation/Emergency-Response-and-Safety.

ADVISORY GUIDANCE

1. Construction plan 17647, Sheet 1-21 is for the Permit Holder's internal reference only and was not reviewed as a decision tool for this permit, nor does it form an integral part of this permit.

2. The permit holder should be aware that there may be First Nation's traditional, cultural, or spiritual activities occurring concurrently with maintenance activities, as well as areas of current use or cultural resources that overlap the activity area. All reasonable efforts should be made to minimize interference with those activities while carrying out the activities authorized herein.

3. Appropriate tenure may be issued upon acceptance of the post-construction plan. Submission of the original application and submission of the post-construction plan is considered an application for all subsequent applicable *Land Act* tenures. Upon the Commission's acceptance of the post-construction plan no further applications for replacement tenure are required.

4. The term "unused equipment" has the same definition as in the Drilling and Production Regulation.

Permit Holder: Vancouver Airport Fuel Facilities Corporation
Application Determination number: 100100195

Application Submission Date: February 15, 2017
Date Issued: April 3, 2017

5. The activity area, with the exception of temporary workspace ancillary numbers 00156648, 00156632, and 00156649, must be confined to the area approved in the Certified Project Description of the associated Environmental Assessment Certificate.

All pages included in this permit and any attached documents form an integral part of this permit.

Ken Paulson, P. Eng
Executive Vice President and Chief Operating Officer
Authorized Signatory and Commission Delegated Decision Maker

Copied to:

Land Agent: CCI Solutions
First Nations: Seabird Island First Nation, Squamish Nation, Katzie First Nation, Stz'uminus First Nation, Tsleil-Waututh Nation, Penelakut Tribe, Cowichan Tribes, Lyackson First Nation, Musqueam Indian Band, Semiahmoo First Nation, Lake Cowichan First Nation, Halalt First Nation, Tsawwassen First Nation, People Of The River Referrals Office, Sto:lo Nation, Sto:lo Tribal Council, Soowahlie First Nation, Skawahlook First Nation, Shxw'ow'hamel First Nation, Hwlitsum
Landowners/Rights Holders
Ministry of Forests District Office: (DCK) Chilliwack Natural Resource District
Work Safe BC
OGC Compliance and Enforcement
OGC Community Relations

BC Oil & Gas COMMISSION

March 28, 2019

Vancouver Airport Fuel Delivery Project
Unit 108- 12300 Horseshoe Way
Richmond, BC, V7A 4Z1

Attention: Vancouver Airport Fuel Delivery Project

RE: **Permit Extension for Application Determination Number 100100195**

Permit Holder: Vancouver Airport Fuel Delivery Project
Permit Date of Issuance: April 3, 2017
Extension Date of Issuance: March 28, 2019
Extended Expiration Date: April 3, 2020
Application Determination No.: 100100195
Pipeline Project No.: 000024381
Ancillary Description: Workspace
Ancillary No.: 00156632 to 00156652
Changes In and About a Stream: 0003774

PERMISSIONS

Oil and Gas Activities Act

1. The BC Oil and Gas Commission (the "Commission"), under section 32(5) of the Oil & Gas Activities Act, hereby extends the permit and any associated authorizations to construct, maintain and operate a pipeline.
2. This permit extension is subject to the original permit, authorizations, subsequent amendments and any additional conditions as set out herein .
3. The prescribed period of this permit has been extended for one year and will expire on **April 3, 2020** if the permit holder has not begun the activity by this date.

Petroleum and Natural Gas Act

4. Pursuant to Section 138(1) of the Petroleum and Natural Gas Act, the permit holder is authorized to enter, occupy and use any unoccupied Crown land located within the operating area to carry out the oil and gas activity and related activities authorized under this permit.

CONDITIONS

5. The rights granted by this authorization are subject to all subsisting grants to or rights of any person made or acquired under the *Coal Act, Forest Act, Land Act, Mineral Tenure Act, Petroleum and Natural Gas Act, Range Act, Water Sustainability Act* or *Wildlife Act*, or any extension or renewal of the same.
6. The Permit holder must not assign or sublicense this permit or permit any person to use or occupy the land, other than its employees, contractors, or representatives, without the Commission's written consent.

Permit Holder: Vancouver Airport Fuel Delivery Project | Permit Extension Submission Date: March 12, 2019
Application Determination number: 100100195 | Date Issued: March 28, 2019

7. The Permit Holder must ensure that the area is maintained in a condition so as to minimize hazards, including but not limited to hazards associated with storage of materials and equipment.
8. The Permit Holder must ensure that the area is free of garbage, debris and unused equipment.

ADVISORY GUIDANCE

1. Appropriate *Land Act* tenure will be issued upon acceptance of the post-construction plan. Submission of the original application and submission of the post-construction plan is considered application for all subsequent *Land Act* tenures; no further applications for replacement tenure is required.

This extension forms an integral part of the permit and should be attached thereto.

James O'Hanley
Vice President, Applications
Commission Delegated Decision Maker

pc: Land Agent – RAM Engineering
OGC, Compliance and enforcement

Attachment 12
Letter regarding MOTI highway permit

Bennett Jones

Bennett Jones LLP
2500 Park Place
666 Burrard Street
Vancouver, BC, V6C 2X8 Canada
T: 604.891.7500
F: 604.891.5100

David Bursey
Partner
Direct Line: 604 891.5128
e-mail: burseyd@bennettjones.com
Our File No.: 73178.2

June 27, 2019

City of Richmond
6911 No. 3 Road
Richmond, BC V6Y 2C1

Attention: Anthony Capuccinello Iraci, City Solicitor

Dear Mr. Capuccinello:

Re: Vancouver Airport Fuel Facilities Corporation – Marine Terminal Development Permit – Site Specific Municipal Access Agreement – Vancouver Airport Fuel Delivery Project – Update on the Ministry of Transportation and Infrastructure Permit

Further to our recent discussions, I understand the City's General Purposes Committee will review VAFFC's Development Permit for its Marine Terminal site and the Site Specific Municipal Access Agreement on 2 July 2019. This letter gives an update on the status of the BC Ministry of Transportation and Infrastructure permit for VAFFC to construct and operate the portion of pipeline that will be located within the provincial highway corridor.

- VAFFC and MoTI staff settled the terms of the permit earlier this year. In March, we sent you a confidential copy of the final draft of the permit. There have been no changes to the terms of the MoTI permit since then. VAFFC expects that any further changes would be minor and technical in nature.

- MoTI is working through its internal administrative approval process to issue the permit. Based on a discussion between VAFFC and MoTI last week, we expect MoTI will issue the final permit by the end of July 2019.

- MoTI staff have assured VAFFC that the MoTI permit process is on track but the issuance process typically takes considerable time to complete because of MoTI staffing capacity. We understand the remaining process required to issue the permit is administrative in nature.

We will send you a final copy once MoTI has issued the final permit.

Please advise us if you require any further information.

Yours truly,

BENNETT JONES LLP

David Bursey

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