

September 10, 2018

Prince Rupert Gas Transmission Ltd.  
450- 1<sup>st</sup> Street SW  
Calgary, AB T2P 5H1

Attention: Prince Rupert Gas Transmission Ltd.

**RE: Permit Extension for Application Determination Number 100082837, OGC Legacy # 9708463**

**Permit Holder:** Prince Rupert Gas Transmission Ltd.  
**Permit Date of Issuance:** September 21, 2015  
**Extension Date of Issuance:** September 10, 2018  
**Extended Expiration Date:** September 21, 2019  
**Application Determination No.:** 100082837  
**Pipeline Project No.:** 23649

## **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 September 21, 2019 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 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.
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.



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James O'Hanley  
Vice President, Applications

Pc: OGC, Compliance and enforcement

August 23, 2017

Prince Rupert Gas Transmission Ltd.  
450- 1<sup>st</sup> Street SW  
Calgary, AB T2P 5H1

Attention: Prince Rupert Gas Transmission Ltd.

**RE: Permit Extension for Application Determination Number 100082837, OGC Legacy # 9708463**

**Permit Holder:** Prince Rupert Gas Transmission Ltd.  
**Permit Date of Issuance:** September 21, 2015  
**Extension Date of Issuance:** August 23, 2017  
**Extended Expiration Date:** September 21, 2018  
**Application Determination No.:** 100082837  
**Pipeline Project No.:** 23649

## **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.

### **Petroleum and Natural Gas Act**

3. 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 authorized under this permit.

## **CONDITIONS**

4. 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.
5. 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.
6. 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.
7. 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.
2. On September 21, 2015, section 14 of the *Land Act* was repealed. Accordingly, the section 14 *Land Act* authorization originally granted to enter, occupy and use any unoccupied Crown land for the purposes of carrying out this oil and gas activity is now authorized under section 138(1) of the *Petroleum and Natural Gas Act*, and the original authorization will be cancelled.

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



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James O'Hanley  
Vice President, Applications

pc: Land Agent – Roy Northern Land Service Ltd.

September 21, 2015

Prince Rupert Gas Transmission Ltd.  
450 – 1<sup>st</sup> Street SW  
Calgary, AB T2P 5H1

**Attention: Prince Rupert Gas Transmission**

**RE: Pipeline Permit (Section 7)**

**Date of Issuance: September 21, 2015**

**Commission File No: 9708463**

**Job No.: 014697250-001**

## **PERMISSIONS**

1. The BC Oil and Gas Commission (the “Commission”), under section 25(1) of the *Oil and Gas Activities Act*, hereby permits the holder to construct and operate a pipeline for the purpose of conveying natural gas subject to the following conditions, any applicable exemptions and authorizations:
  - a. The permissions and authorizations granted under this permit are limited to the areas described in the following construction plans by Focus Surveys (BC) Limited Partnership as submitted to the Commission in the permit application dated February 24, 2015:

FOCUS File: 130275CP07R1, sheet 1-28, revision 1, dated December 31, 2014.
2. This permit expires two years from the date of issuance as per section 8 of the *Oil and Gas Activities Act* General Regulation if the permit holder has not begun the construction of the pipeline permitted unless the permit has been extended.
3. The permit holder is authorized to construct and operate the pipeline segments 001 and 002 to transmit natural gas under a maximum operating pressure of 13380 kPa, and under a maximum concentration of H<sub>2</sub>S of 0.002 mol%<sup>1</sup> unidirectionally, and in accordance with Piping & Instrumentation Diagram(s), 004776-01-ML-01-008, revision DD, dated September 03rd, 2014.
4. Changes may be made to pigging design, and to above ground valves and piping, provided that:
  - a. the changes do not affect direct connections to pipelines and facilities;

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<sup>1</sup> Note: 0.002 mol% means 0.0016, mol%, rounded.

- b. there are no changes to approved pressure protection, H<sub>2</sub>S protection or isolation;
- c. there is no substantive impact to any aspect of the project that was included in a consultation under the Consultation and Notification Regulation; and
- d. the design and operation of the pipeline continues to meet all regulatory requirements and the requirements of CSA Z662, as amended from time to time.

## **CONDITIONS**

### **Notification and Reporting**

1. At least 30 days prior to commencing any construction activities under this permit, the permit holder must provide the Nisga'a Nation, as represented by the Nisga'a Lisims Government (NLG), Kitselas First Nation, Kitsumkalum First Nation, Metlakatla First Nation, Gitxaala First Nation, and Lax Kw'alaams First Nation with the proposed construction schedule.
2. At least one week prior to the beginning of each month, the permit holder must submit a schedule to the Commission indicating the location and timing of horizontal directional drilling, microtunnelling, direct pipe installation, or in-stream work planned to commence in the following month.
3. Unless a submission has been made under condition 4, the permit holder must annually, on or before March 31 of each year, submit to the Commission's KERMIT system, a Post Construction Plan map showing the location and nature of any construction activities completed under this permit during the previous calendar year.
4. Within 60 days of completion of construction activities under this permit, the permit holder must submit to the Commission a Post Construction Plan as an ePASS shape file accurately identifying the location of the total area actually disturbed under this permit.

### **First Nations**

5. At the completion of construction activities, the permit holder must restore any identifiable trails traditionally used by NLG or the First Nations listed in Condition 1 that were impacted by construction, to the level of access that existed prior to construction, if the location of the trail is made known to the permit holder by a First Nation or the Commission prior to the permit holder's notice of construction start.
6. Prior to commencement of construction activities on any portion of the terrestrial pipeline right of way or work space, the permit holder must consider relevant information made available by the NLG or a First Nation listed in Condition 1 in the development of site specific mitigation plans. Relevant information includes culturally modified trees, cache pits, house pits, grave sites, pictograph sites, smoke houses, cabins, artifacts and areas traditionally used on a recurring basis for camping, intensive fishing and berry picking located within the pipeline right of way or work space.  
  
The permit holder must submit, at least 30 days prior to the commencement of construction, the information, along with site-specific mitigation plans for any of the specified items identified that may be impacted by construction activities, to the satisfaction of the Commission.
7. Prior to commencement of construction activities on any portion of the marine pipeline right of way or work space, the permit holder must consider relevant information about marine areas that are traditionally used for intensive fishing and harvesting that is made available on or before March 31, 2016 by a First Nation listed in Condition 1 in the development of site specific mitigation plans for marine areas.

The permit holder must submit, at least 30 days prior to the commencement of construction, the information, along with site-specific mitigation plans for any of the specified items identified that may be impacted by construction activities, to the satisfaction of the Commission.

## Clearing

8. Clearing and site preparation must:
  - a. be limited to areas needed for the pipeline right of way and work space;
  - b. inclusive of work space, be confined to the construction corridor; and
  - c. not exceed 2920.10 ha on Crown land.
9. Except with leave of the Commission, clearing and site preparation, inclusive of work space, must not occur within:
  - a. 100 meters of where water is diverted by a waterworks, water supply well or water storage reservoir;
  - b. an area containing a mineral lick, bald eagle, osprey, goshawk or great blue heron nest unless the mineral lick or nest is not damaged by activities authorized under this permit;
  - c. a permanent sample site on Crown Land used as a snow course; and
  - d. an area that would require harvest or disturbance of whitebark pine trees.
10. Clearing and site preparation, inclusive of work space, must not occur within a riparian management area (RMA) except:
  - a. as shown on the construction plans;
  - b. to facilitate a stream or wetland crossing;
  - c. where it does not involve new clearing and existing clearings do not have a reestablished vegetative cover; or
  - d. with leave of the Commission.
11. Clearing and site preparation, inclusive of work space, must not occur within a wildlife tree retention area except:
  - a. as shown on the construction plans; or
  - b. with leave of the Commission.
12. Except as shown on the construction plans or with leave of the Commission, incremental clearing for additional work space is not permitted within:
  - a. a wildlife habitat area;
  - b. an ungulate winter range (UWR); or
  - c. old growth management areas (OGMAs).
13. Except with leave of the Commission, incremental clearing for additional work space is not permitted within the riparian reserve zone of streams with a riparian classification of S1-S4.
14. Clearing and site preparation, except shooflies identified in the construction plans referenced in Permissions, must be confined to the area approved in the Certified Project Description of the associated Environmental Assessment Certificate.

15. Clearing and site preparation must be limited to the area necessary to safely construct the pipeline taking into account the influence of terrain, safe equipment operations, clearing debris, worker safety and egress, protection of adjacent infrastructure, and other conditions relevant to safe construction operations.
16. Clearing and site preparation, other than those identified in the construction plans referenced in Permissions, must be located on any previously disturbed areas located within the construction corridor unless:
  - a. a previously disturbed area is less than 2 hectares;
  - b. such clearing and site preparation is required to avoid one or more of the areas or features identified in Conditions 9, 10, 11, or 12; or
  - c. the permit holder is granted leave by the Commission to carry out such clearing and site preparation.
17. The permit holder must maintain vegetation and minimize stumping or ground disturbance within 10 metres of the high water mark of a fish bearing watercourse and delay grading of the banks of watercourses until immediately before construction of either pipeline crossings or crossings for vehicle access, except where necessary to address terrain related constraints, safe equipment operations, clearing debris, worker safety and egress, protection of adjacent infrastructure or environmental values, and other conditions relevant to safe construction operations. Appropriate erosion and sediment control structures must be installed as necessary to ensure debris and soil are not deposited into watercourses.
18. The permit holder must fall any tree that is harvested within its tree length of a stream or a wetland away from the stream or wetland, and must immediately remove any debris or soil deposited below the high water mark.

### **Terrestrial Wildlife**

19. Except with leave of the Commission, the permit holder must not undertake clearing activities between April 1 and July 31, unless pre-clearing surveys are completed and, where appropriate, mitigation is implemented as per the methods outlined in the Bird Nest Mitigation and Management Plan (Appendix F-2 of the Construction Environmental Management Plan).
20. Except with leave of the Commission, the permit holder must implement the setbacks that are identified in Attachment F of the Bird Nest Mitigation and Management Plan (Summary of Setbacks from Active Bird Nests for the Project) for any construction or significant maintenance activities on the pipeline right of way and work spaces that are within a wetland where an active waterfowl nest is present.
21. Except with leave of the Commission, the permit holder must not undertake clearing or significant maintenance activities within 200 meters of any active grizzly bear or black bear den that was identified by the survey conducted in accordance with condition 62, between December 1 and April 30.
22. Except with leave of the Commission, the permit holder must not undertake construction or significant maintenance activities within 500 meters of any active wolverine den that was identified by the survey conducted in accordance with condition 62, between February 1 and August 1.
23. Except with leave of the Commission, the permit holder must not, with respect to fisher:
  - a. undertake clearing or significant maintenance activities within 200 metres of any den that was identified by the survey conducted in accordance with condition 62; and



- b. undertake construction or significant maintenance activities within 400 metres of any active den that was identified by the survey conducted in accordance with condition 62, between March 15 and July 31.
24. When using aircraft to undertake activities associated with the permit, the permit holder must provide written instructions to the pilot specifying that flights must not, except in the event of an emergency situation, directly approach, hover over, circle, or land near mountain goats, moose, elk, or caribou.
  25. The permit holder must implement appropriate measures to reduce the obstruction of wildlife movement across the pipeline right of way during construction and operations.
  26. The permit holder must collect and store garbage in a manner that does not attract bears and other wildlife.

### **Marine Wildlife**

27. Prior to commencement of construction in Nasoga Gulf, the permit holder must develop a detailed construction schedule, including specific timing windows for different types of construction activities, in consultation with Fisheries and Oceans Canada and to the Commission's satisfaction. The construction schedule submitted to the Commission must be accompanied by a summary of the permit holder's engagement with NLG and the First Nations listed in Condition 1 on the development of the construction schedule. Except with leave of the Commission, the schedule must be implemented as accepted by the Commission.
28. Outside of Nasoga Gulf, except with leave of the Commission or in accordance with a letter of advice or an authorization from Fisheries and Oceans Canada that has been provided to the Commission, construction activities in shallow waters (a maximum depth of 20 metres) must not occur between February 15 and August 31.
29. The permit holder must limit removal of eelgrass within the construction corridor and the Skeena River Estuary to only that which is necessary to install the pipeline.
30. If eelgrass is removed by construction activities, the permit holder must monitor regrowth of eelgrass that was removed within the construction corridor and the Skeena River Estuary and, within the construction corridor, must:
  - a. transplant, reseed, or replant whatever eelgrass has not naturally regenerated within one year of completion of pipeline installation;
  - b. if any eelgrass is transplanted, reseeded, or replanted under (a), monitor that eelgrass for an additional period of one year to ensure regeneration is successful; and
  - c. provide a report to the Commission one and two years following completion of pipeline installation to describe what, if any, actions were taken under (a) and/or (b).
31. The permit holder must calculate the pressure changes associated with in-water blasting and must not detonate an explosive in a work site in or near commercial, recreational, or aboriginal fisheries or fish habitat that produces, or is likely to produce, an instantaneous pressure change greater than 100 kPa in the swimbladder of a fish, without isolating the work site to exclude or otherwise protect fish. The permit holder must provide the calculations of pressure changes associated with in-water blasting to the Commission upon request.
32. The permit holder must not commence impact pile driving that will produce, or is likely to produce, an instantaneous pressure change greater than 30 kPa at a distance of one meter from the pile, without making efforts to isolate the work area to exclude or otherwise protect fish, and must stop if

there is direct evidence of distressed, injured, or dead fish. The permit holder must provide the calculations of pressure changes associated with impact pile driving to the Commission upon request.

33. Prior to commencement of construction, the permit holder must develop a plan, to the satisfaction of the Commission, that:
  - a. identifies geographic areas where, and periods of time when, construction could cause sensory disturbance or injury to marine mammals;
  - b. describes underwater noise modelling that has been field verified and compared to acoustic thresholds for marine mammals to determine and define a marine mammal exclusion zone during specific construction activities, including blasting and impact pile driving; and
  - c. specifies circumstances, including blasting and impact pile driving, in which construction must stop or not start if a marine mammal is sighted within the marine mammal zone, and not re-start until the marine mammal(s) has moved out of the marine mammal zone.
34. The permit holder must define the geographic areas where crabs, particularly Dungeness Crabs, are likely to be physically disturbed as a result of pipeline construction. Prior to excavation, trenching, plowing, or blasting in those areas, the permit holder must make efforts to capture crabs and release them to suitable areas nearby that are unlikely to be affected by construction activities.
35. The permit holder must not knowingly detonate any explosives within 500 metres of a marine mammal.

#### **Terrain Stability, Acid Rock Drainage and Mineral Leaching**

36. Prior to operating the pipeline, the permit holder must prepare and file with the Commission a report satisfactory to the Commission for the monitoring and maintenance of ground and slope stability on areas where the stability:
  - a. may be affected by clearing or construction of the pipeline; or
  - b. may affect the safe operation of the pipeline.

The report must be prepared by a qualified professional and must include an assessment of a monitoring plan for any areas where karst or ground subsidence may be located/occur.

37. The permit holder must submit prior to construction an acid rock assessment and mitigation information to the Commission, all to the satisfaction of the Commission, with respect to potentially acid generating (PAG) rock along the proposed pipeline route. The information must include, at a minimum, the following elements:
  - a. the criteria used to classify acid rock drainage/metal leaching potential;
  - b. the process used to delineate PAG rock including desktop and field/laboratory assessments;
  - c. results of engineering evaluation of expected PAG rock locations and associated construction-related quantities;
  - d. additional planned characterization to complement initial assessment results;
  - e. protocols to be followed during construction to verify results of PAG characterization and engineering assessments;
  - f. a flowchart outlining material handling steps for confirmed PAG rock;

- g. associated mitigation and monitoring programs for exposed in situ and disposed PAG rock;
- h. mitigation selection criteria;
- i. typical drawings and typical specifications for mitigation such as soil covers and rock slope face barriers (e.g., shotcrete and synthetic spray cover); and
- j. gradational specifications for cover layer barriers composed of glacial till and/or other materials.

The above information must be prepared by a qualified professional and any protocols, mitigation or monitoring associated with e through j must be implemented by permit holder.

### **Stream, Wetland and Lake Crossings**

- 38. Subject to sections 11 and 12 of the EPMR, crossings of non-fish bearing streams and wetlands must be constructed in accordance with the methods and any mitigations specified in a supplemental stream and wetland crossing submission that has been submitted to the satisfaction of the Commission.
- 39. Subject to sections 11 and 12 of the EPMR, crossings of fish bearing streams and wetlands must be constructed in accordance with the timing, methods and any mitigations specified in a supplemental stream and wetland crossing submission that has been submitted to the satisfaction of the Commission. Any contingency method specified in a supplemental stream and wetland crossing submission may only be utilized with leave of the Commission.
- 40. Except with leave of the Commission, the permit holder must only carry out construction activities within a wetland with a riparian class of W2 in accordance with the timing, methods and any mitigations for such works that are specified in a supplemental W2 workspace submission that has been submitted to the satisfaction of the Commission.
- 41. Open cut crossings of watercourses must be planned and conducted in accordance with the relevant detail in a supplemental stream crossing submission that has been submitted to the satisfaction of the Commission, and the following requirements:
  - a. An open cut of a stream classified as S1, S2, S3, S4, S5 or S6 may only occur with leave of the Commission, unless the stream is frozen to its bed or is completely dry with no evidence of subsurface flow;
  - b. where the streambed consists of rocks, pebbles or coarse gravel overlaying finer material, this material must be removed and stockpiled separately above the high water mark of the stream for replacement during restoration;
  - c. spawning gravels must not be disturbed when redds that contain eggs or alevins are present;
  - d. excavated materials must be contained using appropriate techniques, so that that sediment-laden water and spoil do not re-enter the waterbody;
  - e. any sediment-laden trench water must be pumped onto stable surfaces in a manner that does not cause erosion of soils or release of suspended sediments to watercourses;
  - f. where feasible, aquatic vegetation, freshwater mussels, and organic debris removed from the construction area must be salvaged and returned following trench backfilling;

- g. 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; and
  - h. fish streams must be restored based on pre-construction surveys, including restoration of areas containing rearing potential with adequate stream depth and in-stream structures and restoration of spawning areas with gravel placement.
42. Open cut crossings of wetlands must be planned and conducted in accordance with the relevant detail in a supplemental wetland crossing submission that has been submitted to the satisfaction of the Commission, and the following requirements:
- a. where the wetland substrate consists of rocks, pebbles or coarse gravel overlaying finer material, this material must be removed and stockpiled separately above the high water mark of the stream for replacement during restoration;
  - b. materials referred to in a) must be excavated and stockpiled in a manner that minimizes sediment dispersal within the wetland and must be replaced in a manner that minimizes disturbance to the wetland following pipeline installation;
  - c. channels, banks and beds of wetlands, 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; and
  - d. any sediment-laden trench water must be pumped onto stable surfaces in a manner that does not cause erosion of soils or release of suspended sediments to watercourses.
43. Flow isolation crossings must be planned and conducted in accordance with the relevant detail in a supplemental stream crossing submission that has been submitted to the satisfaction of the Commission, and in accordance with b to g of condition 41 and the following additional requirements:
- a. crossings of fish-bearing streams may commence only after confirming that sufficient equipment and supplies are available to complete the crossing in an efficient and timely manner;
  - b. crossing construction, including the location and operation of any equipment must be isolated from water flowing in the stream;
  - c. spawning gravels must not be disturbed when redds that contain eggs or alevins are present;
  - d. activities must be suspended if high stream flows present a material increased risk to safety and effectively completing the intended crossing installation technique;
  - e. welding, coating, weighting and, where applicable testing, of the pipe must be completed prior to commencement of trenching within fish-bearing water bodies;
  - f. water from flumes, pump-arounds, diversions, or other methods must be released to downstream areas using dissipation structures to avoid causing erosion or sediment release;
  - g. pump intakes must not disturb beds of streams or wetlands 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*";

- h. water flows downstream of in-stream construction sites must be maintained at volume and discharge consistent with upstream flows; and
  - i. hard ditch plugs must be installed at or near the banks of the crossing and left in place until the crossing has been initiated.
- 44. Equipment to be used in or adjacent to a stream, lake or wetland must be clean or otherwise free of external grease, oil or other fluids, excessive muds, soil and vegetation, prior to entering the waterbody.
- 45. Within the riparian management area, generators and other stationary equipment that requires refueling, must be situated in secondary containment capable of containing the fuel capacity of the generators.
- 46. Unless otherwise authorized by the Commission, prior to construction activities in a stream classified as S1, S2, S3 or S4; or the Riparian Reserve Zone of a stream classified as S1, S2, S3, or a S4 stream, the permit holder must develop a Freshwater Water Quality Monitoring Program to the satisfaction of the Commission. The Freshwater Water Quality Monitoring Program must:
  - a. be developed, implemented and supervised by a qualified professional;
  - b. be consistent with the Ministry of Environment's approved water quality guidelines;
  - c. include environmental water quality monitoring, including field monitoring of turbidity, pH and total suspended solids for potential exceedance of BC Water Quality Guidelines for the protection of aquatic life, as they may be amended from time to time;
  - d. require pre and post construction monitoring upstream (baseline) and downstream of the location of potential disturbance from construction activities;
  - e. require sampling that is representative of water quality variation across the stream; and
  - f. require documentation of pre and post construction monitoring completed under e.
- 47. Unless otherwise authorized by the Commission, prior to construction activities in a wetland, the permit holder must develop a Freshwater Water Quality Monitoring Program to the satisfaction of the Commission. The Freshwater Water Quality Monitoring Program must:
  - a. be developed, implemented and supervised by a qualified professional;
  - b. be consistent with the Ministry of Environment's approved water quality guidelines;
  - c. include environmental water quality monitoring for potential exceedance of the BC Water Quality Guidelines for the protection of aquatic life, as they may be amended from time to time;
  - d. where appropriate, require pre and post construction monitoring proximal to the location of potential disturbance from construction activities;
  - e. require sampling that is representative of water quality variation across the pipeline right of way through wetlands with a riparian classification of W1; and
  - f. require documentation of pre and post construction monitoring completed under d.
- 48. The permit holder must implement the Freshwater Water Quality Monitoring Program developed as per conditions 46 and 47 and do each of the following:
  - a. provide records of documentation of all pre and post construction monitoring to the Commission;

- b. immediately report to the Commission any exceedance of the BC Water Quality Guidelines for aquatic life, relative to the baseline, consistent with the thresholds defined in the Guidelines; and
  - c. immediately take steps to address the factors producing any exceedance of the BC Water Quality Guidelines for aquatic life, relative to the baseline, and where such steps do not result in addressing the exceedance, promptly suspend construction operations at the site of activities causing the exceedance until effective solutions, satisfactory to the Commission, have been developed and implemented.
49. As part of post construction monitoring, the permit holder must, for all watercourse and wetland crossings:
- a. inspect and provide a report to the Commission that includes assessment of:
    - i. RMA stability;
    - ii. erosion risk to the watercourse;
    - iii. vegetation re-establishment within the RMA, including species composition, percent establishment, and presence of invasive plant species; and
    - iv. identify where contingency measures may be required to address the items in i, ii or iii.
  - b. Where contingency measures are required, the permit holder must develop and implement an appropriate plan to the satisfaction of the Commission.

#### **Marine Water**

50. The permit holder must implement measures, to the Commission's satisfaction, to minimize sedimentation during trenching (intertidal and subtidal), pile driving, in-water blasting, and shore transitions.
51. Prior to the commencement of construction activities in the marine environment, the permit holder must develop a Marine Water Quality and Sediment Monitoring Program to the satisfaction of the Commission. The purpose of the Program is to monitor turbidity and analyze total suspended solids within the sediment plume during pipeline trenching activities in Nasoga Gulf and the shoreline approach to Lelu Island. The Marine Water Quality Monitoring Program must:
- a. be developed, implemented and supervised by a qualified professional;
  - b. describe the methods and schedule for marine water quality sampling to be conducted on turbidity and total suspended solids during trenching activities in Nasoga Gulf and the shoreline approach to Lelu Island;
  - c. identify locations that will be used to define baseline water quality conditions and describe the criteria for selecting these locations;
  - d. outline the procedures for determining exceedances of relevant criteria in the BC Water Quality Guidelines;
  - e. outline the procedures to be followed and the hierarchy of response plans, including instances where construction activities may be suspended, if exceedances to the water quality conditions as defined under d occur; and

- f. describe any pre and post construction monitoring, including documentation, that will be conducted proximal to near shore and shallow water construction activities within the construction corridor.

## Engineering

- 52. Before beginning construction activities on any crossing of a road by the pipeline, the permit holder must submit, to the satisfaction of the Commission information, in tabular or other format, describing:
  - a. the crossing location;
  - b. summary, including any outcomes, of engagement with the road tenure holder, primary road user or road owner;
  - c. whether the crossing will be constructed using trenchless methods;
  - d. the approximate dates and maximum time that traffic at the crossing is expected to be restricted or obstructed;
  - e. pipeline specifications at the crossings, including pipeline diameter, wall thickness, depth of cover and grade; and
  - f. maximum vehicular weights expected at the crossing location.
- 53. The permit holder must construct any road crossing consistent with information accepted by the Commission under condition 52.
- 54. At least 45 days prior to commencement of welding, the permit holder must submit to the Commission's satisfaction, a fracture arrest and mitigation program.
- 55. At least 90 days prior to hydrotesting the marine pipelines between Nasoga Gulf and Lelu Island, the permit holder must submit a pressure test plan to the satisfaction of the Commission. The plan must include:
  - a. The pressure test medium and hold times;
  - b. Calculations for the expansion of the pipe;
  - c. Compressibility of the water;
  - d. Atmospheric pressure and effect of temperature changes during the hydrotest; and
  - e. The pressure along the length of the marine pipeline.
- 56. Where the hoop stress during the pressure test exceeds 100% SMYS, the permit holder must submit to the Commission the P-V test and the pressure test results before beginning operation of a pipeline.
- 57. At least 90 days prior to pipe-laying activities in areas where geohazards are present, the permit holder must submit, to the satisfaction of the Commission:
  - a. a geohazard assessment that includes:
    - i. a description of the geohazard(s) identified that have reasonable probability of impacting the pipeline, with the location of each geohazard illustrated on either a map or in a table; and
    - ii. specific design measures, such as materials to be used, installation procedures, protective structures, depth of cover, and monitoring that will be implemented to mitigate the geohazard(s) identified in (i); and



- b. a field changes manual for geohazards that includes:
  - i. criteria for measures, including those identified in a(ii) above, that will be implemented to mitigate any additional geohazards identified during construction; and
  - ii. qualification requirements for field staff who will implement the field changes manual.

58. Except with leave of the Commission, within 12 months of commencement of gas transmission to the Lelu Island Metering Station, 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 pipelines (GEOPIG) and to detect pipe deformation and defects.

### **Archaeology**

59. An Archaeological Impact Assessment (AIA) must be completed for the pipeline right of way and work spaces prior to commencement of construction activities.

60. The permit holder must, as soon as practicable, submit an AIA report to the Commission.

61. 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
- 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 Commission.

### **Terrestrial Environment**

62. Prior to commencing clearing or site preparation on any portion of the pipeline right of way or work space, the permit holder must conduct a survey identifying any:

- a. Bear, fisher or wolverine dens located within 200 metres of the pipeline right of way and work space, and within the construction corridor;
- b. Western Toad breeding or migration areas located within 100 metres of the pipeline right of way or workspaces;
- c. vascular plants, mosses or lichens listed under the *Species at Risk Act* as endangered, threatened or special concern and located within the construction corridor; and
- d. individual plants, plant communities or residences species identified as species at risk in a subsisting order issued under the *Forest and Range Practices Act* or the *Oil and Gas Activities Act* and located within or adjacent to the construction corridor.

The permit holder must submit the survey results, along with site-specific mitigation plans for any of items identified in a to d that may be impacted by construction activities, to the satisfaction of the Commission prior to notice of construction start.



63. 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 site prior to the construction activities taking place.
64. The permit holder must, as soon as practicable, restore recreation sites, recreation trails or recreation facilities established or authorized under the *Forest and Range Practices Act* that are adversely affected by construction activities to their pre-construction condition to the Commission's satisfaction.
65. The permit holder must, as soon as practicable, restore range developments defined under the *Forest and Range Practices Act* that are adversely affected by construction activities to their pre-construction condition to the Commission's satisfaction.
66. At the completion of construction activities, the permit holder must restore any identifiable trails used by trappers that were adversely affected by pipeline construction, to the level of access that existed prior to construction, if the location of the trail is made known to the permit holder by the registered trapper for the area specific to the trail or the Commission prior to the permit holder's notice of construction start.
67. In all locations where run-off from the area of the pipeline right of way or work space may flow into a watercourse, the permit holder must contour and stabilize banks and approach slopes and install berms, silt fences, cross ditches, or other alternative effective measures as appropriate to minimize erosion and avoid sediment deposit into the watercourse.
68. The permit holder must undertake dust control measures to ensure that dust resulting from construction activities does not affect safe travel on a road or significantly impair the use and enjoyment of lawfully occupied permanent dwellings, significant public use areas or other similar areas.
69. The permit holder must undertake reasonable measures to mitigate noise from construction activity that has the potential to affect public safety or significantly impair the use and enjoyment of lawfully occupied permanent dwellings, significant public use areas during periods of use or other similar areas.
70. Upon completion of construction of activities authorized under this permit, the permit holder must, to the satisfaction of the Commission:
  - a. re-vegetate, using seed or vegetative propagules of an ecologically suitable species or implement other measures that promote the restoration of the wildlife habitat that existed on the area before the oil and gas activity was begun and stabilize the soil if it is highly susceptible to erosion; and
  - b. take reasonably practical measures to limit or prevent vehicular access to and along, and to reduce sightlines along the pipeline right of way.
71. The permit holder must determine timber hauling restrictions pertaining to the management of beetle infested timber recommended by the BC Ministry of Forests, Land, and Natural Resource Operations and adhere to all such restrictions unless otherwise specified by the Commission.

### **Potential Pinch Points**

72. Except with leave of the Commission, the permit holder must provide the Commission with at least 7 days written notice of any proposed change to the pipeline centreline identified in the Construction Plans referenced in Permissions, that:

- a. would result in a change to the horizontal alignment of the pipeline centreline of more than 100 metres; or
  - b. might reasonably limit the construction of any additional pipeline(s) at the location of the proposed change.
73. The permit holder must provide the Commission with a report summarizing its engagement with third parties regarding routing, pipeline alignment and the mitigation of pinch point locations within the construction corridor, at least 60 days prior to construction at such pinch point locations.
74. The permit holder must not begin construction within the area deleted from map reserve 6408684 between June 12, 2015 and August 4, 2015 (the “Nasoga Gulf Area”) unless:
  - a. it has, at least 60 days prior to its planned commencement of construction in the Nasoga Gulf Area, provided the Commission with a report summarizing its engagement with third parties, including the Nisga’a Nation, in respect of routing, pipeline alignment and the mitigation of conflicts with other proposed industrial development; and
  - b. the Commission has granted leave to commence construction in the Nasoga Gulf Area.

## **ADDITIONAL CONDITIONS**

### **Additional Notifications to Nisga’a Lisims Government**

75. The permit holder must notify NLG no more than one month and no less than one week prior to commencing construction of a horizontal directional drill, microtunneling, direct pipeline installation, aerial crossing, or trenched stream crossings located within the Nass Area.
76. The permit holder must provide NLG with a copy of any Post Construction Plan (in shapefile format) that is submitted to the Commission pursuant to condition 3 or 4 identifying the location of areas within the Nass Area that are disturbed under this permit.
77. The permit holder must provide NLG for review and comment a copy of any pre-construction surveys and remediation plans that are submitted to the Commission for trenched stream crossings within the Nass Area.

### **Prince Rupert Port Authority**

78. The permit holder must not begin or carry out the oil and gas activity or any related activity on or under an area of the port of Prince Rupert unless the permit holder has an agreement with the Prince Rupert Port Authority authorizing the permit holder to enter, occupy, and use the area.
79. Before submitting a response contingency plan or supplementary plan to the Commission pursuant to section 7 of the Emergency Management Regulation, the permit holder must give the information set out in section 2(2)(a) – (d) of the Emergency Management Regulation to the Prince Rupert Port Authority. If the Prince Rupert Port Authority provides a statement to the permit holder identifying the name and contact information of a contact person and a description of how the Prince Rupert Port Authority may be affected by an emergency, the permit holder must consider the response in the preparation of its response contingency plan or supplementary plan.

## **AUTHORIZATIONS ASSOCIATED WITH THE PERMIT**

### **Temporary Permit under Section 14 of the *Land Act***

80. Subject to 81 to 88 below, the Commission, under section 14 of the *Land Act* and pursuant to Authorization Number 947287, hereby authorizes the permit holder to occupy and use Crown land

limited to the areas described in the following construction plans by Focus Surveys (BC) Limited Partnership as submitted to the Commission in the permit application dated February 24, 2015:

FOCUS File: 130275CP07R1, sheet 1-28, revision 1, dated December 31, 2014, except within the land and waters under the jurisdiction of the Prince Rupert Port Authority.

81. The permit holder will:

- a. indemnify the Province of British Columbia (the "Province") and the Commission against all losses, damages, costs, and liabilities arising out of any breach or non-performance of any condition or agreement set out in this permit, and any personal injury, death or property damage occurring on the site or happening by virtue of the permit holder's occupation of the site, and this obligation to indemnify will include all of the foregoing from the first day that such losses, damages, costs and liabilities arose; and
- b. immediately effect, and keep in force while occupying the site, insurance of an amount not less than \$1,000,000 protecting the Province, the Commission and the permit holder (without any rights of cross-claim or subrogation) against claims for personal injury, death, property damage, or third party or public liability claims arising from any accident or occurrence on the site.

82. The permit holder must not construct, place, anchor, secure, or affix any improvement in, on, or to the Land or otherwise use the Land in a manner that will interfere with any person's riparian right of access over the Land and the permit holder acknowledges and agrees that the granting of this permit does not:

- a. constitute a representation or determination that such improvements will not give rise to any infringement of any riparian right of access that may exist over the Land; or
- b. abrogate or authorize any infringement of any riparian right of access that may exist over the land.

The permit holder acknowledges and agrees that it remains responsible for ensuring that it will not cause any infringement of any such riparian right of access.

83. The authorization to occupy and use Crown land does not entitle the permit holder to exclusive possession of the area. The permit holder will not interfere with the activities of another person entering on and using the area under a prior or subsequent authorization issued under the *Land Act*.

84. The rights granted by this section 14 permit are subject to all subsisting grants to or rights of any person made or acquired under the *Coal Act*, *Forest Act*, *Mineral Tenure Act*, *Petroleum and Natural Gas Act*, *Range Act*, *Water Act* or *Wildlife Act*, or any extension or renewal of the same, any prior dispositions made under the *Land Act*, and the exceptions and reservations of rights and interests under section 50 of the *Land Act*.

85. The permit holder will acknowledge and agree that any interference with rights granted under this section 14 permit by virtue of the exercise or operation of the rights or interests set out in 83 or 84 above shall not constitute a breach of the Province's or the Commission's obligations under this permit and the permit holder will release and discharge the Province and/or the Commission from any claim for loss or damage arising directly or indirectly out of any such interference. The permit holder will also agree to pay all costs and expenses that arise out of the permit holder's interference with the rights or interests set out in sections 83 or 84 and that the permit holder will not commence

or maintain proceedings under section 65 of the *Land Act* with respect to interference with the permit holder's rights arising out of exercise or operation of the rights set out in sections 83 or 84.

86. The permit holder must pay, when due, the Fees to the address set out in the attached covering letter.
87. The permit holder must not assign, sublicense or transfer 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.
88. This authorization of a permit to occupy and use Crown land expires two years from the date of issuance.

#### **Changes in and about a Stream Authorization under section 9 of the Water Act**

89. The Commission hereby authorizes the permit holder, under section 9 of the *Water Act*, to make changes in and about streams located in the areas described in a supplemental stream and wetland crossing submission that has been submitted to the satisfaction of the Commission.

#### **Cutting Permit Authorization**

90. Pursuant to section 47.4 of the *Forest Act*, the Commission hereby issues Cutting Permit No. 11, under Master License to Cut number M02399, Coast Mountain Forest District, to cut and remove timber from the areas of Crown land within the area within the Site subject to the following conditions:
  - a. This Cutting Permit is deemed spent upon submission of the post-construction plan referenced in condition 4, or upon either the cancellation or the expiry of the permitted oil and gas activity;
  - b. This Cutting Permit is subject to the terms and conditions in the Master Licence to Cut.
  - c. All harvested Crown timber within Master License to Cut number M02399 Coast Mountain Forest District, must be marked with Timber Mark Number MTB 328;
  - d. The felling, bucking and utilization specifications in the Master License to Cut applies to this Cutting Permit;
  - e. Stumpage under this Cutting Permit is required to be paid to the Crown and will be determined according to the applicable appraisal manual;
  - f. This Cutting Permit does not grant the permit holder to the exclusive right to harvest timber from the license area and the Commission reserves the right to grants rights to other persons to harvest timber from the license area;
  - g. In accordance with the Master Licence to Cut referenced above, "Within 60 days of completing operations on a cutting permit, the Licensee shall submit to the Commission a map showing all disturbances that have occurred pursuant to that cutting permit, at a scale of 1:20,000 or 1:50,000";
  - h. Timber that is stored in decks or piles must be marked with the correct timber mark before transportation, or at the end of every shift. The marking must be applied to one end of at least 10% of the timber pieces in each deck or pile using a hammer indentation or paint. Marking must be kept concurrent with decking;
  - i. Where the Permit Holder is aware of overlapping forest tenure rights that have been granted to other persons, the Permit Holder is obligated to communicate to these

persons the timing and extent of their harvest operations at least two weeks prior to commencement of harvest and take all reasonable steps to coordinate their activities with these persons;

- j. Prior to harvesting, any clearing authorized by this Cutting Permit must be clearly defined on the ground by ribboning or blazing; and
- k. This permit authorizes a maximum total new cut area of 10.4 ha within the construction corridor.

## ADVISORY GUIDANCE

1. The permit holder must provide notices required by the Pipeline Regulation prior to beginning construction, maintenance or repair of the pipeline.
2. As required by section 3 of the Pipeline Regulation, the permit holder must design, construct, operate and maintain the pipeline in accordance with CSA Z662, as amended from time to time.
3. As required by section 4(2) of the Pipeline Regulation, the permit holder must submit to the Commission the pipe and component specifications and the as-built drawings for the pipeline within 3 months after completion of construction of a pipeline.
4. As required by section 24(1) of the *Oil and Gas Activities Act* General Regulation, the permit holder must complete the surveying and posting of the pipeline right of way within 16 months after completing construction of the pipeline.
5. As required by section 7 of the Pipeline Regulation, the permit holder must include the pipeline authorized by this permit in its Integrity Management Plan and Damage Prevention Program.
6. Trenchless crossing must be planned and conducted in accordance with the Directional Drilling Procedures and Drilling Mud Release Contingency Plan and the relevant detail in the Typical Drawings of the Environmental Management Plan and any plans accepted by the Commission under conditions 38 and 39 above.
7. Metlakatla has requested that the permit holder follow the protocols that Metlakatla has developed for identifying and addressing archaeological resources, including the Metlakatla Culturally Modified Trees Policy.
8. The permit holder must avoid all archaeology sites unless issued a site alteration permit by the Commission, pursuant to section 12 of the *Heritage Conservation Act*.
9. All archaeological reports submitted to the Commission must also be provided to the archaeology branch of the Ministry of Forests, Lands and Natural Resource Operations.
10. All archaeological reports submitted to the Commission must also be provided to NLG and the First Nations listed in Condition 1 of this permit.
11. Prior to commencing construction on any pipeline stream crossing, the permit holder must:
  - a. identify any new streams not described in a supplemental stream and wetland crossing submission that has been submitted to the satisfaction of the Commission;
  - b. for new streams or where there was outstanding fieldwork required for a stream described in a supplemental stream and wetland crossing submission that has been submitted to the satisfaction of the Commission, conduct the field work needed to complete stream classifications and identify the fish species presence for that stream, including any required

confirmation of fish species presence in streams that were surveyed prior to issuance of this permit; and

- c. submit the results of the field work required under (b) to the satisfaction of the Commission. The results must clearly describe the management and mitigation measures that will be employed in order to minimize impacts to the species present and their habitat.
12. Construction or maintenance activities within a fish bearing stream or wetland must occur:
- a. during the applicable reduced risk work windows as specified in the Skeena Region Reduced Risk In-stream Work Windows and Measures, as appropriate;
  - 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.
13. If emergency management measures are undertaken by the permit holder in response to an emergency, the permit holder must notify NLG and the Band Offices of the First Nations listed in Condition 1 to make them aware of the nature of the emergency and potential impacts to community members.
14. The permit holder should be aware that Nisga'a citizens may be exercising treaty rights, and there may be traditional First Nation activities occurring during construction of the offshore pipeline, and all reasonable efforts should be made to minimize interference with such activities.

## DEFINITIONS

Unless the condition or its context indicates otherwise, the terms in this permit have the same meaning as defined in the *Oil and Gas Activities Act* or the regulations under that Act.

**“additional work space”** means the work space, delineated in purple on construction plans, other than temporary work space, needed to facilitate pipeline construction and includes decking sites and staging areas.

**“construction activities” or “construction”** means clearing, site preparation, trench excavation, pipe installation and any other activities required to construct a pipeline.

**“construction corridor”** means, the area of land extending on either side of the centerline of the pipeline as indicated in the application for this permit, and is labelled as either “construction corridor” or “review corridor” on the construction plans.

**“environmental management plan”** means, the environmental management plan as revised, that supports the application for this permit, the relevant components of which are acceptable to the Commission.

**“Nass Area”** has the meaning ascribed to it in the Nisga'a Final Agreement.

**“Nisga'a Final Agreement”** means the Nisga'a Final Agreement between the Nisga'a Nation, Canada and British Columbia dated May 11, 2000.

**“Nisga'a Lisims Government” or “NLG”** means the government of the Nisga'a Nation as set out in the Nisga'a Final Agreement.

**“pinch point”** means a specific area delineated by topographic, terrain/geohazards, existing infrastructure, watercourses, or climatic conditions requiring non-routine design detail and/or construction execution for a

single (first) pipeline, and/or multiple pipelines (with potentially more complex considerations related to project interactions), to ensure safe and commercially viable design, construction, and operations.

**“qualified professional”** means a member in good standing of a profession regulated in British Columbia and who is recognized by that profession as being qualified to work in area of practice for which an opinion or advice is required.

**“qualified specialist”** means a person who possesses an appropriate combination of formal education, knowledge, skills, and experience to conduct a technically sound and rational assessment for the area of practice, and be familiar with applicable regulations, standards, policies, protocols and guidelines.

**“residence”** means a dwelling-place, such as a den, nest or other similar area or place, that is occupied or habitually occupied by one or more individuals during all or part of their life cycles, including breeding, rearing, staging, wintering, feeding or hibernating.

**“road”** means an existing road:

- a. that is a highway as defined in the *Transportation Act* and is currently being maintained by an agency of the provincial government or a local government, either directly or by agreement,
- b. that is a Forest Service Road,
- c. for which there is a subsisting permit under the *Forest Act*, *Land Act* or *Oil and Gas Activities Act*,
- d. that is an industrial road as defined under the *Industrial Roads Act*, or
- e. that is privately owned.

**“temporary work space”** means the work space, delineated in blue on construction plans, that runs adjacent to the pipeline right of way, which may be used to accommodate vehicle traffic as well as stringing, welding and placing pipe.

**“work space”** means both temporary work space and additional work space.



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

CC: Roy Northern Land Services Ltd.  
MFLNRO, Coast Mountain Forest District  
First Nations (Nisga’a Nation, Kitselas First Nation, Kitsumkalum First Nation, Metlakatla First Nation, Gitxaala First Nation, and Lax Kw’alaams First Nation)  
WorkSafe BC  
OGC File: 9708463  
BC Environmental Assessment Office