PACIFIC FUTURE ENERGY
Building Our Future, Protecting Our Coast

September 28, 2016

Mr. Rob Hajdú
Project Manager
Canadian Environmental Assessment Agency
Suite 410-701 West Georgia Street
Vancouver, BC
V7Y 1C6

Via Email

Dear Mr. Hajdú,

Subject: Addendum to the Project Description - Activities that are Incidental to the Pacific Future Energy Refinery Project

Pursuant to your letter of September 12, 2016, Pacific Future Energy Corporation (PFEC) is pleased to submit to the Canadian Environmental Assessment Agency an *Addendum to the Project Description – Activities that are Incidental to the Pacific Future Energy Refinery Project*.

The Addendum identifies options for the export of refined product from the refinery, including the export of any by-products. Indigenous groups which may be affected by these incidental activities are also identified. The Addendum also comments on existing rail infrastructure that will be associated with the transport of NEATBIT™ to the refinery.

Should you have any questions regarding the Addendum, please contact me at <contact information removed> or at info@pacificfutureenergy.com.

Sincerely,

per: Pacific Future Energy
<Original signed by>

Jacques Benoit
Chief Operating Officer

cc: Scott Bailey, Executive Project Director BC Environmental Assessment Office
Brian Murphy, Executive Director, Major Projects, BC Oil & Gas Commission
Joe Bevan, Chief Councillor, Kitselas First Nation
Ellis Ross, Chief Councillor, Haisla Nation Council
John Helin, Mayor, Lax Kw'alaams Band
Don Roberts, Chief Councillor, Kitsumkalum Band
Harold Leighton, Chief Councillor, Metlakata First Nation
Bruce Dumont, President, Métis Nation British Columbia
Keith Henry, President, BC Métis Federation

ADDENDUM TO THE PROJECT DESCRIPTION – ACTIVITIES THAT ARE INCIDENTAL TO THE PROJECT

This Addendum identifies options for the export of refined product from the refinery, including the export of any by-products. The Addendum also comments on existing rail infrastructure that will be associated with the transport of NEATBIT™ to the refinery. Indigenous groups who may be affected by these incidental activities are also identified.

Options for the Export of Refined Product from the Refinery

There are three options for the export of refined product from the refinery. Below is a general description of each option.

Component	Option 1: Marine export terminal in Kitimat	Option 2: Marine export terminal at Nasoga Gulf	Option 3: Rail transport
Marine terminal	New marine export terminal in Kitimat that will have two tanker berths and one utility berth (tugs and work boats). Also included will be a loading platform, access trestles, berthing and mooring structures, and containment boom.	New marine export terminal at Nasoga Gulf, north of Prince Rupert, similar to Option 1. The terminal will have two tanker berths and one utility berth (tugs and workboats). Also included will be a loading platform, access trestles, berthing and mooring structures, and containment boom.	Refined product would be transported by rail using the feedstock rail cars to markets in Western Canada or existing export terminal in the Lower Mainland of BC.
Refined Product	Refined products: gasoline, diesel and jet fuel.	Refined products: gasoline, diesel and jet fuel.	Refined products: gasoline, diesel and jet fuel.
Refined Product Storage: Tank Terminal	This export facility will not include refined product storage.	This export terminal will include a tank terminal for gasoline (~700,000 barrels), diesel (~1,100,000 barrels) and marine diesel (20,000). The terminal will also have a control centre and operating buildings, roads and fences.	This export facility will not include refined product storage.
Ancillary Facilities	Electrical supply and distribution, fire protection, water management, vapour recovery unit, potable water, utility air and emergency shutdown.	Electrical supply and distribution, fire protection, water management, vapour recovery unit, potable water, utility air and emergency shutdown.	All equipment required for loading the rail cars will be located at the refinery.
Transport Method	Transported to international markets via ocean going vessels of Panamax (450,000 barrels) or Aframax (800,000 barrels) size. Panamax-sized vessels are between 50,000 to 80,000 dead weight tonnes (DWT). Aframax vessels are between 80,000 and 120,000 DWT.	Transported to international markets via ocean going vessels of similar size to Option 1.	Refined products would be transported by rail using the new TC-117 railcars. The same railcars used to transport the NEATBIT™ to the refinery will would used to transport the refined products to market and/or existing export terminal.

Component	Option 1: Marine export terminal in Kitimat	Option 2: Marine export terminal at Nasoga Gulf	Option 3: Rail transport
Transport Method (Cont'd)	This option will include a gasoline (12-inch) and diesel (16-inch) pipeline, each approximately 39 km in length. The pipelines will run from the refinery to a new terminal at tidewater on the west side of the Douglas Channel.	This option will include a gasoline (12-inch) and diesel (16-inch), each approximately 274 km in length. The pipelines will follow a route parallel to Highway 37 from the refinery to Terrace. From Terrace, the pipeline route will follow a route parallel to Highway 113 to about 20 km north of Rosswood. From Rosswood, the pipelines will be routed west to Nasoga Gulf.	Not applicable
Marine Access	Marine access will be via Triple Island, west of Prince Rupert; or Pine Island north of Vancouver Island.	Marine access will be via Triple Island, west of Prince Rupert.	Not applicable
Access Road	Upgrades to an existing access road will be required. The access road extends from the south end of Alcan Road for 5 km to the new export terminal.	Approximately 70 km of new access road will be constructed between Nasoga Gulf and Highway 113.	Not applicable
Construction Staging	Staging area and stockpile locations for pipeline and terminal construction materials.	Staging area and stockpile locations for pipeline and terminal construction materials.	Not applicable
	Fill and borrow sites.	Fill and borrow sites.	Not applicable
	Workforce housing may be required.	Workforce housing may be required.	Not applicable
	Coastal tugs and barges will be needed during the construction of the marine terminal.	Coastal tugs and barges will be needed during the construction of the marine terminal and tank terminal.	Not applicable
Figure Reference	Option 1 Kitimat	Option 2 Nasoga Gulf	Railway Option

We will be producing approximately 1,500 tonnes of bulk sulphur per day. The bulk sulphur will be stored at the refinery site and loaded as a non-dangerous good in railcars. One train (115 railcars and 12,000 tonnes) every 8-10 days will transport the bulk sulphur to an export terminal in Vancouver.

We will be producing approximately 10,000 barrels per day (BPD) of liquefied petroleum gas (LPG), 9,000 BPD of Butanes and 13,000 BPD of Jet A-1 fuel. LPG, Butanes and Jet-A-1 fuel will be stored on-site at the refinery and exported to local markets in BC and Alberta by railcar. Each railcar can carry approximately 1,000 barrels of either LPG, Butanes or Jet fuel and therefore will require approximately 32 rail cars per day. The frequency of trains to transport these products to local markets will depend on demand and will vary.

From an environmental, technical and economical basis, Pacific Future Energy Corporation (PFEC) prefers Option 1. We believe that this option provides the lowest risk to the land and marine environment; is technically feasible using existing technology and construction methods; and provides the lowest capital cost. However, as we indicated in our Project Description, PFEC will only engage with third parties for the export of our refined product export if they share in our values and recognition of First Nations rights, titles and interest in the pipeline and associated marine terminal.

Existing Rail Infrastructure (Terrace-Kitimat) Associated with the Transport of NEATBIT™ to the Refinery

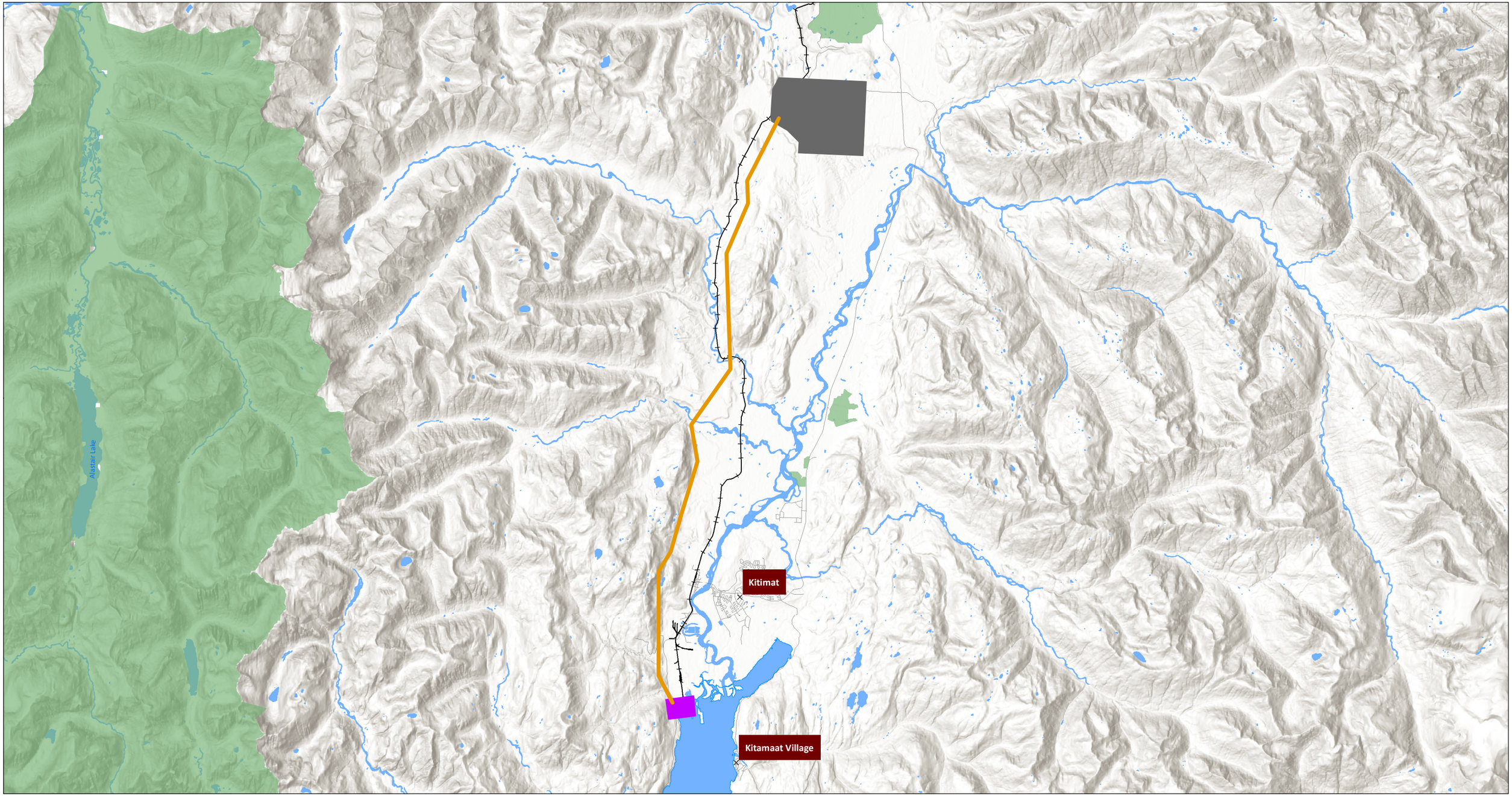
Canadian National Railway Company (CN Rail) is responsible for rail upgrades to the existing rail infrastructure associated with the NEATBIT™ transport to the refinery. At this time, PFEC has no plans for any upgrades to the rail line between Terrace and Kitimat.

Potentially Affected Indigenous Groups

'●' denotes Indigenous groups who may be affected by the incidental activities and export options described in the preceding sections.

Indigenous Groups	Refinery	Option 1	Option 2	Option 3
Kitselas	●	●	●	●
Haisla	●	●	●	●
Metlakatla	●	●	●	●
Kitsumkalum	●	●	●	●
Lax Kw'alaams	●	●	●	●
Métis Nation BC	●	●	●	●
BC Métis Federation	●	●	●	●
Gitxaala		●	●	
Gitga'at		●	●	
Haida		●	●	
Nisga'a			●	
Tlingit (Alaska)			●	
Heiltsuk		●		
Oweekeno		●		
Kwakwaka'wakw		●		
Gitxan				●
Wet'suwet'en				●
Carrier Sekani				●
Lake Babine				●
Lheidli T'enneh				●
Nazko				●
Treaty 8				●
McLeod Lake				●
Yekooche				●
Shuswap				●
Stl'atl'imc				●
Esk'etemc				●
Katzie				●
Kwantlen				●
Kwikwetlem				●
Matsqui				●
Musqueam				●
Squamish				●
Tsawwassen				●
Tsleil-Waututh				●
Stólō				●
Hul'Quni'num				●

FIGURES



Option 1 Kitimat

LEGEND

- Option 1
- Railway
- Refinery Area
- Roads
- Lakes
- Parks
- Coastline
- Alternative Site
- Conservancy Area

MXD Path: P:\LOB\EIAM-BC\Current Projects\Pacific Future Energy\631180 Dubose Flats - PFEC Refinery\4.0 Execution\4.5 GIS and Drawings\GIS\Maps\MXD\General\636814-GEN-010 Kitimat.mxd

NOTES

1. Original in colour.
2. Numerical scale reflects full-size print. Print scaling will distort this scale, however scale bar will remain accurate.
3. Intended for illustration purposes, accuracy has not been verified for construction or navigation purposes.

REFERENCES

ESRI Base Maps, NatureEarth, PFEC, DataBC

SNC·LAVALIN

CLIENT NAME:	PROJECT LOCATION:
Pacific Future Energy	Kitimat, BC

N

SCALE: 1:190,000

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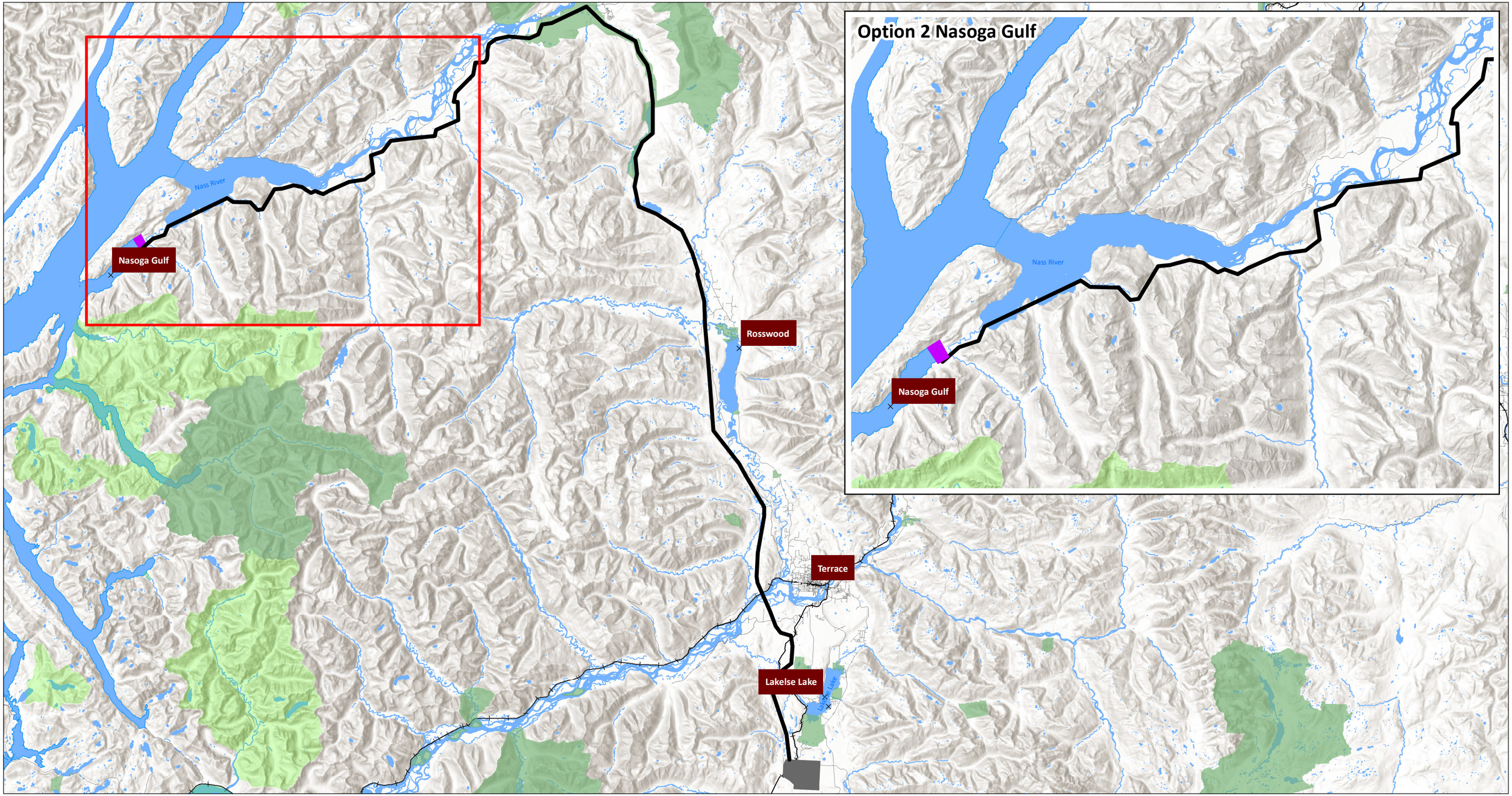

Option 2 Nasoga Gulf

LEGEND

- Option 2
- Railway
- Refinery Area
- Roads
- Lakes
- Parks
- Coastline
- Alternative Site
- Conservancy Area

MXD Path: P:\LOB\EIAM-BC\Current Projects\Pacific Future Energy\631180 Dubose Flats - PFEC Refinery\4.0 Execution\4.5 GIS and Drawings\GIS\Maps\MXD\General\636814-GEN-009 Nasoga Gulf.mxd

NOTES

1. Original in colour.
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3. Intended for illustration purposes, accuracy has not been verified for construction or navigation purposes.

REFERENCES

ESRI Base Maps, NatureEarth, PFEC, DataBC

SNC·LAVALIN

CLIENT NAME: Pacific Future Energy

PROJECT LOCATION: Kitimat, BC

N

SCALE: 1:490,000

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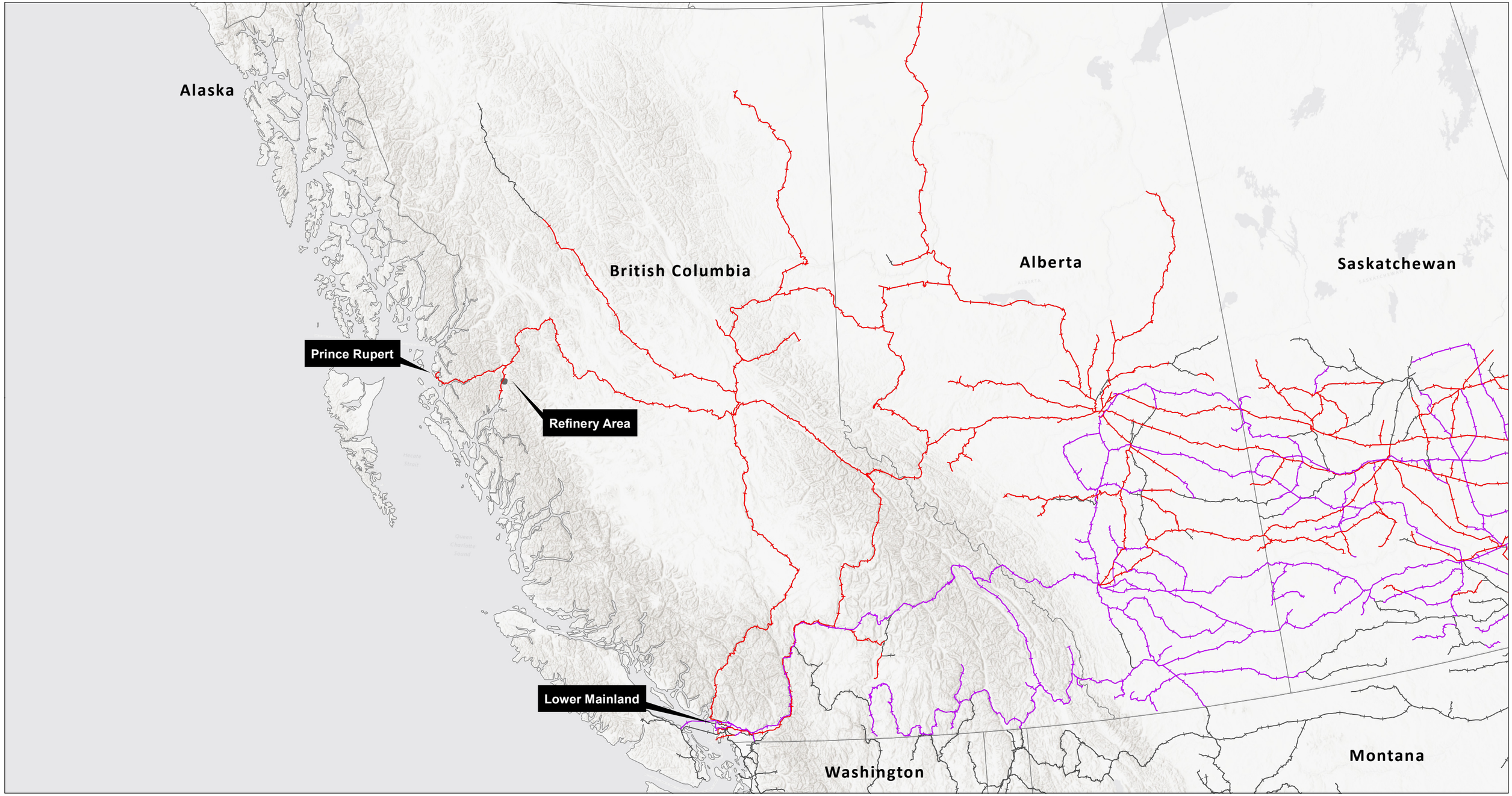

Railway Options

LEGEND

- Canadian National Rail
- Canadian Pacific Rail
- Both CN and CP Rail
- Other Rail Service Providers
- Refinery Area
- Provincial/State Boundaries

MXD Path: P:\LOB\EIAM-BC\Current Projects\Pacific Future Energy\631180 Dubose Flats - PFEC Refinery\4.0 Execution\4.5 GIS and Drawings\GIS\Maps\MXD\General\636814-GEN-008 Sites Overview - Railway Option.mxd

NOTES

1. Original in colour.
2. Numerical scale reflects full-size print. Print scaling will distort this scale, however scale bar will remain accurate.
3. Intended for illustration purposes, accuracy has not been verified for construction or navigation purposes.

REFERENCES

ESRI Base Maps, NatureEarth, PFEC, DataBC

SNC·LAVALIN

CLIENT NAME:	PROJECT LOCATION:
Pacific Future Energy	Kitimat, BC

N

SCALE: 1:6,000,000

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